

PX SERIES ■ LOW PROFILE TYPE

KEY FEATURES



- **SOLID CONDUCTIVE POLYMER** • THT type
- Low profile for space critical applications
- Endurance: 105°C • 2 000 hours
- Large permissible ripple current
- No dry-out effect guarantees extremely long life

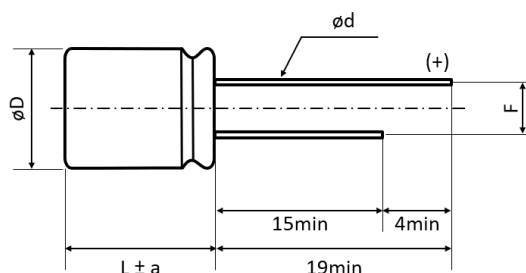


SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +105°C
Rated Voltage Range	V_R	2.5 ~ 25V DC
Surge Voltage	V_S	($V_R \leq 20V$): $V_S = 1.15 \cdot V_R$ ($V_R \geq 25V$): $V_S = 1.10 \cdot V_R$
Capacitance Range	C_R	6.8 ~ 820µF
Cap. Tolerance	ΔC	±20% (120Hz • 20°C)
Leakage Current (20°C • V_R applied)	I_{LEAK}	Not to exceed the values shown in standard ratings After 2 minutes
Dissipation Factor % (20°C • 120Hz)	$\tan \delta$	Not to exceed the values shown in standard ratings
Equivalent Series Resistance (20°C • 100kHz)	ESR	Not to exceed the values shown in standard ratings

Lifetime Test		
Endurance 105°C (V_R applied)	Test	2 000 hours
	$\Delta C/C_R$	Within ±20% of the initial value
	$\tan \delta$	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	I_{Leak}	Less than the specified value
Moisture Resistance stored at 60°C (RH 90 ~ 95%)	Test	1 000 hours
	$\Delta C/C_R$	Within ±20% of the initial value
	$\tan \delta$	Not to exceed 150% of the value specified
	ESR	Not to exceed 150% of the value specified
	I_{Leak}	Less than the specified value

DIMENSIONS ■ All dimensions in mm



ø D	L	øD+0.5max	a	F±0.5	ød±0.05
4	5 and 7	4	1	1.5	0.45
4	10	5	1	1.5	0.5
5	5 and 7	5	1	2	0.45
5	8 and 9	5	1	2	0.5
5	11	5	1	2	0.6
6.3	5.2 and 7	6.3	1	2.5	0.45
6.3	9	6.3	1	2.5	0.5
6.3	11	6.3	1	2.5	0.6

STANDARD RATINGS

Part number shows tape version with straight leads

V _R (V)	C _R (μF)	ø D (mm)	L (mm)	I _{LEAK} (μA, 2min)	tanδ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (mΩ)	I _R • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
2.5	100	4	5	300	8	30	1670	PX101M2R5B050PTF
	150	5	5	300	8	30	1970	PX151M2R5C050PTB
	150	6.3	5.2	300	8	30	2200	PX151M2R5E052PTC
	180	5	5	300	8	30	1970	PX181M2R5C050PTB
	220	5	5	300	8	30	2200	PX221M2R5C050PTB
	330	6.3	5.2	300	8	25	2610	PX331M2R5E052PTC
	390	6.3	5.2	300	8	20	2690	PX391M2R5E052PTC
	390	6.3	7	300	8	15	3100	PX391M2R5E070PTC
	470	6.3	5.2	300	8	20	2690	PX471M2R5E052PTC
	470	6.3	7	300	8	15	3100	PX471M2R5E070PTC
	560	5	9	300	8	15	3100	PX561M2R5C090PTB
	560	6.3	7	300	8	15	3100	PX561M2R5E070PTC
	680	6.3	11	300	8	15	3500	PX681M2R5E110PTC
	100	5	5	300	8	30	1970	PX101M004C050PTB
4	100	6.3	5.2	300	8	30	2200	PX101M004E052PTC
	150	6.3	7	300	8	25	2670	PX151M004E070PTC
	220	6.3	7	300	8	20	2690	PX221M004E070PTC
	270	6.3	5.2	300	8	25	2610	PX271M004E052PTC
	270	6.3	9	300	8	15	3300	PX271M004E090PTC
	330	6.3	5.2	300	8	20	2690	PX331M004E052PTC
	330	6.3	7	300	8	15	3100	PX331M004E070PTC
	390	6.3	9	300	8	15	3300	PX391M004E090PTC
	470	6.3	7	300	8	15	3100	PX471M004E070PTC
	560	6.3	11	300	8	15	3500	PX561M004E110PTC
	82	6.3	5.2	300	8	30	2200	PX820M6R3E052PTC
6.3	100	6.3	5.2	300	8	25	2390	PX101M6R3E052PTC
	100	6.3	7	300	8	20	2690	PX101M6R3E070PTC
	150	4	7	300	8	35	1900	PX151M6R3B070PTF
	220	5	7	300	8	20	2450	PX221M6R3C070PTB
	220	5	8	300	8	15	2690	PX221M6R3C080PTB
	220	6.3	5.2	300	8	20	2690	PX221M6R3E052PTC
	220	6.3	7	300	8	15	3100	PX221M6R3E070PTC
	220	6.3	9	300	8	15	3300	PX221M6R3E090PTC
	270	5	7	300	8	20	2450	PX271M6R3C070PTB
	270	5	8	300	8	15	2690	PX271M6R3C080PTB
	330	5	8	300	8	15	2690	PX331M6R3C080PTB
	330	5	9	300	8	15	3100	PX331M6R3C090PTB
	330	6.3	5.2	300	8	20	2690	PX331M6R3E052PTC
	330	6.3	9	300	8	15	3300	PX331M6R3E090PTC
	390	5	9	300	8	15	3100	PX391M6R3C090PTB
	390	6.3	11	300	8	15	3500	PX391M6R3E110PTC
	470	6.3	7	300	8	15	3100	PX471M6R3E070PTC
	680	6.3	9	300	8	15	3300	PX681M6R3E090PTC
	680	6.3	11	300	8	15	3500	PX681M6R3E110PTC
	820	6.3	11	300	8	15	3500	PX821M6R3E110PTC

See "PACKAGING INFORMATION" for pin treatment options.

STANDARD RATINGS

Part number shows tape version with straight leads

V _R (V)	C _R (μF)	ø D (mm)	L (mm)	I _{LEAK} (μA, 2min)	tanδ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (mΩ)	I _R • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
10	10	4	5	300	8	80	1200	PX100M010B050PTF
	22	4	5	300	8	80	1200	PX220M010B050PTF
	33	5	5	300	8	45	1670	PX330M010C050PTB
	33	6.3	5.2	300	8	30	2200	PX330M010E052PTC
	33	6.3	7	300	8	25	2410	PX330M010E070PTC
	39	5	5	300	8	45	1670	PX390M010C050PTB
	47	6.3	5.2	300	8	30	2200	PX470M010E052PTC
	47	6.3	7	300	8	20	2690	PX470M010E070PTC
	47	6.3	9	300	8	18	3100	PX470M010E090PTC
	56	6.3	5.2	300	8	30	2200	PX560M010E052PTC
	68	6.3	9	300	8	18	3100	PX680M010E090PTC
	82	6.3	5.2	300	8	30	2200	PX820M010E052PTC
	100	6.3	5.2	300	8	30	2200	PX101M010E052PTC
	100	6.3	9	300	8	18	3100	PX101M010E090PTC
	150	5	7	300	8	25	2100	PX151M010C070PTB
	150	6.3	5.2	300	8	25	2200	PX151M010E052PTC
	150	6.3	9	300	8	18	3100	PX151M010E090PTC
	180	5	11	300	8	20	2690	PX181M010C110PTB
	220	5	11	300	8	20	2690	PX221M010C110PTB
	220	6.3	9	300	8	15	3300	PX221M010E090PTC
	270	5	11	300	8	20	2690	PX271M010C110PTB
	270	6.3	7	300	8	20	3100	PX271M010E070PTC
	270	6.3	11	300	8	15	3500	PX271M010E110PTC
	330	6.3	9	300	8	15	3300	PX331M010E090PTC
	470	6.3	9	300	8	15	3300	PX471M010E090PTC
	470	6.3	11	300	8	15	3500	PX471M010E110PTC
16	10	6.3	5.2	300	8	30	2200	PX100M016E052PTC
	22	6.3	5.2	300	8	30	2200	PX220M016E052PTC
	22	6.3	7	300	8	25	2610	PX220M016E070PTC
	33	6.3	5.2	300	8	30	2200	PX330M016E052PTC
	33	6.3	7	300	8	25	2610	PX330M016E070PTC
	39	6.3	5.2	300	8	30	2200	PX390M016E052PTC
	47	6.3	5.2	300	8	30	2200	PX470M016E052PTC
	47	6.3	7	300	8	25	2610	PX470M016E070PTC
	82	6.3	7	300	8	20	2690	PX820M016E070PTC
	100	5	11	300	8	20	2690	PX101M016C110PTB
	100	6.3	5.2	300	8	30	2200	PX101M016E052PTC
	100	6.3	9	300	8	20	2900	PX101M016E090PTC
	100	6.3	11	300	8	15	3500	PX101M016E110PTC
	150	6.3	7	300	8	20	2690	PX151M016E070PTC
	180	6.3	9	300	8	20	3100	PX181M016E090PTC
	220	6.3	9	300	8	20	3100	PX221M016E090PTC
	220	6.3	11	300	8	15	3500	PX221M016E110PTC
	270	6.3	11	300	8	15	3500	PX271M016E110PTC
	330	6.3	9	300	8	15	3100	PX331M016E090PTC

See "PACKAGING INFORMATION" for pin treatment options.

STANDARD RATINGS

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V_R (V)	C_R (μF)	ϕD (mm)	L (mm)	I_{LEAK} (μA , 2min)	$\tan\delta$ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (m Ω)	I_R • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
20	10	6.3	5.2	300	8	30	2200	PX100M020E052PTC
	15	6.3	7	300	8	25	2670	PX150M020E070PTC
	22	6.3	5.2	300	8	30	2200	PX220M020E052PTC
	22	6.3	7	300	8	25	2670	PX220M020E070PTC
	33	6.3	7	300	8	25	2670	PX330M020E070PTC
	33	6.3	9	300	8	20	2900	PX330M020E090PTC
	47	6.3	7	300	8	25	2670	PX470M020E070PTC
	56	6.3	9	300	8	20	2900	PX560M020E090PTC
	68	6.3	9	300	8	20	2900	PX680M020E090PTC
	68	6.3	11	300	8	20	2900	PX680M020E110PTC
25	82	6.3	11	300	8	20	2900	PX820M020E110PTC
	6.8	6.3	5.2	300	8	40	1800	PX6R8M025E052PTC
	10	6.3	5.2	300	8	30	2200	PX100M025E052PTC
	10	6.3	7	300	8	25	2670	PX100M025E070PTC
	15	6.3	5.2	300	8	30	2200	PX150M025E052PTC
	15	6.3	7	300	8	25	2670	PX150M025E070PTC
	22	6.3	7	300	8	25	2670	PX220M025E070PTC
	27	6.3	9	300	8	25	2670	PX270M025E090PTC
	33	6.3	7	300	8	25	2670	PX330M025E070PTC
	33	6.3	5.2	300	8	30	2200	PX330M025E052PTC
	39	6.3	7	300	8	25	2670	PX390M025E070PTC
	47	6.3	9	300	8	25	2670	PX470M025E090PTC
	56	6.3	11	300	8	20	2900	PX560M025E110PTC
	68	6.3	11	300	8	20	2900	PX680M025E110PTC

See “PACKAGING INFORMATION” for pin treatment options.

MULTIPLIER K_f for RIPPLE CURRENT vs. FREQUENCY

Frequency (Hz)	$120 \leq \text{Freq.} < 1k$	$1k \leq \text{Freq.} < 10k$	$10k \leq \text{Freq.} < 100k$	$100k \leq \text{Freq.} < 300k$
Coefficient K_f	0.05	0.3	0.7	1

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.

General Precautions & Guidelines	Packaging Information	3D Models	Reliability Tests

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 or contact CapXon directly.