

### HU SERIES • ULTRA LONG LIFE 105°C TYPE

#### KEY FEATURES



- ALUMINUM ELECTROLYTIC CAPACITOR • Snap-In type
- Useful life: 105°C • 5 000 hours up to 8 000 hours
- Wide capacitance range
- Small dimensions
- Stable operating under steady state environment



#### SPECIFICATIONS

| Items                                                             |                   | Performance Characteristics                                                                                                                          |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |
|-------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----|----|----|----------|---------------------------------------------------------------|-----------------------------------|-----|-----------|-----------|--|
| Operating Temperature Range                                       |                   | -40 ~ +105°C                                                                                                                                         |                                   |    |    |    |          | -25 ~ +105°C                                                  |                                   |     |           |           |  |
| Rated Voltage Range                                               | V <sub>R</sub>    | 10 ~ 350V DC                                                                                                                                         |                                   |    |    |    |          | 385 ~ 500V DC                                                 |                                   |     |           |           |  |
| Surge Voltage                                                     | V <sub>S</sub>    | (V <sub>R</sub> ≤ 315V): V <sub>S</sub> = 1.15·V <sub>R</sub>                                                                                        |                                   |    |    |    |          | (V <sub>R</sub> > 315V): V <sub>S</sub> = 1.10·V <sub>R</sub> |                                   |     |           |           |  |
| Capacitance Range                                                 | C <sub>R</sub>    | 56 ~ 82000μF                                                                                                                                         |                                   |    |    |    |          | 33 ~ 1200μF                                                   |                                   |     |           |           |  |
| Cap. Tolerance                                                    | ΔC                | ±20% (120Hz ▪ 20°C)                                                                                                                                  |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |
| Leakage Current<br>(20°C ▪ V <sub>R</sub> applied)                | I <sub>LEAK</sub> | ≤ 3 · √C <sub>R</sub> · V <sub>R</sub> ▪ After 5 minutes<br>[ I <sub>LEAK</sub> (μA) ; C <sub>R</sub> (μF) ; V <sub>R</sub> (V) ]                    |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |
| Dissipation Factor %<br>(20°C ▪ 120Hz)                            | tanδ              | μF / V DC                                                                                                                                            | 10                                | 16 | 25 | 35 | 50       | 63                                                            | 80                                | 100 | 160 ~ 420 | 450 ~ 500 |  |
|                                                                   |                   | ≤ 8200                                                                                                                                               | 35                                | 35 | 30 | 25 | 20       | 20                                                            | 15                                | 15  | 15        | 20        |  |
|                                                                   |                   | 10000 ~ 22000                                                                                                                                        | 40                                | 40 | 35 | 30 | 30       | 25                                                            | 20                                | -   | -         | -         |  |
|                                                                   |                   | ≥ 27000                                                                                                                                              | 50                                | 40 | 35 | 35 | 30       | 25                                                            | -                                 | -   | -         | -         |  |
| Low Temperature<br>Characteristics at<br>120Hz                    | Z ratio<br>max.   | V <sub>R</sub> (V DC)                                                                                                                                | 10 ~ 16                           |    | 25 | 35 | 50 ~ 100 |                                                               | 160 ~ 250                         |     | 315 ~ 350 | 400 ~ 500 |  |
|                                                                   |                   | Z-25°C/Z+20°C                                                                                                                                        | 4                                 |    | 3  | 3  | 3        |                                                               | 4                                 |     | 8         | 8         |  |
|                                                                   |                   | Z-40°C/Z+20°C                                                                                                                                        | 15                                |    | 10 | 8  | 6        |                                                               | 8                                 |     | 12        | -         |  |
| Lifetime Test                                                     |                   |                                                                                                                                                      | V <sub>R</sub> ≤ 100V             |    |    |    |          |                                                               | V <sub>R</sub> > 100V             |     |           |           |  |
| Useful Life<br>105°C<br>(V <sub>R</sub> & I <sub>R</sub> applied) |                   | Test                                                                                                                                                 | 5 000 hours                       |    |    |    |          |                                                               | 8 000 hours                       |     |           |           |  |
|                                                                   |                   | ΔC/C <sub>R</sub>                                                                                                                                    | ≤ ±30% of initial measured value  |    |    |    |          |                                                               | ≤ ±20% of initial measured value  |     |           |           |  |
|                                                                   |                   | tanδ                                                                                                                                                 | ≤ 300% of initial specified value |    |    |    |          |                                                               | ≤ 200% of initial specified value |     |           |           |  |
|                                                                   |                   | I <sub>Leak</sub>                                                                                                                                    | ≤ the initial specified value     |    |    |    |          |                                                               | ≤ the initial specified value     |     |           |           |  |
|                                                                   |                   | Deviation Rate at Useful Life: 100 FIT = 0.01%/1000h with 60% confidence level ▪ parts show higher drift as test criteria                            |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |
| Endurance<br>105°C<br>(V <sub>R</sub> & I <sub>R</sub> applied)   |                   | Test                                                                                                                                                 | 3 000 hours                       |    |    |    |          |                                                               |                                   |     |           |           |  |
|                                                                   |                   | ΔC/C <sub>R</sub>                                                                                                                                    | ≤ ±20% of initial measured value  |    |    |    |          |                                                               | ≤ ±15% of initial measured value  |     |           |           |  |
|                                                                   |                   | tanδ                                                                                                                                                 | ≤ 200% of initial specified value |    |    |    |          |                                                               | ≤ 175% of initial specified value |     |           |           |  |
|                                                                   |                   | I <sub>Leak</sub>                                                                                                                                    | ≤ the initial specified value     |    |    |    |          |                                                               | ≤ the initial specified value     |     |           |           |  |
| Shelf Life<br>105°C<br>(V <sub>R</sub> = 0)                       |                   | Test                                                                                                                                                 | 1 000 hours                       |    |    |    |          |                                                               |                                   |     |           |           |  |
|                                                                   |                   | ΔC/C <sub>R</sub>                                                                                                                                    | ≤ ±20% of initial measured value  |    |    |    |          |                                                               | ≤ ±15% of initial measured value  |     |           |           |  |
|                                                                   |                   | tanδ                                                                                                                                                 | ≤ 200% of initial specified value |    |    |    |          |                                                               | ≤ 175% of initial specified value |     |           |           |  |
|                                                                   |                   | I <sub>Leak</sub>                                                                                                                                    | ≤ the initial specified value     |    |    |    |          |                                                               | ≤ the initial specified value     |     |           |           |  |
|                                                                   |                   | Before measurement: Restore capacitor to 20°C, apply V <sub>R</sub> for 30 min according JIS-C-5101-4                                                |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |
| Vibration Resistance Test                                         |                   | Max. 10g force, f <sub>RANGE</sub> 10Hz ... 55Hz, amplitude 0.75mm; X/Y/Z-axis each 2h; capacitor rigidly clamped by body to surface ▪ IEC 60068-2-6 |                                   |    |    |    |          |                                                               |                                   |     |           |           |  |

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 10                    | 4700                   | 22          | 25        | 76                                | 99                                | 860                                                                   | HU472M010M250A □□  |
|                       | 6800                   | 22          | 25        | 53                                | 68                                | 1310                                                                  | HU682M010M250A □□  |
|                       | 8200                   | 25          | 20        | 44                                | 57                                | 1600                                                                  | HU822M010N200A □□  |
|                       | 10000                  | 25          | 20        | 36                                | 46                                | 1810                                                                  | HU103M010N200A □□  |
|                       | 12000                  | 22          | 30        | 34                                | 44                                | 2110                                                                  | HU123M010M300A □□  |
|                       | 15000                  | 22          | 35        | 27                                | 35                                | 2310                                                                  | HU153M010M350A □□  |
|                       | 18000                  | 22          | 40        | 23                                | 29                                | 2400                                                                  | HU183M010M400A □□  |
|                       | 22000                  | 25          | 35        | 19                                | 24                                | 2600                                                                  | HU223M010N350A □□  |
|                       | 27000                  | 35          | 25        | 19                                | 25                                | 3110                                                                  | HU273M010P250A □□  |
|                       | 33000                  | 35          | 30        | 15                                | 20                                | 3420                                                                  | HU333M010P300A □□  |
|                       | 39000                  | 35          | 30        | 13                                | 17                                | 3700                                                                  | HU393M010P300A □□  |
|                       | 47000                  | 35          | 35        | 11                                | 14                                | 4210                                                                  | HU473M010P350A □□  |
|                       | 56000                  | 35          | 40        | 9                                 | 12                                | 5100                                                                  | HU563M010P400A □□  |
|                       | 68000                  | 35          | 50        | 8                                 | 10                                | 5510                                                                  | HU683M010P500A □□  |
| 16                    | 3300                   | 22          | 25        | 110                               | 140                               | 1300                                                                  | HU332M016M250A □□  |
|                       | 4700                   | 22          | 25        | 76                                | 99                                | 1520                                                                  | HU472M016M250A □□  |
|                       | 6800                   | 22          | 25        | 53                                | 68                                | 1810                                                                  | HU682M016M250A □□  |
|                       | 8200                   | 22          | 30        | 44                                | 57                                | 2050                                                                  | HU822M016M300A □□  |
|                       | 10000                  | 22          | 30        | 36                                | 46                                | 2150                                                                  | HU103M016M300A □□  |
|                       | 10000                  | 25          | 25        | 36                                | 46                                | 2200                                                                  | HU103M016N250A □□  |
|                       | 12000                  | 22          | 35        | 34                                | 44                                | 2310                                                                  | HU123M016M350A □□  |
|                       | 12000                  | 25          | 30        | 34                                | 44                                | 2320                                                                  | HU123M016N300A □□  |
|                       | 12000                  | 30          | 25        | 34                                | 44                                | 2400                                                                  | HU123M016O250A □□  |
|                       | 15000                  | 22          | 40        | 27                                | 35                                | 2700                                                                  | HU153M016M400A □□  |
|                       | 15000                  | 25          | 35        | 27                                | 35                                | 2710                                                                  | HU153M016N350A □□  |
|                       | 15000                  | 30          | 30        | 27                                | 35                                | 2730                                                                  | HU153M016O300A □□  |
|                       | 18000                  | 22          | 45        | 23                                | 29                                | 2980                                                                  | HU183M016M450A □□  |
|                       | 18000                  | 25          | 40        | 23                                | 29                                | 3170                                                                  | HU183M016N400A □□  |
|                       | 18000                  | 30          | 30        | 23                                | 29                                | 3200                                                                  | HU183M016O300A □□  |
|                       | 22000                  | 25          | 45        | 19                                | 24                                | 3410                                                                  | HU223M016N450A □□  |
|                       | 22000                  | 30          | 35        | 19                                | 24                                | 3420                                                                  | HU223M016O350A □□  |
|                       | 22000                  | 35          | 30        | 19                                | 24                                | 3430                                                                  | HU223M016P300A □□  |
|                       | 27000                  | 25          | 50        | 15                                | 20                                | 3850                                                                  | HU273M016N500A □□  |
|                       | 27000                  | 30          | 40        | 15                                | 20                                | 3860                                                                  | HU273M016O400A □□  |
|                       | 27000                  | 35          | 30        | 15                                | 20                                | 3870                                                                  | HU273M016P300A □□  |
|                       | 33000                  | 30          | 45        | 12                                | 16                                | 4400                                                                  | HU333M016O450A □□  |
|                       | 33000                  | 35          | 35        | 12                                | 16                                | 4420                                                                  | HU333M016P350A □□  |
|                       | 39000                  | 30          | 50        | 10                                | 14                                | 4820                                                                  | HU393M016O500A □□  |
|                       | 39000                  | 35          | 40        | 10                                | 14                                | 4830                                                                  | HU393M016P400A □□  |
|                       | 47000                  | 35          | 45        | 9                                 | 11                                | 5540                                                                  | HU473M016P450A □□  |
|                       | 56000                  | 35          | 50        | 7                                 | 10                                | 5900                                                                  | HU563M016P500A □□  |
|                       | 68000                  | 35          | 60        | 6                                 | 8                                 | 6600                                                                  | HU683M016P600A □□  |
|                       | 82000                  | 40          | 60        | 5                                 | 7                                 | 7660                                                                  | HU823M016Q600A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 25                    | 2200                   | 22          | 25        | 140                               | 180                               | 1300                                                                  | HU222M025M250A □□  |
|                       | 3300                   | 22          | 25        | 92                                | 120                               | 1310                                                                  | HU332M025M250A □□  |
|                       | 4700                   | 22          | 25        | 65                                | 85                                | 1620                                                                  | HU472M025M250A □□  |
|                       | 5600                   | 22          | 30        | 55                                | 71                                | 1800                                                                  | HU562M025M300A □□  |
|                       | 6800                   | 25          | 25        | 45                                | 59                                | 1920                                                                  | HU682M025N250A □□  |
|                       | 8200                   | 22          | 35        | 37                                | 49                                | 2150                                                                  | HU822M025M350A □□  |
|                       | 8200                   | 30          | 25        | 37                                | 49                                | 2300                                                                  | HU822M025O250A □□  |
|                       | 10000                  | 22          | 40        | 31                                | 40                                | 2500                                                                  | HU103M025M400A □□  |
|                       | 10000                  | 25          | 30        | 31                                | 40                                | 2500                                                                  | HU103M025N300A □□  |
|                       | 10000                  | 30          | 30        | 31                                | 40                                | 2680                                                                  | HU103M025O300A □□  |
|                       | 12000                  | 22          | 45        | 30                                | 39                                | 2760                                                                  | HU123M025M450A □□  |
|                       | 12000                  | 25          | 40        | 30                                | 39                                | 2810                                                                  | HU123M025N400A □□  |
|                       | 12000                  | 30          | 30        | 30                                | 39                                | 2820                                                                  | HU123M025O300A □□  |
|                       | 15000                  | 25          | 45        | 24                                | 31                                | 3280                                                                  | HU153M025N450A □□  |
|                       | 15000                  | 30          | 35        | 24                                | 31                                | 3290                                                                  | HU153M025O350A □□  |
|                       | 15000                  | 35          | 30        | 24                                | 31                                | 3300                                                                  | HU153M025P300A □□  |
|                       | 18000                  | 25          | 50        | 20                                | 26                                | 3550                                                                  | HU183M025N500A □□  |
|                       | 18000                  | 30          | 40        | 20                                | 26                                | 3560                                                                  | HU183M025O400A □□  |
|                       | 22000                  | 30          | 45        | 16                                | 21                                | 4250                                                                  | HU223M025O450A □□  |
|                       | 22000                  | 35          | 35        | 16                                | 21                                | 4260                                                                  | HU223M025P350A □□  |
| 35                    | 27000                  | 35          | 45        | 13                                | 17                                | 4760                                                                  | HU273M025P450A □□  |
|                       | 33000                  | 35          | 50        | 11                                | 14                                | 5500                                                                  | HU333M025P500A □□  |
|                       | 2200                   | 25          | 25        | 120                               | 150                               | 1520                                                                  | HU222M035N250A □□  |
|                       | 3300                   | 22          | 25        | 77                                | 100                               | 1530                                                                  | HU332M035M250A □□  |
|                       | 3900                   | 22          | 30        | 65                                | 85                                | 1700                                                                  | HU392M035M300A □□  |
|                       | 4700                   | 22          | 35        | 54                                | 71                                | 2030                                                                  | HU472M035M350A □□  |
|                       | 4700                   | 25          | 25        | 54                                | 71                                | 2040                                                                  | HU472M035N250A □□  |
|                       | 5600                   | 22          | 35        | 46                                | 59                                | 2130                                                                  | HU562M035M350A □□  |
|                       | 5600                   | 25          | 30        | 46                                | 59                                | 2140                                                                  | HU562M035N300A □□  |
|                       | 5600                   | 30          | 25        | 46                                | 59                                | 2150                                                                  | HU562M035O250A □□  |
|                       | 6800                   | 22          | 40        | 38                                | 49                                | 2600                                                                  | HU682M035M400A □□  |
|                       | 6800                   | 25          | 35        | 38                                | 49                                | 2600                                                                  | HU682M035N350A □□  |
|                       | 6800                   | 30          | 25        | 38                                | 49                                | 2550                                                                  | HU682M035O250A □□  |
|                       | 8200                   | 22          | 50        | 31                                | 40                                | 2850                                                                  | HU822M035M500A □□  |
|                       | 8200                   | 25          | 40        | 31                                | 40                                | 2860                                                                  | HU822M035N400A □□  |
|                       | 8200                   | 30          | 30        | 31                                | 40                                | 2870                                                                  | HU822M035O300A □□  |
|                       | 10000                  | 25          | 45        | 26                                | 33                                | 3070                                                                  | HU103M035N450A □□  |
|                       | 10000                  | 30          | 35        | 26                                | 33                                | 3080                                                                  | HU103M035O350A □□  |
|                       | 12000                  | 25          | 50        | 26                                | 33                                | 3370                                                                  | HU123M035N500A □□  |
|                       | 12000                  | 30          | 40        | 26                                | 33                                | 3380                                                                  | HU123M035O400A □□  |
|                       | 12000                  | 35          | 30        | 26                                | 33                                | 3400                                                                  | HU123M035P300A □□  |
|                       | 15000                  | 30          | 45        | 20                                | 27                                | 3750                                                                  | HU153M035O450A □□  |
|                       | 15000                  | 35          | 35        | 20                                | 27                                | 3760                                                                  | HU153M035P350A □□  |
|                       | 18000                  | 35          | 40        | 17                                | 22                                | 4370                                                                  | HU183M035P400A □□  |
|                       | 22000                  | 35          | 50        | 14                                | 18                                | 4950                                                                  | HU223M035P500A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 50                    | 1500                   | 25          | 20        | 140                               | 180                               | 1150                                                                  | HU152M050N200A □□  |
|                       | 1800                   | 22          | 25        | 120                               | 150                               | 1350                                                                  | HU182M050M250A □□  |
|                       | 2200                   | 22          | 25        | 92                                | 120                               | 1550                                                                  | HU222M050M250A □□  |
|                       | 2700                   | 22          | 30        | 76                                | 98                                | 1750                                                                  | HU272M050M300A □□  |
|                       | 2700                   | 25          | 25        | 76                                | 98                                | 1760                                                                  | HU272M050N250A □□  |
|                       | 3300                   | 22          | 35        | 62                                | 80                                | 1990                                                                  | HU332M050M350A □□  |
|                       | 3300                   | 25          | 30        | 62                                | 80                                | 2000                                                                  | HU332M050N300A □□  |
|                       | 3900                   | 22          | 40        | 52                                | 68                                | 2250                                                                  | HU392M050M400A □□  |
|                       | 3900                   | 30          | 25        | 52                                | 68                                | 2260                                                                  | HU392M050O250A □□  |
|                       | 4700                   | 22          | 45        | 43                                | 56                                | 2560                                                                  | HU472M050M450A □□  |
|                       | 4700                   | 25          | 35        | 43                                | 56                                | 2620                                                                  | HU472M050N350A □□  |
|                       | 4700                   | 30          | 30        | 43                                | 56                                | 2630                                                                  | HU472M050O300A □□  |
|                       | 5600                   | 22          | 50        | 36                                | 47                                | 2890                                                                  | HU562M050M500A □□  |
|                       | 5600                   | 25          | 40        | 36                                | 47                                | 2900                                                                  | HU562M050N400A □□  |
|                       | 5600                   | 30          | 30        | 36                                | 47                                | 2950                                                                  | HU562M050O300A □□  |
|                       | 6800                   | 25          | 45        | 30                                | 39                                | 3370                                                                  | HU682M050N450A □□  |
|                       | 6800                   | 30          | 35        | 30                                | 39                                | 3390                                                                  | HU682M050O350A □□  |
|                       | 6800                   | 35          | 30        | 30                                | 39                                | 3400                                                                  | HU682M050P300A □□  |
|                       | 8200                   | 30          | 40        | 25                                | 32                                | 3710                                                                  | HU822M050O400A □□  |
|                       | 8200                   | 35          | 35        | 25                                | 32                                | 3720                                                                  | HU822M050P350A □□  |
|                       | 10000                  | 30          | 50        | 20                                | 27                                | 4090                                                                  | HU103M050O500A □□  |
|                       | 10000                  | 35          | 40        | 20                                | 27                                | 4100                                                                  | HU103M050P400A □□  |
|                       | 12000                  | 35          | 45        | 26                                | 33                                | 4560                                                                  | HU123M050P450A □□  |
|                       | 15000                  | 35          | 50        | 20                                | 27                                | 4770                                                                  | HU153M050P500A □□  |
| 63                    | 1000                   | 22          | 25        | 210                               | 270                               | 1170                                                                  | HU102M063M250A □□  |
|                       | 1200                   | 22          | 25        | 170                               | 220                               | 1250                                                                  | HU122M063M250A □□  |
|                       | 1500                   | 22          | 30        | 140                               | 180                               | 1480                                                                  | HU152M063M300A □□  |
|                       | 1500                   | 25          | 25        | 140                               | 180                               | 1500                                                                  | HU152M063N250A □□  |
|                       | 1800                   | 22          | 30        | 120                               | 150                               | 1590                                                                  | HU182M063M300A □□  |
|                       | 1800                   | 25          | 25        | 120                               | 150                               | 1600                                                                  | HU182M063N250A □□  |
|                       | 2200                   | 22          | 35        | 92                                | 120                               | 1830                                                                  | HU222M063M350A □□  |
|                       | 2200                   | 25          | 30        | 92                                | 120                               | 1840                                                                  | HU222M063N300A □□  |
|                       | 2700                   | 22          | 40        | 76                                | 98                                | 2050                                                                  | HU272M063M400A □□  |
|                       | 2700                   | 25          | 35        | 76                                | 98                                | 2050                                                                  | HU272M063N350A □□  |
|                       | 2700                   | 30          | 25        | 76                                | 98                                | 2030                                                                  | HU272M063O250A □□  |
|                       | 3300                   | 22          | 45        | 62                                | 80                                | 2330                                                                  | HU332M063M450A □□  |
|                       | 3300                   | 30          | 30        | 62                                | 80                                | 2400                                                                  | HU332M063O300A □□  |
|                       | 3900                   | 25          | 40        | 52                                | 68                                | 2540                                                                  | HU392M063N400A □□  |
|                       | 3900                   | 30          | 35        | 52                                | 68                                | 2570                                                                  | HU392M063O350A □□  |
|                       | 4700                   | 25          | 50        | 43                                | 56                                | 2980                                                                  | HU472M063N500A □□  |
|                       | 4700                   | 30          | 40        | 43                                | 56                                | 3020                                                                  | HU472M063O400A □□  |
|                       | 4700                   | 35          | 30        | 43                                | 56                                | 3050                                                                  | HU472M063P300A □□  |
|                       | 5600                   | 30          | 40        | 36                                | 47                                | 3280                                                                  | HU562M063O400A □□  |
|                       | 5600                   | 35          | 35        | 36                                | 47                                | 3310                                                                  | HU562M063P350A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 63                    | 6800                   | 30          | 50        | 30                                | 39                                | 3730                                                                  | HU682M063O500A □□  |
|                       | 6800                   | 35          | 40        | 30                                | 39                                | 3750                                                                  | HU682M063P400A □□  |
|                       | 8200                   | 35          | 45        | 25                                | 32                                | 4200                                                                  | HU822M063P450A □□  |
|                       | 10000                  | 35          | 50        | 20                                | 27                                | 4700                                                                  | HU103M063P500A □□  |
| 80                    | 680                    | 22          | 25        | 220                               | 290                               | 1000                                                                  | HU681M080M250A □□  |
|                       | 820                    | 22          | 25        | 180                               | 240                               | 1150                                                                  | HU821M080M250A □□  |
|                       | 1000                   | 22          | 25        | 150                               | 200                               | 1290                                                                  | HU102M080M250A □□  |
|                       | 1200                   | 22          | 30        | 130                               | 170                               | 1630                                                                  | HU122M080M300A □□  |
|                       | 1200                   | 25          | 25        | 130                               | 170                               | 1650                                                                  | HU122M080N250A □□  |
|                       | 1500                   | 22          | 30        | 100                               | 130                               | 1750                                                                  | HU152M080M300A □□  |
|                       | 1500                   | 25          | 25        | 100                               | 130                               | 1760                                                                  | HU152M080N250A □□  |
|                       | 1800                   | 22          | 35        | 85                                | 110                               | 1830                                                                  | HU182M080M350A □□  |
|                       | 1800                   | 25          | 30        | 85                                | 110                               | 1860                                                                  | HU182M080N300A □□  |
|                       | 1800                   | 30          | 25        | 85                                | 110                               | 1870                                                                  | HU182M080O250A □□  |
|                       | 2200                   | 22          | 40        | 70                                | 90                                | 2090                                                                  | HU222M080M400A □□  |
|                       | 2200                   | 25          | 35        | 70                                | 90                                | 2100                                                                  | HU222M080N350A □□  |
|                       | 2200                   | 30          | 25        | 70                                | 90                                | 2110                                                                  | HU222M080O250A □□  |
|                       | 2700                   | 25          | 40        | 57                                | 74                                | 2430                                                                  | HU272M080N400A □□  |
|                       | 2700                   | 30          | 30        | 57                                | 74                                | 2440                                                                  | HU272M080O300A □□  |
|                       | 3300                   | 25          | 45        | 46                                | 60                                | 2760                                                                  | HU332M080N450A □□  |
|                       | 3300                   | 30          | 35        | 46                                | 60                                | 2790                                                                  | HU332M080O350A □□  |
|                       | 3300                   | 35          | 30        | 46                                | 60                                | 2800                                                                  | HU332M080P300A □□  |
|                       | 3900                   | 25          | 50        | 39                                | 51                                | 3090                                                                  | HU392M080N500A □□  |
|                       | 3900                   | 30          | 40        | 39                                | 51                                | 3120                                                                  | HU392M080O400A □□  |
|                       | 3900                   | 35          | 30        | 39                                | 51                                | 3130                                                                  | HU392M080P300A □□  |
|                       | 4700                   | 30          | 45        | 33                                | 42                                | 3520                                                                  | HU472M080O450A □□  |
|                       | 4700                   | 35          | 35        | 33                                | 42                                | 3530                                                                  | HU472M080P350A □□  |
|                       | 5600                   | 30          | 50        | 27                                | 36                                | 3800                                                                  | HU562M080O500A □□  |
|                       | 5600                   | 35          | 40        | 27                                | 36                                | 3870                                                                  | HU562M080P400A □□  |
| 100                   | 6800                   | 35          | 45        | 23                                | 29                                | 4190                                                                  | HU682M080P450A □□  |
|                       | 330                    | 22          | 20        | 460                               | 600                               | 800                                                                   | HU331M100M200A □□  |
|                       | 470                    | 22          | 25        | 320                               | 420                               | 920                                                                   | HU471M100M250A □□  |
|                       | 470                    | 25          | 20        | 320                               | 420                               | 1000                                                                  | HU471M100N200A □□  |
|                       | 560                    | 22          | 25        | 280                               | 360                               | 1100                                                                  | HU561M100M250A □□  |
|                       | 680                    | 22          | 30        | 220                               | 290                               | 1220                                                                  | HU681M100M300A □□  |
|                       | 680                    | 25          | 25        | 220                               | 290                               | 1240                                                                  | HU681M100N250A □□  |
|                       | 820                    | 22          | 30        | 180                               | 240                               | 1880                                                                  | HU821M100M300A □□  |
|                       | 820                    | 25          | 25        | 180                               | 240                               | 1960                                                                  | HU821M100N250A □□  |
|                       | 1000                   | 22          | 30        | 150                               | 200                               | 1930                                                                  | HU102M100M300A □□  |
|                       | 1000                   | 25          | 25        | 150                               | 200                               | 1920                                                                  | HU102M100N250A □□  |
|                       | 1200                   | 22          | 40        | 130                               | 170                               | 2080                                                                  | HU122M100M400A □□  |
|                       | 1200                   | 25          | 30        | 130                               | 170                               | 2080                                                                  | HU122M100N300A □□  |
|                       | 1200                   | 30          | 25        | 130                               | 170                               | 2080                                                                  | HU122M100O250A □□  |
|                       | 1500                   | 22          | 45        | 100                               | 130                               | 2150                                                                  | HU152M100M450A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 100                   | 1500                   | 25          | 35        | 100                               | 130                               | 2150                                                                  | HU152M100N350A     |
|                       | 1500                   | 30          | 30        | 100                               | 130                               | 2150                                                                  | HU152M100O300A     |
|                       | 1500                   | 35          | 25        | 100                               | 130                               | 2150                                                                  | HU152M100P250A     |
|                       | 1800                   | 25          | 40        | 85                                | 110                               | 2370                                                                  | HU182M100N400A     |
|                       | 1800                   | 30          | 35        | 85                                | 110                               | 2370                                                                  | HU182M100O350A     |
|                       | 2200                   | 25          | 50        | 70                                | 90                                | 2650                                                                  | HU222M100N500A     |
|                       | 2200                   | 30          | 35        | 70                                | 90                                | 2610                                                                  | HU222M100O350A     |
|                       | 2200                   | 35          | 30        | 70                                | 90                                | 2750                                                                  | HU222M100P300A     |
|                       | 2700                   | 25          | 50        | 57                                | 74                                | 2760                                                                  | HU272M100N500A     |
|                       | 2700                   | 30          | 45        | 57                                | 74                                | 2960                                                                  | HU272M100O450A     |
|                       | 2700                   | 35          | 35        | 57                                | 74                                | 2960                                                                  | HU272M100P350A     |
|                       | 3300                   | 30          | 50        | 46                                | 60                                | 3340                                                                  | HU332M100O500A     |
|                       | 3300                   | 35          | 40        | 46                                | 60                                | 3340                                                                  | HU332M100P400A     |
|                       | 3900                   | 35          | 45        | 39                                | 51                                | 3690                                                                  | HU392M100P450A     |
|                       | 4700                   | 35          | 50        | 33                                | 42                                | 4150                                                                  | HU472M100P500A     |
| 160                   | 220                    | 20          | 25        | 470                               | 900                               | 810                                                                   | HU221M160L250A     |
|                       | 220                    | 22          | 20        | 470                               | 900                               | 780                                                                   | HU221M160M200A     |
|                       | 270                    | 22          | 25        | 390                               | 740                               | 1010                                                                  | HU271M160M250A     |
|                       | 270                    | 25          | 20        | 390                               | 740                               | 1010                                                                  | HU271M160N200A     |
|                       | 330                    | 22          | 25        | 320                               | 600                               | 1170                                                                  | HU331M160M250A     |
|                       | 330                    | 25          | 20        | 320                               | 600                               | 1170                                                                  | HU331M160N200A     |
|                       | 390                    | 22          | 30        | 270                               | 510                               | 1430                                                                  | HU391M160M300A     |
|                       | 390                    | 25          | 25        | 270                               | 510                               | 1430                                                                  | HU391M160N250A     |
|                       | 470                    | 22          | 30        | 220                               | 420                               | 1520                                                                  | HU471M160M300A     |
|                       | 470                    | 25          | 25        | 220                               | 420                               | 1520                                                                  | HU471M160N250A     |
|                       | 470                    | 30          | 20        | 220                               | 420                               | 1530                                                                  | HU471M160O200A     |
|                       | 680                    | 22          | 40        | 150                               | 290                               | 1530                                                                  | HU681M160M400A     |
|                       | 680                    | 25          | 30        | 150                               | 290                               | 1530                                                                  | HU681M160N300A     |
|                       | 680                    | 30          | 25        | 150                               | 290                               | 1530                                                                  | HU681M160O250A     |
|                       | 680                    | 35          | 20        | 150                               | 290                               | 1560                                                                  | HU681M160P200A     |
|                       | 820                    | 22          | 45        | 130                               | 240                               | 1960                                                                  | HU821M160M450A     |
|                       | 820                    | 25          | 35        | 130                               | 240                               | 1960                                                                  | HU821M160N350A     |
|                       | 820                    | 30          | 30        | 130                               | 240                               | 1960                                                                  | HU821M160O300A     |
|                       | 820                    | 35          | 25        | 130                               | 240                               | 1960                                                                  | HU821M160P250A     |
|                       | 1000                   | 25          | 40        | 110                               | 200                               | 2230                                                                  | HU102M160N400A     |
|                       | 1200                   | 25          | 45        | 89                                | 170                               | 2400                                                                  | HU122M160N450A     |
|                       | 1200                   | 30          | 35        | 89                                | 170                               | 2400                                                                  | HU122M160O350A     |
|                       | 1200                   | 35          | 30        | 89                                | 170                               | 2400                                                                  | HU122M160P300A     |
|                       | 1500                   | 25          | 50        | 68                                | 130                               | 2600                                                                  | HU152M160N500A     |
|                       | 1500                   | 30          | 40        | 68                                | 130                               | 2600                                                                  | HU152M160O400A     |
|                       | 1500                   | 35          | 30        | 68                                | 130                               | 2600                                                                  | HU152M160P300A     |
|                       | 1800                   | 30          | 45        | 58                                | 110                               | 2820                                                                  | HU182M160O450A     |
|                       | 1800                   | 35          | 35        | 58                                | 110                               | 2820                                                                  | HU182M160P350A     |
|                       | 2200                   | 30          | 50        | 48                                | 90                                | 3320                                                                  | HU222M160O500A     |

: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 160                   | 2200                   | 35          | 45        | 48                                | 90                                | 3500                                                                  | HU222M160P450A □□  |
|                       | 2700                   | 35          | 50        | 39                                | 74                                | 3780                                                                  | HU272M160P500A □□  |
|                       | 3300                   | 35          | 55        | 32                                | 60                                | 3860                                                                  | HU332M160P550A □□  |
| 180                   | 180                    | 22          | 20        | 580                               | 1110                              | 760                                                                   | HU181M180M200A □□  |
|                       | 220                    | 25          | 20        | 470                               | 900                               | 900                                                                   | HU221M180N200A □□  |
|                       | 270                    | 22          | 25        | 390                               | 740                               | 1020                                                                  | HU271M180M250A □□  |
|                       | 270                    | 25          | 20        | 390                               | 740                               | 1030                                                                  | HU271M180N200A □□  |
|                       | 330                    | 20          | 30        | 320                               | 600                               | 1200                                                                  | HU331M180L300A □□  |
|                       | 330                    | 22          | 25        | 320                               | 600                               | 1200                                                                  | HU331M180M250A □□  |
|                       | 330                    | 25          | 20        | 320                               | 600                               | 1220                                                                  | HU331M180N200A □□  |
|                       | 390                    | 22          | 30        | 270                               | 510                               | 1320                                                                  | HU391M180M300A □□  |
|                       | 390                    | 25          | 25        | 270                               | 510                               | 1350                                                                  | HU391M180N250A □□  |
|                       | 390                    | 30          | 20        | 270                               | 510                               | 1350                                                                  | HU391M180O200A □□  |
|                       | 470                    | 22          | 35        | 220                               | 420                               | 1530                                                                  | HU471M180M350A □□  |
|                       | 470                    | 25          | 30        | 220                               | 420                               | 1540                                                                  | HU471M180N300A □□  |
|                       | 470                    | 30          | 25        | 220                               | 420                               | 1550                                                                  | HU471M180O250A □□  |
|                       | 560                    | 22          | 40        | 190                               | 360                               | 1670                                                                  | HU561M180M400A □□  |
|                       | 560                    | 25          | 30        | 190                               | 360                               | 1670                                                                  | HU561M180N300A □□  |
|                       | 560                    | 30          | 25        | 190                               | 360                               | 1670                                                                  | HU561M180O250A □□  |
|                       | 560                    | 35          | 20        | 190                               | 360                               | 1670                                                                  | HU561M180P200A □□  |
|                       | 680                    | 22          | 45        | 150                               | 290                               | 1780                                                                  | HU681M180M450A □□  |
|                       | 680                    | 25          | 35        | 150                               | 290                               | 1780                                                                  | HU681M180N350A □□  |
|                       | 680                    | 30          | 30        | 150                               | 290                               | 1780                                                                  | HU681M180O300A □□  |
|                       | 680                    | 35          | 25        | 150                               | 290                               | 1780                                                                  | HU681M180P250A □□  |
|                       | 820                    | 22          | 50        | 130                               | 240                               | 2090                                                                  | HU821M180M500A □□  |
|                       | 820                    | 25          | 40        | 130                               | 240                               | 2090                                                                  | HU821M180N400A □□  |
|                       | 820                    | 30          | 30        | 130                               | 240                               | 2090                                                                  | HU821M180O300A □□  |
|                       | 820                    | 35          | 25        | 130                               | 240                               | 2090                                                                  | HU821M180P250A □□  |
|                       | 1000                   | 22          | 50        | 110                               | 200                               | 2150                                                                  | HU102M180M500A □□  |
|                       | 1000                   | 25          | 45        | 110                               | 200                               | 2150                                                                  | HU102M180N450A □□  |
|                       | 1000                   | 30          | 35        | 110                               | 200                               | 2150                                                                  | HU102M180O350A □□  |
|                       | 1000                   | 35          | 30        | 110                               | 200                               | 2150                                                                  | HU102M180P300A □□  |
|                       | 1200                   | 22          | 60        | 89                                | 170                               | 2220                                                                  | HU122M180M600A □□  |
|                       | 1200                   | 25          | 50        | 89                                | 170                               | 2220                                                                  | HU122M180N500A □□  |
|                       | 1200                   | 30          | 40        | 89                                | 170                               | 2220                                                                  | HU122M180O400A □□  |
|                       | 1200                   | 35          | 30        | 89                                | 170                               | 2220                                                                  | HU122M180P300A □□  |
|                       | 1500                   | 25          | 50        | 68                                | 130                               | 2240                                                                  | HU152M180N500A □□  |
|                       | 1500                   | 30          | 45        | 68                                | 130                               | 2240                                                                  | HU152M180O450A □□  |
|                       | 1500                   | 35          | 35        | 68                                | 130                               | 2240                                                                  | HU152M180P350A □□  |
|                       | 1800                   | 30          | 50        | 58                                | 110                               | 2880                                                                  | HU182M180O500A □□  |
|                       | 1800                   | 35          | 35        | 58                                | 110                               | 2880                                                                  | HU182M180P350A □□  |
|                       | 1800                   | 35          | 40        | 58                                | 110                               | 2940                                                                  | HU182M180P400A □□  |
|                       | 2200                   | 30          | 55        | 48                                | 90                                | 3120                                                                  | HU222M180O550A □□  |
|                       | 2200                   | 35          | 45        | 48                                | 90                                | 3120                                                                  | HU222M180P450A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 180                   | 2200                   | 35          | 50        | 48                                | 90                                | 3230                                                                  | HU222M180P500A □□  |
|                       | 2200                   | 35          | 55        | 48                                | 90                                | 3320                                                                  | HU222M180P550A □□  |
|                       | 2700                   | 35          | 50        | 39                                | 74                                | 3810                                                                  | HU272M180P500A □□  |
| 200                   | 150                    | 20          | 20        | 700                               | 1330                              | 740                                                                   | HU151M200L200A □□  |
|                       | 180                    | 22          | 20        | 580                               | 1110                              | 760                                                                   | HU181M200M200A □□  |
|                       | 220                    | 20          | 25        | 470                               | 900                               | 1010                                                                  | HU221M200L250A □□  |
|                       | 220                    | 22          | 25        | 470                               | 900                               | 1050                                                                  | HU221M200M250A □□  |
|                       | 220                    | 25          | 20        | 470                               | 900                               | 1060                                                                  | HU221M200N200A □□  |
|                       | 270                    | 20          | 25        | 390                               | 740                               | 1070                                                                  | HU271M200L250A □□  |
|                       | 270                    | 22          | 25        | 390                               | 740                               | 1110                                                                  | HU271M200M250A □□  |
|                       | 330                    | 20          | 30        | 320                               | 600                               | 1210                                                                  | HU331M200L300A □□  |
|                       | 330                    | 22          | 30        | 320                               | 600                               | 1260                                                                  | HU331M200M300A □□  |
|                       | 330                    | 25          | 25        | 320                               | 600                               | 1270                                                                  | HU331M200N250A □□  |
|                       | 390                    | 20          | 35        | 270                               | 510                               | 1350                                                                  | HU391M200L350A □□  |
|                       | 390                    | 22          | 25        | 270                               | 510                               | 1350                                                                  | HU391M200M250A □□  |
|                       | 390                    | 22          | 30        | 270                               | 510                               | 1360                                                                  | HU391M200M300A □□  |
|                       | 390                    | 25          | 25        | 270                               | 510                               | 1370                                                                  | HU391M200N250A □□  |
|                       | 470                    | 20          | 40        | 220                               | 420                               | 1550                                                                  | HU471M200L400A □□  |
|                       | 470                    | 22          | 30        | 220                               | 420                               | 1560                                                                  | HU471M200M300A □□  |
|                       | 470                    | 22          | 35        | 220                               | 420                               | 1570                                                                  | HU471M200M350A □□  |
|                       | 470                    | 25          | 30        | 220                               | 420                               | 1580                                                                  | HU471M200N300A □□  |
|                       | 470                    | 30          | 25        | 220                               | 420                               | 1590                                                                  | HU471M200O250A □□  |
|                       | 560                    | 20          | 45        | 190                               | 360                               | 1730                                                                  | HU561M200L450A □□  |
|                       | 560                    | 22          | 35        | 190                               | 360                               | 1730                                                                  | HU561M200M350A □□  |
|                       | 560                    | 22          | 40        | 190                               | 360                               | 1770                                                                  | HU561M200M400A □□  |
|                       | 560                    | 25          | 30        | 190                               | 360                               | 1770                                                                  | HU561M200N300A □□  |
|                       | 560                    | 30          | 25        | 190                               | 360                               | 1770                                                                  | HU561M200O250A □□  |
|                       | 680                    | 22          | 40        | 150                               | 290                               | 2120                                                                  | HU681M200M400A □□  |
|                       | 680                    | 22          | 45        | 150                               | 290                               | 2150                                                                  | HU681M200M450A □□  |
|                       | 680                    | 25          | 35        | 150                               | 290                               | 2150                                                                  | HU681M200N350A □□  |
|                       | 680                    | 30          | 30        | 150                               | 290                               | 2150                                                                  | HU681M200O300A □□  |
|                       | 680                    | 35          | 25        | 150                               | 290                               | 2150                                                                  | HU681M200P250A □□  |
|                       | 820                    | 22          | 50        | 130                               | 240                               | 2190                                                                  | HU821M200M500A □□  |
|                       | 820                    | 25          | 45        | 130                               | 240                               | 2190                                                                  | HU821M200N450A □□  |
|                       | 820                    | 30          | 25        | 130                               | 240                               | 2200                                                                  | HU821M200O250A □□  |
|                       | 820                    | 30          | 30        | 130                               | 240                               | 2240                                                                  | HU821M200O300A □□  |
|                       | 820                    | 35          | 25        | 130                               | 240                               | 2240                                                                  | HU821M200P250A □□  |
|                       | 1000                   | 25          | 40        | 110                               | 200                               | 2240                                                                  | HU102M200N400A □□  |
|                       | 1000                   | 30          | 30        | 110                               | 200                               | 2240                                                                  | HU102M200O300A □□  |
|                       | 1000                   | 30          | 35        | 110                               | 200                               | 2500                                                                  | HU102M200O350A □□  |
|                       | 1000                   | 35          | 30        | 110                               | 200                               | 2500                                                                  | HU102M200P300A □□  |
|                       | 1200                   | 25          | 50        | 89                                | 170                               | 2950                                                                  | HU122M200N500A □□  |
|                       | 1200                   | 30          | 35        | 89                                | 170                               | 2700                                                                  | HU122M200O350A □□  |
|                       | 1200                   | 30          | 40        | 89                                | 170                               | 2950                                                                  | HU122M200O400A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 200                   | 1200                   | 35          | 30        | 89                                | 170                               | 2950                                                                  | HU122M200P300A □□  |
|                       | 1200                   | 35          | 35        | 89                                | 170                               | 3130                                                                  | HU122M200P350A □□  |
|                       | 1500                   | 30          | 50        | 68                                | 130                               | 3200                                                                  | HU152M200O500A □□  |
|                       | 1500                   | 35          | 40        | 68                                | 130                               | 3200                                                                  | HU152M200P400A □□  |
|                       | 1800                   | 30          | 50        | 58                                | 110                               | 3300                                                                  | HU182M200O500A □□  |
|                       | 1800                   | 35          | 40        | 58                                | 110                               | 3300                                                                  | HU182M200P400A □□  |
|                       | 1800                   | 35          | 45        | 58                                | 110                               | 3550                                                                  | HU182M200P450A □□  |
|                       | 2200                   | 35          | 45        | 48                                | 90                                | 3850                                                                  | HU222M200P450A □□  |
|                       | 2200                   | 35          | 50        | 48                                | 90                                | 4000                                                                  | HU222M200P500A □□  |
|                       | 2700                   | 35          | 55        | 39                                | 74                                | 4300                                                                  | HU272M200P550A □□  |
| 220                   | 150                    | 20          | 20        | 700                               | 1330                              | 710                                                                   | HU151M220L200A □□  |
|                       | 180                    | 22          | 20        | 580                               | 1110                              | 770                                                                   | HU181M220M200A □□  |
|                       | 220                    | 20          | 30        | 470                               | 900                               | 1070                                                                  | HU221M220L300A □□  |
|                       | 220                    | 22          | 25        | 470                               | 900                               | 1070                                                                  | HU221M220M250A □□  |
|                       | 270                    | 20          | 35        | 390                               | 740                               | 1160                                                                  | HU271M220L350A □□  |
|                       | 270                    | 22          | 30        | 390                               | 740                               | 1170                                                                  | HU271M220M300A □□  |
|                       | 270                    | 25          | 25        | 390                               | 740                               | 1180                                                                  | HU271M220N250A □□  |
|                       | 330                    | 20          | 35        | 320                               | 600                               | 1270                                                                  | HU331M220L350A □□  |
|                       | 330                    | 22          | 35        | 320                               | 600                               | 1280                                                                  | HU331M220M350A □□  |
|                       | 330                    | 25          | 25        | 320                               | 600                               | 1280                                                                  | HU331M220N250A □□  |
|                       | 330                    | 30          | 20        | 320                               | 600                               | 1300                                                                  | HU331M220O200A □□  |
|                       | 390                    | 20          | 40        | 270                               | 510                               | 1350                                                                  | HU391M220L400A □□  |
|                       | 390                    | 22          | 35        | 270                               | 510                               | 1410                                                                  | HU391M220M350A □□  |
|                       | 390                    | 25          | 30        | 270                               | 510                               | 1420                                                                  | HU391M220N300A □□  |
|                       | 470                    | 20          | 45        | 220                               | 420                               | 1630                                                                  | HU471M220L450A □□  |
|                       | 470                    | 22          | 40        | 220                               | 420                               | 1650                                                                  | HU471M220M400A □□  |
|                       | 470                    | 25          | 35        | 220                               | 420                               | 1650                                                                  | HU471M220N350A □□  |
|                       | 470                    | 30          | 25        | 220                               | 420                               | 1640                                                                  | HU471M220O250A □□  |
|                       | 560                    | 22          | 40        | 190                               | 360                               | 1790                                                                  | HU561M220M400A □□  |
|                       | 560                    | 22          | 45        | 190                               | 360                               | 1810                                                                  | HU561M220M450A □□  |
|                       | 560                    | 25          | 40        | 190                               | 360                               | 1830                                                                  | HU561M220N400A □□  |
|                       | 560                    | 30          | 30        | 190                               | 360                               | 1840                                                                  | HU561M220O300A □□  |
|                       | 680                    | 25          | 45        | 150                               | 290                               | 2230                                                                  | HU681M220N450A □□  |
|                       | 680                    | 30          | 35        | 150                               | 290                               | 2230                                                                  | HU681M220O350A □□  |
|                       | 680                    | 35          | 25        | 150                               | 290                               | 2230                                                                  | HU681M220P250A □□  |
|                       | 820                    | 25          | 50        | 130                               | 240                               | 2250                                                                  | HU821M220N500A □□  |
|                       | 820                    | 30          | 40        | 130                               | 240                               | 2250                                                                  | HU821M220O400A □□  |
|                       | 820                    | 35          | 30        | 130                               | 240                               | 2250                                                                  | HU821M220P300A □□  |
|                       | 1000                   | 25          | 55        | 110                               | 200                               | 2280                                                                  | HU102M220N550A □□  |
|                       | 1000                   | 30          | 45        | 110                               | 200                               | 2280                                                                  | HU102M220O450A □□  |
|                       | 1000                   | 35          | 35        | 110                               | 200                               | 2280                                                                  | HU102M220P350A □□  |
|                       | 1200                   | 30          | 50        | 89                                | 170                               | 2320                                                                  | HU122M220O500A □□  |
|                       | 1200                   | 35          | 40        | 89                                | 170                               | 2320                                                                  | HU122M220P400A □□  |
|                       | 1500                   | 30          | 55        | 68                                | 130                               | 3130                                                                  | HU152M220O550A □□  |
|                       | 1500                   | 35          | 45        | 68                                | 130                               | 3230                                                                  | HU152M220P450A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 220                   | 1800                   | 35          | 50        | 58                                | 110                               | 3890                                                                  | HU182M220P500A □□  |
|                       | 2200                   | 35          | 60        | 48                                | 90                                | 3950                                                                  | HU222M220P600A □□  |
| 250                   | 150                    | 20          | 20        | 700                               | 1330                              | 670                                                                   | HU151M250L200A □□  |
|                       | 150                    | 22          | 25        | 700                               | 1330                              | 760                                                                   | HU151M250M250A □□  |
|                       | 150                    | 25          | 20        | 700                               | 1330                              | 770                                                                   | HU151M250N200A □□  |
|                       | 180                    | 22          | 25        | 580                               | 1110                              | 790                                                                   | HU181M250M250A □□  |
|                       | 180                    | 25          | 25        | 580                               | 1110                              | 910                                                                   | HU181M250N250A □□  |
|                       | 220                    | 22          | 25        | 470                               | 900                               | 1110                                                                  | HU221M250M250A □□  |
|                       | 220                    | 25          | 25        | 470                               | 900                               | 1120                                                                  | HU221M250N250A □□  |
|                       | 270                    | 22          | 30        | 390                               | 740                               | 1220                                                                  | HU271M250M300A □□  |
|                       | 270                    | 25          | 30        | 390                               | 740                               | 1250                                                                  | HU271M250N300A □□  |
|                       | 270                    | 30          | 25        | 390                               | 740                               | 1250                                                                  | HU271M250O250A □□  |
|                       | 330                    | 22          | 35        | 320                               | 600                               | 1440                                                                  | HU331M250M350A □□  |
|                       | 330                    | 25          | 25        | 320                               | 600                               | 1430                                                                  | HU331M250N250A □□  |
|                       | 330                    | 25          | 30        | 320                               | 600                               | 1450                                                                  | HU331M250N300A □□  |
|                       | 330                    | 30          | 25        | 320                               | 600                               | 1450                                                                  | HU331M250O250A □□  |
|                       | 390                    | 22          | 35        | 270                               | 510                               | 1720                                                                  | HU391M250M350A □□  |
|                       | 390                    | 22          | 40        | 270                               | 510                               | 1750                                                                  | HU391M250M400A □□  |
|                       | 390                    | 25          | 35        | 270                               | 510                               | 1770                                                                  | HU391M250N350A □□  |
|                       | 390                    | 30          | 25        | 270                               | 510                               | 1780                                                                  | HU391M250O250A □□  |
|                       | 470                    | 22          | 40        | 220                               | 420                               | 1850                                                                  | HU471M250M400A □□  |
|                       | 470                    | 22          | 45        | 220                               | 420                               | 1860                                                                  | HU471M250M450A □□  |
|                       | 470                    | 25          | 40        | 220                               | 420                               | 1870                                                                  | HU471M250N400A □□  |
|                       | 470                    | 30          | 35        | 220                               | 420                               | 1880                                                                  | HU471M250O350A □□  |
|                       | 470                    | 35          | 30        | 220                               | 420                               | 1890                                                                  | HU471M250P300A □□  |
|                       | 560                    | 22          | 45        | 190                               | 360                               | 2160                                                                  | HU561M250M450A □□  |
|                       | 560                    | 25          | 45        | 190                               | 360                               | 2170                                                                  | HU561M250N450A □□  |
|                       | 560                    | 30          | 30        | 190                               | 360                               | 2180                                                                  | HU561M250O300A □□  |
|                       | 560                    | 35          | 25        | 190                               | 360                               | 2190                                                                  | HU561M250P250A □□  |
|                       | 680                    | 22          | 50        | 150                               | 290                               | 2250                                                                  | HU681M250M500A □□  |
|                       | 680                    | 25          | 40        | 150                               | 290                               | 2250                                                                  | HU681M250N400A □□  |
|                       | 680                    | 30          | 30        | 150                               | 290                               | 2250                                                                  | HU681M250O300A □□  |
|                       | 680                    | 30          | 35        | 150                               | 290                               | 2400                                                                  | HU681M250O350A □□  |
|                       | 680                    | 35          | 30        | 150                               | 290                               | 2400                                                                  | HU681M250P300A □□  |
|                       | 820                    | 25          | 50        | 130                               | 240                               | 2520                                                                  | HU821M250N500A □□  |
|                       | 820                    | 30          | 40        | 130                               | 240                               | 2520                                                                  | HU821M250O400A □□  |
|                       | 820                    | 35          | 35        | 130                               | 240                               | 2520                                                                  | HU821M250P350A □□  |
|                       | 1000                   | 30          | 40        | 110                               | 200                               | 2750                                                                  | HU102M250O400A □□  |
|                       | 1000                   | 30          | 50        | 110                               | 200                               | 2880                                                                  | HU102M250O500A □□  |
|                       | 1000                   | 35          | 40        | 110                               | 200                               | 2880                                                                  | HU102M250P400A □□  |
|                       | 1200                   | 30          | 50        | 89                                | 170                               | 3150                                                                  | HU122M250O500A □□  |
|                       | 1200                   | 30          | 60        | 89                                | 170                               | 3350                                                                  | HU122M250O600A □□  |
|                       | 1200                   | 35          | 45        | 89                                | 170                               | 3280                                                                  | HU122M250P450A □□  |
|                       | 1500                   | 35          | 45        | 68                                | 130                               | 3760                                                                  | HU152M250P450A □□  |
|                       | 1800                   | 35          | 50        | 58                                | 110                               | 4060                                                                  | HU182M250P500A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 315                   | 68                     | 22          | 20        | 1540                              | 2930                              | 480                                                                   | HU680M315M200A □□  |
|                       | 82                     | 22          | 20        | 1280                              | 2430                              | 520                                                                   | HU820M315M200A □□  |
|                       | 100                    | 25          | 20        | 1050                              | 1990                              | 580                                                                   | HU101M315N200A □□  |
|                       | 120                    | 22          | 25        | 870                               | 1660                              | 760                                                                   | HU121M315M250A □□  |
|                       | 120                    | 30          | 20        | 870                               | 1660                              | 770                                                                   | HU121M315O200A □□  |
|                       | 150                    | 22          | 30        | 700                               | 1330                              | 830                                                                   | HU151M315M300A □□  |
|                       | 150                    | 25          | 25        | 700                               | 1330                              | 850                                                                   | HU151M315N250A □□  |
|                       | 150                    | 30          | 20        | 700                               | 1330                              | 860                                                                   | HU151M315O200A □□  |
|                       | 180                    | 22          | 30        | 580                               | 1110                              | 930                                                                   | HU181M315M300A □□  |
|                       | 180                    | 25          | 25        | 580                               | 1110                              | 950                                                                   | HU181M315N250A □□  |
|                       | 220                    | 22          | 40        | 470                               | 900                               | 1170                                                                  | HU221M315M400A □□  |
|                       | 220                    | 25          | 30        | 470                               | 900                               | 1140                                                                  | HU221M315N300A □□  |
|                       | 220                    | 30          | 25        | 470                               | 900                               | 1140                                                                  | HU221M315O250A □□  |
|                       | 270                    | 22          | 45        | 390                               | 740                               | 1280                                                                  | HU271M315M450A □□  |
|                       | 270                    | 25          | 35        | 390                               | 740                               | 1260                                                                  | HU271M315N350A □□  |
|                       | 270                    | 30          | 25        | 390                               | 740                               | 1270                                                                  | HU271M315O250A □□  |
|                       | 330                    | 22          | 50        | 320                               | 600                               | 1490                                                                  | HU331M315M500A □□  |
|                       | 330                    | 25          | 40        | 320                               | 600                               | 1490                                                                  | HU331M315N400A □□  |
|                       | 330                    | 30          | 30        | 320                               | 600                               | 1490                                                                  | HU331M315O300A □□  |
|                       | 330                    | 35          | 25        | 320                               | 600                               | 1490                                                                  | HU331M315P250A □□  |
|                       | 390                    | 25          | 45        | 270                               | 510                               | 1860                                                                  | HU391M315N450A □□  |
|                       | 390                    | 30          | 35        | 270                               | 510                               | 1860                                                                  | HU391M315O350A □□  |
|                       | 390                    | 35          | 30        | 270                               | 510                               | 1860                                                                  | HU391M315P300A □□  |
|                       | 470                    | 25          | 50        | 220                               | 420                               | 1960                                                                  | HU471M315N500A □□  |
|                       | 470                    | 30          | 40        | 220                               | 420                               | 1970                                                                  | HU471M315O400A □□  |
|                       | 470                    | 35          | 35        | 220                               | 420                               | 1990                                                                  | HU471M315P350A □□  |
|                       | 560                    | 30          | 45        | 190                               | 360                               | 2350                                                                  | HU561M315O450A □□  |
|                       | 560                    | 35          | 35        | 190                               | 360                               | 2360                                                                  | HU561M315P350A □□  |
|                       | 680                    | 30          | 50        | 150                               | 290                               | 2370                                                                  | HU681M315O500A □□  |
|                       | 680                    | 35          | 40        | 150                               | 290                               | 2370                                                                  | HU681M315P400A □□  |
|                       | 820                    | 35          | 45        | 130                               | 240                               | 2380                                                                  | HU821M315P450A □□  |
|                       | 1000                   | 35          | 45        | 110                               | 200                               | 2460                                                                  | HU102M315P450A □□  |
| 350                   | 56                     | 22          | 20        | 1870                              | 3550                              | 420                                                                   | HU560M350M200A □□  |
|                       | 68                     | 25          | 20        | 1540                              | 2930                              | 520                                                                   | HU680M350N200A □□  |
|                       | 82                     | 25          | 20        | 1280                              | 2430                              | 550                                                                   | HU820M350N200A □□  |
|                       | 100                    | 22          | 30        | 1050                              | 1990                              | 710                                                                   | HU101M350M300A □□  |
|                       | 120                    | 25          | 25        | 870                               | 1660                              | 770                                                                   | HU121M350N250A □□  |
|                       | 120                    | 30          | 20        | 870                               | 1660                              | 770                                                                   | HU121M350O200A □□  |
|                       | 150                    | 22          | 30        | 700                               | 1330                              | 870                                                                   | HU151M350M300A □□  |
|                       | 150                    | 25          | 25        | 700                               | 1330                              | 870                                                                   | HU151M350N250A □□  |
|                       | 150                    | 30          | 20        | 700                               | 1330                              | 890                                                                   | HU151M350O200A □□  |
|                       | 180                    | 22          | 35        | 580                               | 1110                              | 950                                                                   | HU181M350M350A □□  |
|                       | 180                    | 25          | 30        | 580                               | 1110                              | 960                                                                   | HU181M350N300A □□  |
|                       | 180                    | 30          | 25        | 580                               | 1110                              | 1050                                                                  | HU181M350O250A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 350                   | 220                    | 22          | 45        | 470                               | 900                               | 1250                                                                  | HU221M350M450A □□  |
|                       | 220                    | 25          | 35        | 470                               | 900                               | 1260                                                                  | HU221M350N350A □□  |
|                       | 220                    | 35          | 25        | 470                               | 900                               | 1280                                                                  | HU221M350P250A □□  |
|                       | 270                    | 22          | 50        | 390                               | 740                               | 1300                                                                  | HU271M350M500A □□  |
|                       | 270                    | 25          | 40        | 390                               | 740                               | 1310                                                                  | HU271M350N400A □□  |
|                       | 270                    | 30          | 30        | 390                               | 740                               | 1310                                                                  | HU271M350O300A □□  |
|                       | 270                    | 35          | 25        | 390                               | 740                               | 1320                                                                  | HU271M350P250A □□  |
|                       | 330                    | 25          | 45        | 320                               | 600                               | 1520                                                                  | HU331M350N450A □□  |
|                       | 330                    | 30          | 35        | 320                               | 600                               | 1540                                                                  | HU331M350O350A □□  |
|                       | 330                    | 35          | 30        | 320                               | 600                               | 1550                                                                  | HU331M350P300A □□  |
|                       | 390                    | 25          | 50        | 270                               | 510                               | 1940                                                                  | HU391M350N500A □□  |
|                       | 390                    | 30          | 35        | 270                               | 510                               | 1880                                                                  | HU391M350O350A □□  |
|                       | 390                    | 35          | 30        | 270                               | 510                               | 1880                                                                  | HU391M350P300A □□  |
|                       | 470                    | 25          | 50        | 220                               | 420                               | 2100                                                                  | HU471M350N500A □□  |
|                       | 470                    | 30          | 40        | 220                               | 420                               | 2100                                                                  | HU471M350O400A □□  |
|                       | 470                    | 35          | 40        | 220                               | 420                               | 2100                                                                  | HU471M350P400A □□  |
|                       | 560                    | 30          | 45        | 190                               | 360                               | 2390                                                                  | HU561M350O450A □□  |
|                       | 560                    | 35          | 40        | 190                               | 360                               | 2390                                                                  | HU561M350P400A □□  |
|                       | 680                    | 30          | 50        | 150                               | 290                               | 2400                                                                  | HU681M350O500A □□  |
|                       | 680                    | 35          | 40        | 150                               | 290                               | 2410                                                                  | HU681M350P400A □□  |
| 385                   | 820                    | 35          | 45        | 130                               | 240                               | 2450                                                                  | HU821M350P450A □□  |
|                       | 33                     | 22          | 20        | 3170                              | 6030                              | 200                                                                   | HU330M385M200A □□  |
|                       | 39                     | 20          | 20        | 2680                              | 5100                              | 350                                                                   | HU390M385L200A □□  |
|                       | 56                     | 22          | 20        | 1870                              | 3550                              | 430                                                                   | HU560M385M200A □□  |
|                       | 68                     | 22          | 25        | 1540                              | 2930                              | 520                                                                   | HU680M385M250A □□  |
|                       | 68                     | 25          | 20        | 1540                              | 2930                              | 520                                                                   | HU680M385N200A □□  |
|                       | 82                     | 22          | 25        | 1280                              | 2430                              | 640                                                                   | HU820M385M250A □□  |
|                       | 82                     | 25          | 20        | 1280                              | 2430                              | 640                                                                   | HU820M385N200A □□  |
|                       | 100                    | 22          | 25        | 1050                              | 1990                              | 690                                                                   | HU101M385M250A □□  |
|                       | 100                    | 22          | 30        | 1050                              | 1990                              | 750                                                                   | HU101M385M300A □□  |
|                       | 100                    | 25          | 25        | 1050                              | 1990                              | 750                                                                   | HU101M385N250A □□  |
|                       | 120                    | 22          | 35        | 870                               | 1660                              | 800                                                                   | HU121M385M350A □□  |
|                       | 120                    | 25          | 25        | 870                               | 1660                              | 800                                                                   | HU121M385N250A □□  |
|                       | 120                    | 30          | 20        | 870                               | 1660                              | 800                                                                   | HU121M385O200A □□  |
|                       | 150                    | 22          | 35        | 700                               | 1330                              | 920                                                                   | HU151M385M350A □□  |
|                       | 150                    | 25          | 35        | 700                               | 1330                              | 920                                                                   | HU151M385N350A □□  |
|                       | 150                    | 30          | 30        | 700                               | 1330                              | 920                                                                   | HU151M385O300A □□  |
|                       | 180                    | 22          | 35        | 580                               | 1110                              | 1220                                                                  | HU181M385M350A □□  |
|                       | 180                    | 22          | 40        | 580                               | 1110                              | 1250                                                                  | HU181M385M400A □□  |
|                       | 180                    | 25          | 30        | 580                               | 1110                              | 1320                                                                  | HU181M385N300A □□  |
|                       | 180                    | 30          | 30        | 580                               | 1110                              | 1340                                                                  | HU181M385O300A □□  |
|                       | 180                    | 35          | 25        | 580                               | 1110                              | 1340                                                                  | HU181M385P250A □□  |
|                       | 270                    | 30          | 30        | 390                               | 740                               | 1470                                                                  | HU271M385O300A □□  |
|                       | 270                    | 35          | 30        | 390                               | 740                               | 1480                                                                  | HU271M385P300A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 385                   | 390                    | 25          | 50        | 270                               | 510                               | 1950                                                                  | HU391M385N500A □□  |
|                       | 390                    | 30          | 40        | 270                               | 510                               | 1950                                                                  | HU391M385O400A □□  |
|                       | 390                    | 35          | 30        | 270                               | 510                               | 1950                                                                  | HU391M385P300A □□  |
|                       | 470                    | 30          | 50        | 220                               | 420                               | 2320                                                                  | HU471M385O500A □□  |
|                       | 470                    | 35          | 35        | 220                               | 420                               | 2320                                                                  | HU471M385P350A □□  |
|                       | 680                    | 30          | 55        | 150                               | 290                               | 2550                                                                  | HU681M385O550A □□  |
|                       | 680                    | 35          | 50        | 150                               | 290                               | 2550                                                                  | HU681M385P500A □□  |
|                       | 820                    | 35          | 55        | 130                               | 240                               | 2650                                                                  | HU821M385P550A □□  |
| 400                   | 47                     | 22          | 20        | 2230                              | 4230                              | 400                                                                   | HU470M400M200A □□  |
|                       | 56                     | 22          | 20        | 1870                              | 3550                              | 440                                                                   | HU560M400M200A □□  |
|                       | 68                     | 22          | 25        | 1540                              | 2930                              | 530                                                                   | HU680M400M250A □□  |
|                       | 68                     | 25          | 20        | 1540                              | 2930                              | 530                                                                   | HU680M400N200A □□  |
|                       | 82                     | 22          | 25        | 1280                              | 2430                              | 580                                                                   | HU820M400M250A □□  |
|                       | 82                     | 25          | 20        | 1280                              | 2430                              | 580                                                                   | HU820M400N200A □□  |
|                       | 82                     | 25          | 25        | 1280                              | 2430                              | 630                                                                   | HU820M400N250A □□  |
|                       | 100                    | 22          | 25        | 1050                              | 1990                              | 660                                                                   | HU101M400M250A □□  |
|                       | 100                    | 22          | 30        | 1050                              | 1990                              | 690                                                                   | HU101M400M300A □□  |
|                       | 100                    | 25          | 25        | 1050                              | 1990                              | 690                                                                   | HU101M400N250A □□  |
|                       | 120                    | 22          | 30        | 870                               | 1660                              | 760                                                                   | HU121M400M300A □□  |
|                       | 120                    | 22          | 35        | 870                               | 1660                              | 810                                                                   | HU121M400M350A □□  |
|                       | 120                    | 25          | 25        | 870                               | 1660                              | 810                                                                   | HU121M400N250A □□  |
|                       | 120                    | 25          | 30        | 870                               | 1660                              | 840                                                                   | HU121M400N300A □□  |
|                       | 120                    | 30          | 20        | 870                               | 1660                              | 810                                                                   | HU121M400O200A □□  |
|                       | 120                    | 30          | 25        | 870                               | 1660                              | 840                                                                   | HU121M400O250A □□  |
|                       | 150                    | 22          | 35        | 700                               | 1330                              | 900                                                                   | HU151M400M350A □□  |
|                       | 150                    | 22          | 40        | 700                               | 1330                              | 950                                                                   | HU151M400M400A □□  |
|                       | 150                    | 25          | 25        | 700                               | 1330                              | 900                                                                   | HU151M400N250A □□  |
|                       | 150                    | 25          | 30        | 700                               | 1330                              | 950                                                                   | HU151M400N300A □□  |
|                       | 150                    | 30          | 20        | 700                               | 1330                              | 900                                                                   | HU151M400O200A □□  |
|                       | 150                    | 30          | 25        | 700                               | 1330                              | 950                                                                   | HU151M400O250A □□  |
|                       | 180                    | 22          | 35        | 580                               | 1110                              | 990                                                                   | HU181M400M350A □□  |
|                       | 180                    | 22          | 40        | 580                               | 1110                              | 1050                                                                  | HU181M400M400A □□  |
|                       | 180                    | 22          | 45        | 580                               | 1110                              | 1100                                                                  | HU181M400M450A □□  |
|                       | 180                    | 25          | 30        | 580                               | 1110                              | 1050                                                                  | HU181M400N300A □□  |
|                       | 180                    | 25          | 35        | 580                               | 1110                              | 1100                                                                  | HU181M400N350A □□  |
|                       | 180                    | 30          | 30        | 580                               | 1110                              | 1050                                                                  | HU181M400O300A □□  |
|                       | 180                    | 35          | 25        | 580                               | 1110                              | 1050                                                                  | HU181M400P250A □□  |
|                       | 220                    | 22          | 45        | 470                               | 900                               | 1120                                                                  | HU221M400M450A □□  |
|                       | 220                    | 22          | 50        | 470                               | 900                               | 1160                                                                  | HU221M400M500A □□  |
|                       | 220                    | 25          | 35        | 470                               | 900                               | 1120                                                                  | HU221M400N350A □□  |
|                       | 220                    | 25          | 40        | 470                               | 900                               | 1160                                                                  | HU221M400N400A □□  |
|                       | 220                    | 25          | 45        | 470                               | 900                               | 1160                                                                  | HU221M400N450A □□  |
|                       | 220                    | 30          | 25        | 470                               | 900                               | 1120                                                                  | HU221M400O250A □□  |
|                       | 220                    | 30          | 30        | 470                               | 900                               | 1160                                                                  | HU221M400O300A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 400                   | 220                    | 30          | 35        | 470                               | 900                               | 1190                                                                  | HU221M400O350A □□  |
|                       | 220                    | 35          | 25        | 470                               | 900                               | 1160                                                                  | HU221M400P250A □□  |
|                       | 270                    | 22          | 50        | 390                               | 740                               | 1290                                                                  | HU271M400M500A □□  |
|                       | 270                    | 25          | 40        | 390                               | 740                               | 1290                                                                  | HU271M400N400A □□  |
|                       | 270                    | 25          | 45        | 390                               | 740                               | 1320                                                                  | HU271M400N450A □□  |
|                       | 270                    | 25          | 50        | 390                               | 740                               | 1380                                                                  | HU271M400N500A □□  |
|                       | 270                    | 30          | 30        | 390                               | 740                               | 1290                                                                  | HU271M400O300A □□  |
|                       | 270                    | 30          | 35        | 390                               | 740                               | 1320                                                                  | HU271M400O350A □□  |
|                       | 270                    | 35          | 30        | 390                               | 740                               | 1380                                                                  | HU271M400P300A □□  |
|                       | 330                    | 25          | 45        | 320                               | 600                               | 1460                                                                  | HU331M400N450A □□  |
|                       | 330                    | 25          | 50        | 320                               | 600                               | 1530                                                                  | HU331M400N500A □□  |
|                       | 330                    | 30          | 35        | 320                               | 600                               | 1480                                                                  | HU331M400O350A □□  |
|                       | 330                    | 30          | 40        | 320                               | 600                               | 1550                                                                  | HU331M400O400A □□  |
|                       | 330                    | 35          | 30        | 320                               | 600                               | 1550                                                                  | HU331M400P300A □□  |
|                       | 330                    | 35          | 35        | 320                               | 600                               | 1590                                                                  | HU331M400P350A □□  |
|                       | 390                    | 25          | 45        | 270                               | 510                               | 1610                                                                  | HU391M400N450A □□  |
|                       | 390                    | 30          | 40        | 270                               | 510                               | 1670                                                                  | HU391M400O400A □□  |
|                       | 390                    | 30          | 45        | 270                               | 510                               | 1760                                                                  | HU391M400O450A □□  |
|                       | 390                    | 35          | 30        | 270                               | 510                               | 1670                                                                  | HU391M400P300A □□  |
|                       | 390                    | 35          | 35        | 270                               | 510                               | 1760                                                                  | HU391M400P350A □□  |
|                       | 390                    | 35          | 40        | 270                               | 510                               | 1830                                                                  | HU391M400P400A □□  |
|                       | 470                    | 30          | 45        | 220                               | 420                               | 1930                                                                  | HU471M400O450A □□  |
|                       | 470                    | 30          | 50        | 220                               | 420                               | 2020                                                                  | HU471M400O500A □□  |
|                       | 470                    | 35          | 30        | 220                               | 420                               | 1670                                                                  | HU471M400P300A □□  |
|                       | 470                    | 35          | 35        | 220                               | 420                               | 1930                                                                  | HU471M400P350A □□  |
|                       | 470                    | 35          | 40        | 220                               | 420                               | 2010                                                                  | HU471M400P400A □□  |
|                       | 560                    | 30          | 50        | 190                               | 360                               | 2210                                                                  | HU561M400O500A □□  |
|                       | 560                    | 35          | 40        | 190                               | 360                               | 2210                                                                  | HU561M400P400A □□  |
|                       | 560                    | 35          | 45        | 190                               | 360                               | 2300                                                                  | HU561M400P450A □□  |
|                       | 560                    | 35          | 50        | 190                               | 360                               | 2410                                                                  | HU561M400P500A □□  |
|                       | 680                    | 30          | 55        | 150                               | 290                               | 2530                                                                  | HU681M400O550A □□  |
|                       | 680                    | 35          | 40        | 150                               | 290                               | 2530                                                                  | HU681M400P400A □□  |
|                       | 680                    | 35          | 50        | 150                               | 290                               | 2650                                                                  | HU681M400P500A □□  |
|                       | 820                    | 35          | 55        | 130                               | 240                               | 2900                                                                  | HU821M400P550A □□  |
|                       | 820                    | 35          | 60        | 170                               | 320                               | 2950                                                                  | HU821M400P600A □□  |
|                       | 1000                   | 35          | 60        | 140                               | 270                               | 3000                                                                  | HU102M400P600A □□  |
|                       | 1200                   | 35          | 70        | 120                               | 220                               | 3120                                                                  | HU122M400P700A □□  |
| 420                   | 47                     | 22          | 20        | 2050                              | 3900                              | 400                                                                   | HU470M420M200A □□  |
|                       | 56                     | 22          | 20        | 1700                              | 3230                              | 440                                                                   | HU560M420M200A □□  |
|                       | 68                     | 22          | 25        | 1700                              | 3230                              | 540                                                                   | HU680M420M250A □□  |
|                       | 68                     | 25          | 20        | 1390                              | 2650                              | 540                                                                   | HU680M420N200A □□  |
|                       | 82                     | 22          | 25        | 1390                              | 2650                              | 580                                                                   | HU820M420M250A □□  |
|                       | 82                     | 25          | 25        | 1390                              | 2650                              | 630                                                                   | HU820M420N250A □□  |
|                       | 100                    | 22          | 25        | 1390                              | 2650                              | 660                                                                   | HU101M420M250A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 420                   | 100                    | 22          | 30        | 1160                              | 2210                              | 690                                                                   | HU101M420M300A □□  |
|                       | 100                    | 25          | 25        | 1160                              | 2210                              | 690                                                                   | HU101M420N250A □□  |
|                       | 100                    | 30          | 20        | 1160                              | 2210                              | 690                                                                   | HU101M420O200A □□  |
|                       | 120                    | 22          | 30        | 1160                              | 2210                              | 760                                                                   | HU121M420M300A □□  |
|                       | 120                    | 22          | 35        | 1160                              | 2210                              | 810                                                                   | HU121M420M350A □□  |
|                       | 120                    | 25          | 25        | 1160                              | 2210                              | 810                                                                   | HU121M420N250A □□  |
|                       | 120                    | 25          | 30        | 930                               | 1770                              | 830                                                                   | HU121M420N300A □□  |
|                       | 120                    | 30          | 25        | 930                               | 1770                              | 830                                                                   | HU121M420O250A □□  |
|                       | 120                    | 35          | 20        | 930                               | 1770                              | 830                                                                   | HU121M420P200A □□  |
|                       | 150                    | 22          | 35        | 930                               | 1770                              | 900                                                                   | HU151M420M350A □□  |
|                       | 150                    | 22          | 40        | 930                               | 1770                              | 960                                                                   | HU151M420M400A □□  |
|                       | 150                    | 25          | 30        | 770                               | 1470                              | 960                                                                   | HU151M420N300A □□  |
|                       | 150                    | 25          | 35        | 770                               | 1470                              | 970                                                                   | HU151M420N350A □□  |
|                       | 150                    | 30          | 25        | 770                               | 1470                              | 970                                                                   | HU151M420O250A □□  |
|                       | 180                    | 25          | 35        | 640                               | 1210                              | 1060                                                                  | HU181M420N350A □□  |
|                       | 180                    | 30          | 30        | 640                               | 1210                              | 1110                                                                  | HU181M420O300A □□  |
|                       | 180                    | 35          | 25        | 640                               | 1210                              | 1110                                                                  | HU181M420P250A □□  |
|                       | 220                    | 22          | 45        | 640                               | 1210                              | 1110                                                                  | HU221M420M450A □□  |
|                       | 220                    | 22          | 50        | 640                               | 1210                              | 1160                                                                  | HU221M420M500A □□  |
|                       | 220                    | 25          | 35        | 640                               | 1210                              | 1110                                                                  | HU221M420N350A □□  |
|                       | 220                    | 25          | 45        | 640                               | 1210                              | 1190                                                                  | HU221M420N450A □□  |
|                       | 220                    | 30          | 30        | 520                               | 980                               | 1120                                                                  | HU221M420O300A □□  |
|                       | 220                    | 30          | 35        | 520                               | 980                               | 1190                                                                  | HU221M420O350A □□  |
|                       | 220                    | 35          | 25        | 520                               | 980                               | 1190                                                                  | HU221M420P250A □□  |
|                       | 270                    | 25          | 40        | 520                               | 980                               | 1250                                                                  | HU271M420N400A □□  |
|                       | 270                    | 30          | 30        | 520                               | 980                               | 1250                                                                  | HU271M420O300A □□  |
|                       | 270                    | 30          | 35        | 520                               | 980                               | 1320                                                                  | HU271M420O350A □□  |
|                       | 270                    | 30          | 40        | 420                               | 800                               | 1390                                                                  | HU271M420O400A □□  |
|                       | 270                    | 35          | 25        | 420                               | 800                               | 1320                                                                  | HU271M420P250A □□  |
|                       | 270                    | 35          | 30        | 420                               | 800                               | 1390                                                                  | HU271M420P300A □□  |
|                       | 330                    | 25          | 50        | 420                               | 800                               | 1530                                                                  | HU331M420N500A □□  |
|                       | 330                    | 30          | 35        | 420                               | 800                               | 1460                                                                  | HU331M420O350A □□  |
|                       | 330                    | 30          | 40        | 420                               | 800                               | 1530                                                                  | HU331M420O400A □□  |
|                       | 330                    | 30          | 45        | 360                               | 680                               | 1620                                                                  | HU331M420O450A □□  |
|                       | 330                    | 35          | 30        | 360                               | 680                               | 1620                                                                  | HU331M420P300A □□  |
|                       | 330                    | 35          | 35        | 360                               | 680                               | 1630                                                                  | HU331M420P350A □□  |
|                       | 390                    | 30          | 40        | 360                               | 680                               | 1670                                                                  | HU391M420O400A □□  |
|                       | 390                    | 30          | 45        | 360                               | 680                               | 1760                                                                  | HU391M420O450A □□  |
|                       | 390                    | 30          | 50        | 290                               | 560                               | 1840                                                                  | HU391M420O500A □□  |
|                       | 390                    | 35          | 35        | 290                               | 560                               | 1770                                                                  | HU391M420P350A □□  |
|                       | 390                    | 35          | 40        | 290                               | 560                               | 1840                                                                  | HU391M420P400A □□  |
|                       | 470                    | 30          | 50        | 290                               | 560                               | 2020                                                                  | HU471M420O500A □□  |
|                       | 470                    | 30          | 60        | 250                               | 470                               | 2190                                                                  | HU471M420O600A □□  |
|                       | 470                    | 35          | 40        | 250                               | 470                               | 2010                                                                  | HU471M420P400A □□  |

□□: See description at end of standard ratings

## STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 420                   | 470                    | 35          | 45        | 210                               | 390                               | 2110                                                                  | HU471M420P450A □□  |
|                       | 560                    | 35          | 45        | 210                               | 390                               | 2300                                                                  | HU561M420P450A □□  |
|                       | 560                    | 35          | 50        | 170                               | 320                               | 2410                                                                  | HU561M420P500A □□  |
|                       | 680                    | 35          | 50        | 170                               | 320                               | 2410                                                                  | HU681M420P500A □□  |
|                       | 680                    | 35          | 55        | 170                               | 320                               | 2760                                                                  | HU681M420P550A □□  |
|                       | 820                    | 30          | 60        | 170                               | 320                               | 2900                                                                  | HU821M420O600A □□  |
|                       | 820                    | 35          | 55        | 140                               | 270                               | 2950                                                                  | HU821M420P550A □□  |
|                       | 820                    | 35          | 60        | 120                               | 220                               | 3000                                                                  | HU821M420P600A □□  |
| 450                   | 56                     | 22          | 25        | 2490                              | 4740                              | 470                                                                   | HU560M450M250A □□  |
|                       | 68                     | 22          | 25        | 2050                              | 3900                              | 520                                                                   | HU680M450M250A □□  |
|                       | 68                     | 22          | 30        | 2050                              | 3900                              | 560                                                                   | HU680M450M300A □□  |
|                       | 68                     | 25          | 25        | 2050                              | 3900                              | 570                                                                   | HU680M450N250A □□  |
|                       | 82                     | 22          | 25        | 1700                              | 3230                              | 560                                                                   | HU820M450M250A □□  |
|                       | 82                     | 22          | 30        | 1700                              | 3230                              | 620                                                                   | HU820M450M300A □□  |
|                       | 82                     | 25          | 25        | 1700                              | 3230                              | 620                                                                   | HU820M450N250A □□  |
|                       | 100                    | 22          | 30        | 1390                              | 2650                              | 680                                                                   | HU101M450M300A □□  |
|                       | 100                    | 22          | 35        | 1390                              | 2650                              | 730                                                                   | HU101M450M350A □□  |
|                       | 100                    | 25          | 25        | 1390                              | 2650                              | 730                                                                   | HU101M450N250A □□  |
|                       | 100                    | 25          | 30        | 1390                              | 2650                              | 760                                                                   | HU101M450N300A □□  |
|                       | 100                    | 30          | 25        | 1390                              | 2650                              | 760                                                                   | HU101M450O250A □□  |
|                       | 120                    | 22          | 35        | 1160                              | 2210                              | 800                                                                   | HU121M450M350A □□  |
|                       | 120                    | 22          | 40        | 1160                              | 2210                              | 840                                                                   | HU121M450M400A □□  |
|                       | 120                    | 25          | 30        | 1160                              | 2210                              | 840                                                                   | HU121M450N300A □□  |
|                       | 120                    | 25          | 35        | 1160                              | 2210                              | 860                                                                   | HU121M450N350A □□  |
|                       | 120                    | 30          | 25        | 1160                              | 2210                              | 860                                                                   | HU121M450O250A □□  |
|                       | 150                    | 22          | 40        | 930                               | 1770                              | 940                                                                   | HU151M450M400A □□  |
|                       | 150                    | 22          | 45        | 930                               | 1770                              | 990                                                                   | HU151M450M450A □□  |
|                       | 150                    | 25          | 30        | 930                               | 1770                              | 940                                                                   | HU151M450N300A □□  |
|                       | 150                    | 25          | 35        | 930                               | 1770                              | 990                                                                   | HU151M450N350A □□  |
|                       | 150                    | 25          | 40        | 930                               | 1770                              | 1010                                                                  | HU151M450N400A □□  |
|                       | 150                    | 30          | 25        | 930                               | 1770                              | 990                                                                   | HU151M450O250A □□  |
|                       | 150                    | 30          | 30        | 930                               | 1770                              | 1010                                                                  | HU151M450O300A □□  |
|                       | 150                    | 35          | 25        | 930                               | 1770                              | 1010                                                                  | HU151M450P250A □□  |
|                       | 180                    | 25          | 35        | 770                               | 1470                              | 1050                                                                  | HU181M450N350A □□  |
|                       | 180                    | 25          | 40        | 770                               | 1470                              | 1110                                                                  | HU181M450N400A □□  |
|                       | 180                    | 25          | 45        | 770                               | 1470                              | 1180                                                                  | HU181M450N450A □□  |
|                       | 180                    | 30          | 30        | 770                               | 1470                              | 1120                                                                  | HU181M450O300A □□  |
|                       | 180                    | 30          | 35        | 770                               | 1470                              | 1180                                                                  | HU181M450O350A □□  |
|                       | 180                    | 35          | 25        | 770                               | 1470                              | 1180                                                                  | HU181M450P250A □□  |
|                       | 220                    | 22          | 50        | 640                               | 1210                              | 1160                                                                  | HU221M450M500A □□  |
|                       | 220                    | 25          | 40        | 640                               | 1210                              | 1160                                                                  | HU221M450N400A □□  |
|                       | 220                    | 25          | 45        | 640                               | 1210                              | 1190                                                                  | HU221M450N450A □□  |
|                       | 220                    | 25          | 50        | 640                               | 1210                              | 1250                                                                  | HU221M450N500A □□  |
|                       | 220                    | 30          | 30        | 640                               | 1210                              | 1160                                                                  | HU221M450O300A □□  |

□□: See description at end of standard ratings

# STANDARD RATINGS

| V <sub>R</sub><br>(V) | C <sub>R</sub><br>(μF) | ø D<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(mΩ) | Max. ESR<br>+20°C • 120Hz<br>(mΩ) | I <sub>R</sub> • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|-----------------------|------------------------|-------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------------------------------------------|--------------------|
| 450                   | 220                    | 30          | 35        | 640                               | 1210                              | 1190                                                                  | HU221M450O350A □□  |
|                       | 220                    | 30          | 40        | 640                               | 1210                              | 1250                                                                  | HU221M450O400A □□  |
|                       | 220                    | 35          | 25        | 640                               | 1210                              | 1190                                                                  | HU221M450P250A □□  |
|                       | 220                    | 35          | 30        | 640                               | 1210                              | 1250                                                                  | HU221M450P300A □□  |
|                       | 270                    | 25          | 50        | 520                               | 980                               | 1380                                                                  | HU271M450N500A □□  |
|                       | 270                    | 30          | 30        | 520                               | 980                               | 1180                                                                  | HU271M450O300A □□  |
|                       | 270                    | 30          | 35        | 520                               | 980                               | 1320                                                                  | HU271M450O350A □□  |
|                       | 270                    | 30          | 40        | 520                               | 980                               | 1390                                                                  | HU271M450O400A □□  |
|                       | 270                    | 30          | 45        | 520                               | 980                               | 1460                                                                  | HU271M450O450A □□  |
|                       | 270                    | 35          | 30        | 520                               | 980                               | 1400                                                                  | HU271M450P300A □□  |
|                       | 270                    | 35          | 35        | 520                               | 980                               | 1470                                                                  | HU271M450P350A □□  |
|                       | 330                    | 30          | 40        | 420                               | 800                               | 1540                                                                  | HU331M450O400A □□  |
|                       | 330                    | 30          | 45        | 420                               | 800                               | 1620                                                                  | HU331M450O450A □□  |
|                       | 330                    | 30          | 50        | 420                               | 800                               | 1690                                                                  | HU331M450O500A □□  |
|                       | 330                    | 35          | 35        | 420                               | 800                               | 1630                                                                  | HU331M450P350A □□  |
|                       | 330                    | 35          | 40        | 420                               | 800                               | 1700                                                                  | HU331M450P400A □□  |
|                       | 390                    | 30          | 50        | 360                               | 680                               | 1840                                                                  | HU391M450O500A □□  |
|                       | 390                    | 35          | 40        | 360                               | 680                               | 1860                                                                  | HU391M450P400A □□  |
|                       | 390                    | 35          | 45        | 360                               | 680                               | 1920                                                                  | HU391M450P450A □□  |
|                       | 470                    | 35          | 40        | 290                               | 560                               | 2010                                                                  | HU471M450P400A □□  |
|                       | 470                    | 35          | 45        | 290                               | 560                               | 2110                                                                  | HU471M450P450A □□  |
|                       | 560                    | 30          | 60        | 250                               | 470                               | 2390                                                                  | HU561M450O600A □□  |
|                       | 560                    | 35          | 50        | 250                               | 470                               | 2410                                                                  | HU561M450P500A □□  |
|                       | 560                    | 35          | 55        | 250                               | 470                               | 2510                                                                  | HU561M450P550A □□  |
|                       | 680                    | 35          | 50        | 210                               | 390                               | 2650                                                                  | HU681M450P500A □□  |
|                       | 680                    | 35          | 55        | 210                               | 390                               | 2760                                                                  | HU681M450P550A □□  |
| 500                   | 39                     | 22          | 25        | 3580                              | 6800                              | 360                                                                   | HU390M500M250A □□  |
|                       | 47                     | 22          | 25        | 2970                              | 5640                              | 400                                                                   | HU470M500M250A □□  |
|                       | 56                     | 22          | 30        | 2490                              | 4740                              | 470                                                                   | HU560M500M300A □□  |
|                       | 68                     | 22          | 30        | 2050                              | 3900                              | 520                                                                   | HU680M500M300A □□  |
|                       | 68                     | 25          | 25        | 2050                              | 3900                              | 530                                                                   | HU680M500N250A □□  |
|                       | 82                     | 22          | 35        | 1700                              | 3230                              | 610                                                                   | HU820M500M350A □□  |
|                       | 82                     | 25          | 30        | 1700                              | 3230                              | 620                                                                   | HU820M500N300A □□  |
|                       | 82                     | 30          | 25        | 1700                              | 3230                              | 650                                                                   | HU820M500O250A □□  |
|                       | 100                    | 22          | 40        | 1390                              | 2650                              | 710                                                                   | HU101M500M400A □□  |
|                       | 100                    | 25          | 35        | 1390                              | 2650                              | 720                                                                   | HU101M500N350A □□  |
|                       | 100                    | 30          | 25        | 1390                              | 2650                              | 700                                                                   | HU101M500O250A □□  |
|                       | 120                    | 22          | 45        | 1160                              | 2210                              | 700                                                                   | HU121M500M450A □□  |
|                       | 120                    | 25          | 35        | 1160                              | 2210                              | 700                                                                   | HU121M500N350A □□  |
|                       | 120                    | 30          | 30        | 1160                              | 2210                              | 820                                                                   | HU121M500O300A □□  |
|                       | 120                    | 35          | 30        | 1160                              | 2210                              | 910                                                                   | HU121M500P300A □□  |
|                       | 150                    | 22          | 50        | 930                               | 1770                              | 960                                                                   | HU151M500M500A □□  |
|                       | 150                    | 25          | 45        | 930                               | 1770                              | 980                                                                   | HU151M500N450A □□  |
|                       | 150                    | 30          | 35        | 930                               | 1770                              | 980                                                                   | HU151M500O350A □□  |

□□: See description at end of standard ratings

### STANDARD RATINGS

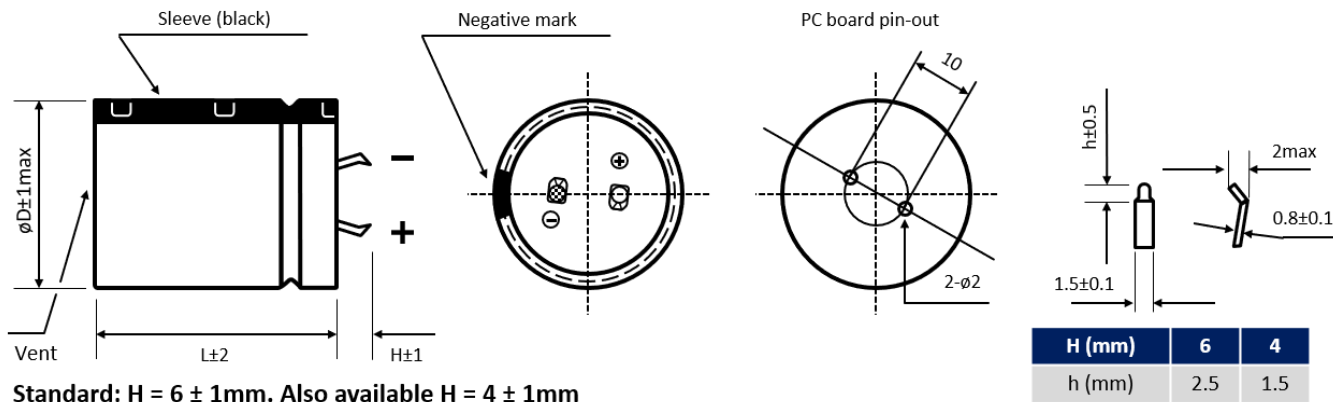
| $V_R$<br>(V) | $C_R$<br>( $\mu F$ ) | $\phi D$<br>(mm) | L<br>(mm) | Typ. ESR<br>+20°C • 120Hz<br>(m $\Omega$ ) | Max. ESR<br>+20°C • 120Hz<br>(m $\Omega$ ) | $I_R$ • Max.<br>Ripple Current<br>+105°C • 120Hz<br>(mA rms) | CapXon Part Number |
|--------------|----------------------|------------------|-----------|--------------------------------------------|--------------------------------------------|--------------------------------------------------------------|--------------------|
| 500          | 150                  | 35               | 30        | 930                                        | 1770                                       | 980                                                          | HU151M500P300A □□  |
|              | 180                  | 25               | 50        | 770                                        | 1470                                       | 1130                                                         | HU181M500N500A □□  |
|              | 180                  | 30               | 40        | 770                                        | 1470                                       | 1130                                                         | HU181M500O400A □□  |
|              | 180                  | 35               | 30        | 770                                        | 1470                                       | 1130                                                         | HU181M500P300A □□  |
|              | 220                  | 30               | 45        | 640                                        | 1210                                       | 1320                                                         | HU221M500O450A □□  |
|              | 220                  | 35               | 35        | 640                                        | 1210                                       | 1320                                                         | HU221M500P350A □□  |
|              | 270                  | 30               | 50        | 520                                        | 980                                        | 1530                                                         | HU271M500O500A □□  |
|              | 270                  | 35               | 40        | 520                                        | 980                                        | 1530                                                         | HU271M500P400A □□  |
|              | 330                  | 35               | 45        | 420                                        | 800                                        | 1770                                                         | HU331M500P450A □□  |
|              | 390                  | 35               | 50        | 360                                        | 680                                        | 1880                                                         | HU391M500P500A □□  |
|              | 470                  | 35               | 55        | 290                                        | 560                                        | 2200                                                         | HU471M500P550A □□  |

□□: Enter **P6** for standard type • 6mm pin length  
 □□: Enter **Z6** for 3-pin type • 6mm pin length  
 □□: Enter **Y6** for multipin-type • 6mm pin length

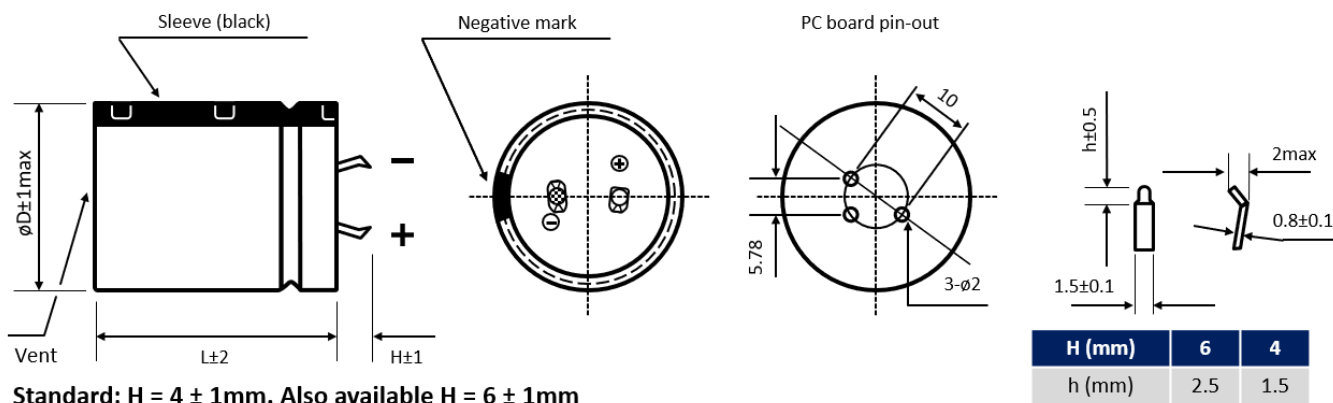
□□: Enter **P4** for standard type • 4mm pin length  
 □□: Enter **Z4** for 3-pin type • 4mm pin length  
 □□: Enter **Y4** for multipin type • 4mm pin length

### DIMENSIONS • All dimensions in mm

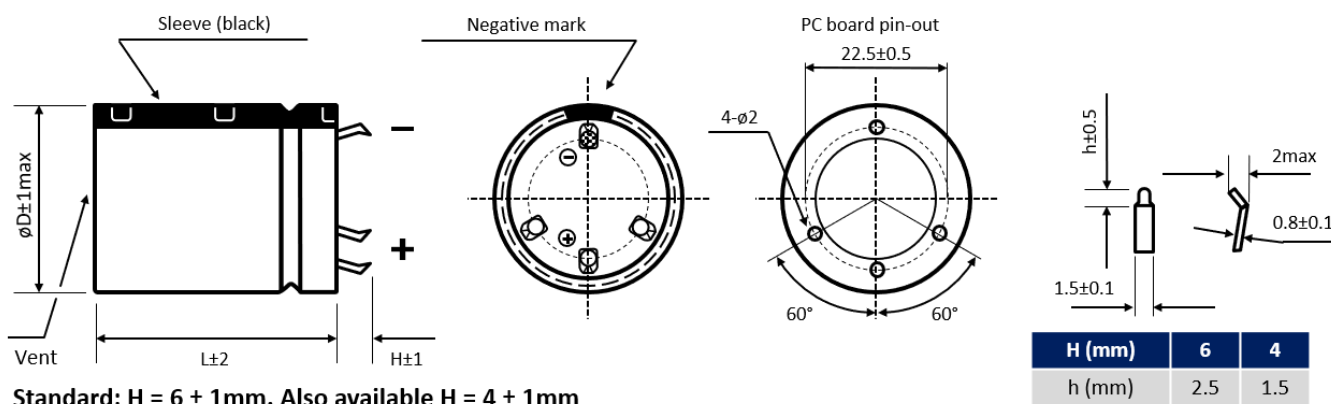
#### 2-pin version • Standard type



#### 3-pin version • Polarity protection



Multipin version ▪ Diameter  $\varnothing D \geq 30$  mm



**Further possible terminal styles can be found in our packaging information liquid snap-in.**

## MULTIPLIER $K_f$ for RIPPLE CURRENT vs. FREQUENCY

| $V_R$ (V) / Frequency (Hz) | 50/60 | 100/120 | 300  | 1k   | 10k  | 50k - 100k |
|----------------------------|-------|---------|------|------|------|------------|
| $10 \leq V_R \leq 100$     | 0.88  | 1       | 1.07 | 1.15 | 1.15 | 1.15       |
| $160 \leq V_R \leq 250$    | 0.81  | 1       | 1.17 | 1.32 | 1.45 | 1.5        |
| $315 \leq V_R \leq 500$    | 0.77  | 1       | 1.16 | 1.3  | 1.41 | 1.43       |

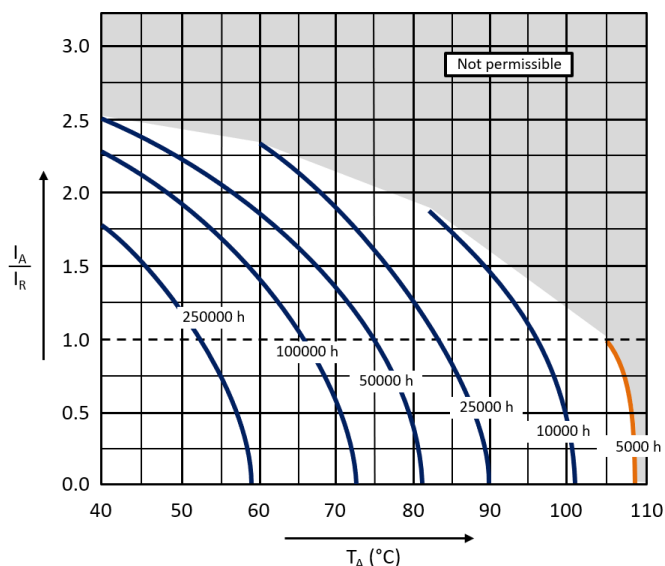
## PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

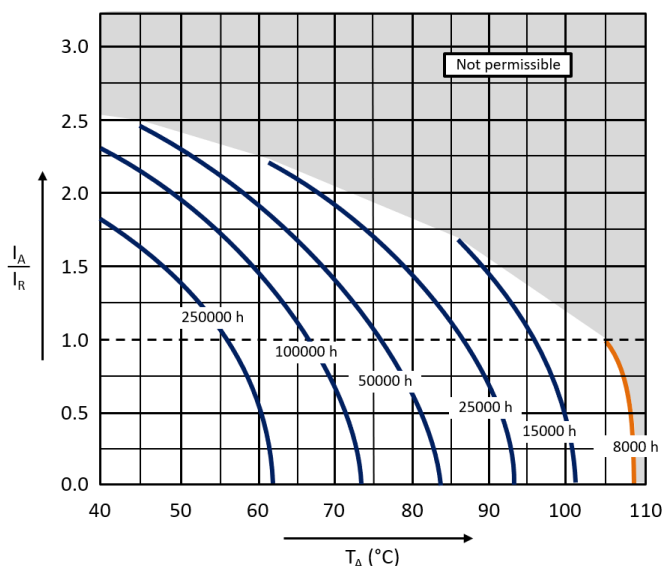
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| <a href="#">General Precautions &amp; Guidelines</a>                                | <a href="#">Packaging Information</a>                                               | <a href="#">Vibration Test Profiles</a>                                             | <a href="#">3D Models</a>                                                            | <a href="#">Reliability Tests</a>                                                     |

### USEFUL LIFE

$V_R \leq 100V$



$V_R \geq 160V$



With:  $I_A$ : Application current  
 $I_R$ : Rated ripple current (A RMS)  
 $T_A$ : Application temperature of the capacitor

#### DISCLAIMER

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

Except for the written expressed warranties, CapXon does not impliedly, by assumption or whatever else, warrant, undertake, promise any other warranty or guaranty for any CapXon product.

For further information, please visit our website [www.capxongroup.com](http://www.capxongroup.com) or contact CapXon directly.