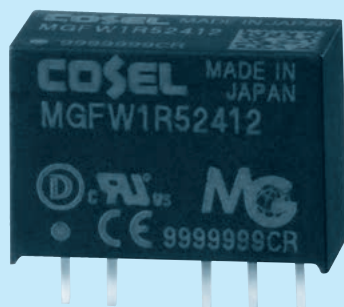


MGFW1R5

MGF W 1R5 24 12 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
② Dual output
③ Output wattage
④ Input voltage
⑤ Output voltage
⑥ Optional

MODEL	MGFW1R52412	MGFW1R52415	MGFW1R54812	MGFW1R54815
MAX OUTPUT WATTAGE[W]	1.56	1.50	1.56	1.50
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±12 or +24	±15 or +30
	CURRENT[A]	0.065	0.05	0.065

SPECIFICATIONS

	MODEL	MGFW1R52412	MGFW1R52415	MGFW1R54812	MGFW1R54815
INPUT	VOLTAGE[V]	DC9 - 36 (Surge voltage 50V, 100ms max)		DC18 - 76 (Surge voltage 100V, 100ms max)	
	CURRENT[A] *2	0.081typ	0.079typ	0.041typ	0.040typ
	EFFICIENCY[%] *2	81typ	80typ	81typ	79typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.065	0.05	0.065	0.05
	LINE REGULATION[mV]	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 480max	600max	480max	600max
		*4 600max	750max	600max	750max
	RIPPLE[mVp-p] *5	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p] *5	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +85°C 210max	260max	150max	180max
		-40 to +85°C 320max	390max	240max	290max
	DRIFT[mV] *6	48max	60max	48max	60max
PROTECTION CIRCUIT	START-UP TIME[ms]	30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE SETTING[V]	11.64 - 12.36	14.55 - 15.45	11.64 - 12.36	14.55 - 15.45
ISOLATION	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
ENVIRONMENT	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)			
	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max			
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis			
SAFETY	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis			
	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1			
OTHERS	CASE SIZE/WEIGHT	17.0×12.0×8.5mm [0.67×0.48×0.34 inches] (W×H×D) / 4g max			
	COOLING METHOD	Convection/Forced air			

*1 Single output +24V, +30V with no use of COM.

*2 Rated input 24V or 48V DC Io=100%

*3 Symmetrical loading from 20% to 100%.

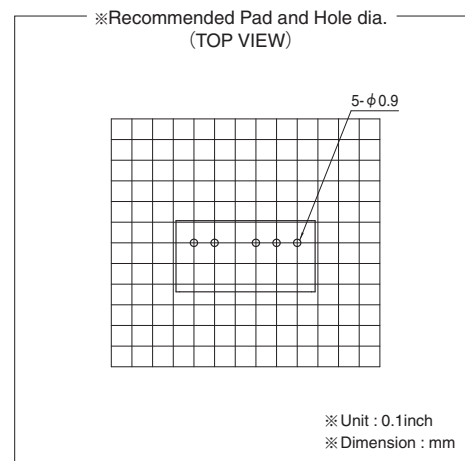
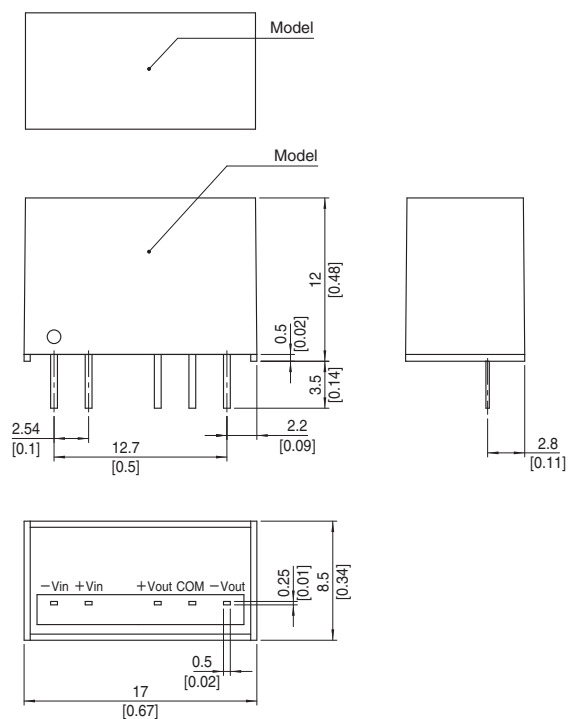
*4 Symmetrical loading from 0% to 100%.

*5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.

*6 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

* Parallel operation with other model is not possible.

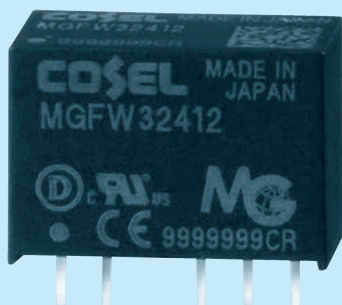
External view



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []= inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 4g max

MGF W 3 24 12 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
② Dual output
③ Output wattage
④ Input voltage
⑤ Output voltage
⑥ Optional

MODEL	MGFW32412	MGFW32415	MGFW34812	MGFW34815
MAX OUTPUT WATTAGE[W]	3.12	3.00	3.12	3.00
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±12 or +24	±15 or +30
	CURRENT[A]	0.13	0.1	0.1

SPECIFICATIONS

	MODEL	MGFW32412	MGFW32415	MGFW34812	MGFW34815
INPUT	VOLTAGE[V]	DC9 - 36 (Surge voltage 50V,100ms max) (Refer to the instruction manual for input voltage derating.)		DC18 - 76 (Surge voltage 100V,100ms max) (Refer to the instruction manual for input voltage derating.)	
	CURRENT[A] *2	0.16typ	0.16typ	0.081typ	0.078typ
	EFFICIENCY[%] *2	82typ	82typ	81typ	81typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.13	0.1	0.13	0.1
	LINE REGULATION[mV]	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 480max	600max	480max	600max
		*4 600max	750max	600max	750max
	RIPPLE[mVp-p] *5	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p] *5	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +70°C 180max	220max	180max	220max
		-40 to +70°C 290max	340max	290max	340max
	DRIFT[mV] *6	48max	60max	48max	60max
PROTECTION CIRCUIT	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
	ISOLATION	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)			
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max			
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis			
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis			
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1			
OTHERS	CASE SIZE/WEIGHT	17.0×12.0×8.5mm [0.67×0.48×0.34 inches] (W×H×D) / 4g max			
	COOLING METHOD	Convection/Forced air			

*1 Single output +24V, +30V with no use of COM.

*2 Rated input 24V or 48V DC $I_o=100\%$

*3 Symmetrical loading from 20% to 100%.

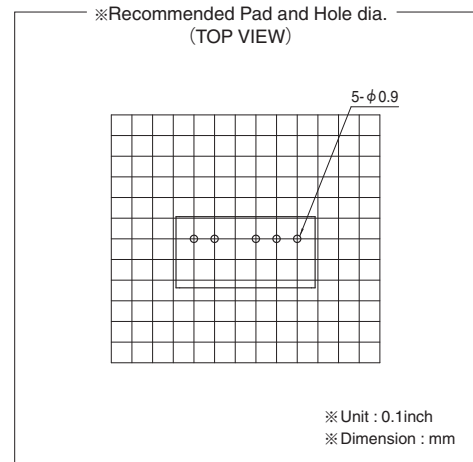
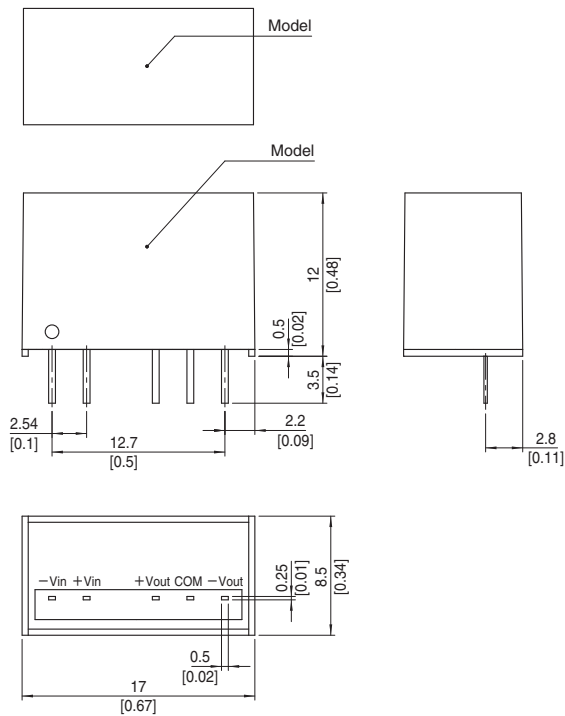
*4 Symmetrical loading from 0% to 100%.

*5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.

*6 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

* Parallel operation with other model is not possible.

External view

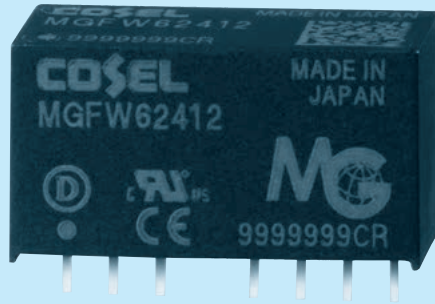


- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []= inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 4g max

MGFW6

MGF W 6 24 12 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGFW62412	MGFW62415	MGFW64812	MGFW64815
MAX OUTPUT WATTAGE[W]	6.00	6.00	6.00	6.00
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±12 or +24	±15 or +30
	CURRENT[A]	0.25	0.2	0.25

SPECIFICATIONS

	MODEL	MGFW62412	MGFW62415	MGFW64812	MGFW64815
INPUT	VOLTAGE[V]	DC9 - 36 (Surge voltage 50V,100ms max)		DC18 - 76 (Surge voltage 100V,100ms max)	
	CURRENT[A] *2	0.29typ	0.29typ	0.15typ	0.15typ
	EFFICIENCY[%] *2	87typ	88typ	88typ	88typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.25	0.2	0.25	0.2
	LINE REGULATION[mV]	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 480max	600max	480max	600max
		*4 600max	750max	600max	750max
	RIPPLE[mVp-p] *5	Po=30% - 120max	120max	120max	120max
		Po=0 - 30% 360max	360max	360max	360max
	RIPPLE NOISE[mVp-p] *5	Po=30% - 200max	200max	200max	200max
		Po=0 - 30% 500max	500max	500max	500max
	TEMPERATURE REGULATION[mV]	-20 to +75°C 190max -40 to +75°C 300max	230max 360max	190max 300max	230max 360max
	DRIFT[mV] *6	48max	60max	48max	60max
PROTECTION CIRCUIT AND OTHERS	START-UP TIME[ms]	30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE SETTING[V]	11.64 - 12.36	14.55 - 15.45	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)			
	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)			
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max			
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis			
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis			
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1			
OTHERS	CASE SIZE/WEIGHT	22.0×12.0×9.5mm [0.87×0.48×0.38 inches] (W×H×D) / 7g max			
	COOLING METHOD	Convection/Forced air			

*1 Single output +24V, +30V with no use of COM.

*2 Rated input 5V, 12V, 24V or 48V DC Io=100%

*3 Symmetrical loading from 20% to 100%.

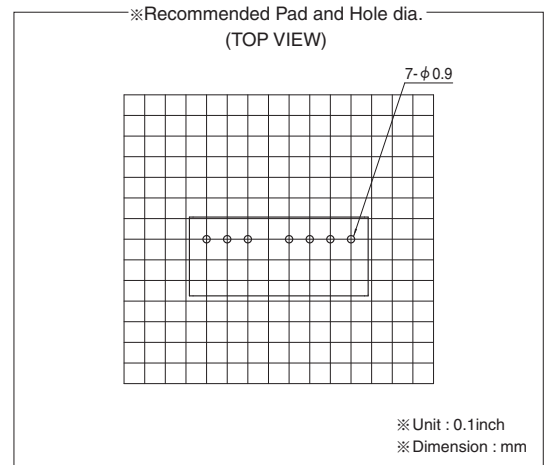
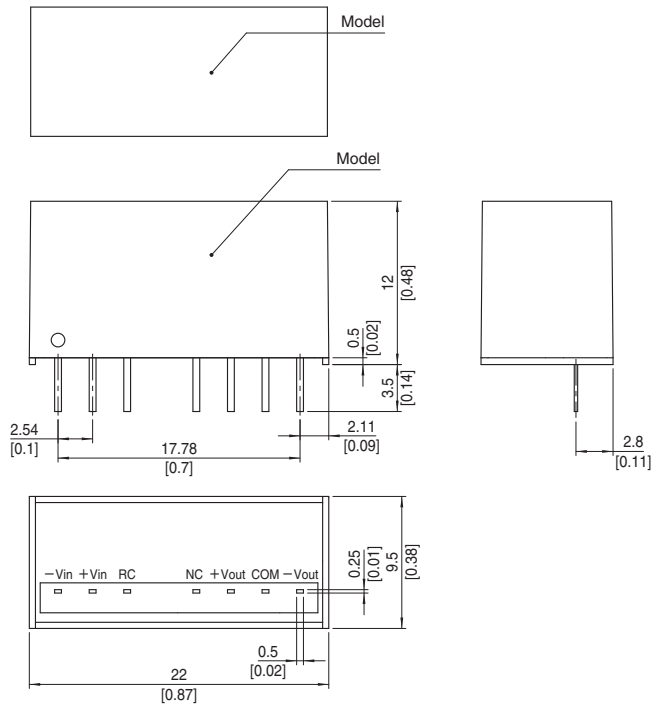
*4 Symmetrical loading from 0% to 100%.

*5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins. Po: Output wattage.

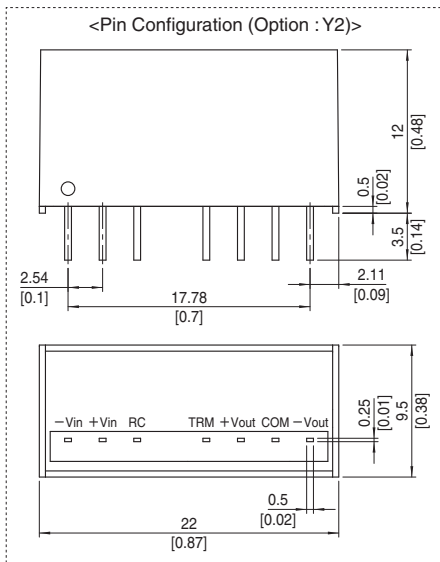
*6 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

* Parallel operation with other model is not possible.

External view



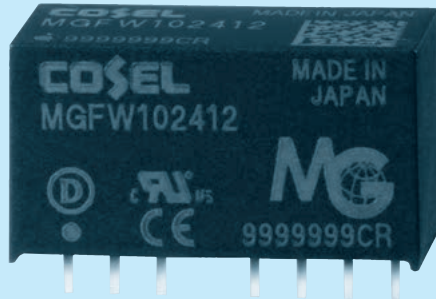
- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []= inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 7g max



MGFW10

MGF W 10 24 12 - ☐

① ② ③ ④ ⑤ ⑥



- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 Y2: Output voltage adjustable (+10%, -5%)

MODEL	MGFW102412	MGFW102415	MGFW104812	MGFW104815
MAX OUTPUT WATTAGE[W]	10.08	10.20	10.08	10.20
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±12 or +24	±15 or +30
	CURRENT[A]	0.42	0.34	0.42

SPECIFICATIONS

	MODEL	MGFW102412	MGFW102415	MGFW104812	MGFW104815
INPUT	VOLTAGE[V]	DC9 - 36 (Surge voltage 50V,100ms max) (Refer to the instruction manual for input voltage derating.)		DC18 - 76 (Surge voltage 100V,100ms max) (Refer to the instruction manual for input voltage derating.)	
	CURRENT[A] *2	0.49typ	0.49typ	0.25typ	0.25typ
	EFFICIENCY[%] *2	87typ	87typ	87typ	88typ
OUTPUT	VOLTAGE[V]	±12 (+24)	±15 (+30)	±12 (+24)	±15 (+30)
	CURRENT[A]	0.42	0.34	0.42	0.34
	LINE REGULATION[mV]	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 480max	600max	480max	600max
		*4 600max	750max	600max	750max
	RIPPLE[mVp-p]	Po=30% - 120max	120max	120max	120max
		*5 Po=0 - 30% 360max	360max	360max	360max
	RIPPLE NOISE[mVp-p]	Po=30% - 200max	200max	200max	200max
		*5 Po=0 - 30% 500max	500max	500max	500max
	TEMPERATURE REGULATION[mV]	-20 to +50°C 150max	180max	150max	180max
		-40 to +50°C 240max	290max	240max	290max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *6	48max	60max	48max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)			
	OUTPUT VOLTAGE SETTING[V]	11.64 - 12.36	14.55 - 15.45	11.64 - 12.36	14.55 - 15.45
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)			
	INPUT-OUTPUT	DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15°C)			
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max			
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION	10 - 55Hz 98.0m/s ² (10G), 3minute period, 60minutes each along X, Y and Z axis			
	IMPACT	490.3m/s ² (50G) 11ms, once each along X, Y and Z axis			
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1			
OTHERS	CASE SIZE/WEIGHT	22.0×12.0×9.5mm [0.87×0.48×0.38 inches] (WXHxD) / 7g max			
	COOLING METHOD	Convection/Forced air			

*1 Single output +24V, +30V with no use of COM.

*2 Rated input 5V, 12V, 24V or 48V DC Io=100%

*3 Symmetrical loading from 20% to 100%.

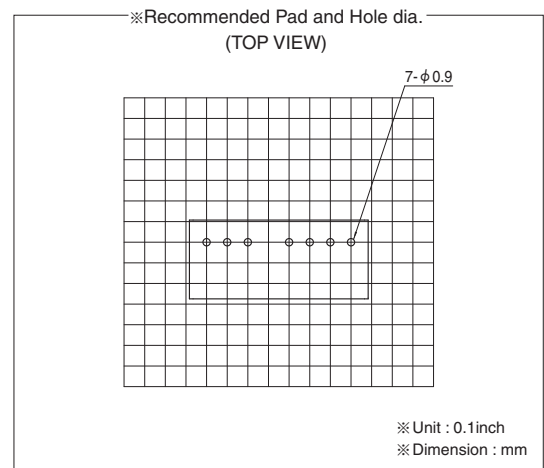
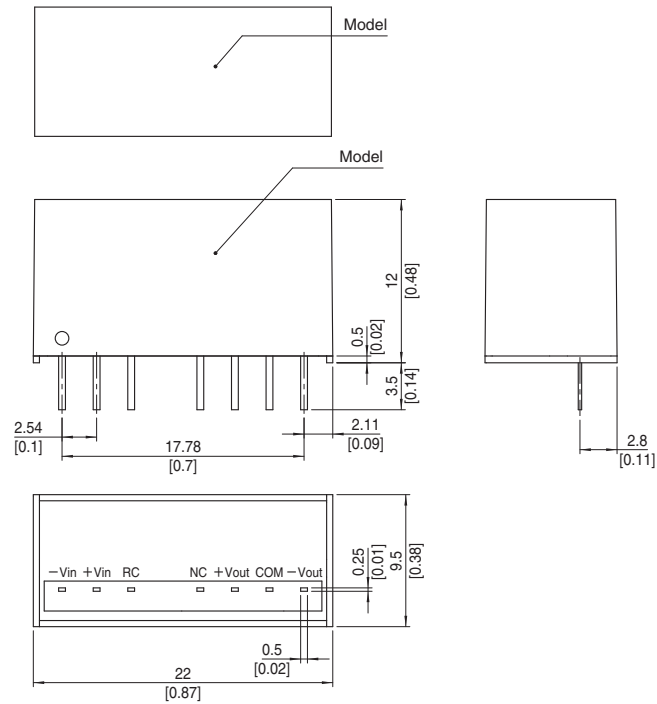
*4 Symmetrical loading from 0% to 100%.

*5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins. Po: Output wattage.

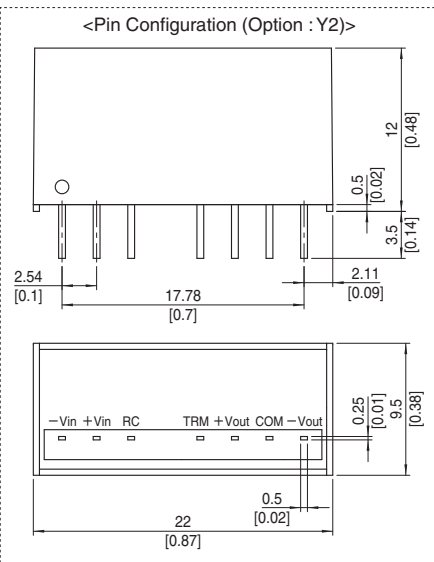
*6 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

* Parallel operation with other model is not possible.

External view



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []= inches
- ※ Pin terminal material : Copper
- ※ Planting treatment of terminal : Lead free plating
- ※ Case material : PBT
- ※ Weight 7g max





RoHS



- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 G: Capacitor between
 Input and Output is removed.
 R: with Remote ON/OFF
 (Positive logic control)

MODEL	MGFW152405	MGFW152412	MGFW152415	MGFW154805	MGFW154812	MGFW154815
MAX OUTPUT WATTAGE[W]	15	15.6	15	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65

SPECIFICATIONS

	MODEL	MGFW152405	MGFW152412	MGFW152415	MGFW154805	MGFW154812	MGFW154815
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76		
	CURRENT[A] *2	0.74typ	0.74typ	0.70typ	0.37typ	0.37typ	0.36typ
	EFFICIENCY[%] *2	84typ	88typ	89typ	84typ	87typ	88typ
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65	0.5
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max
	LOAD REGULATION[mV]	*3 500max *5	600max	750max	500max *5	600max	750max
		*4 250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	-20 to +60°C 100max	100max	100max	100max	100max	100max
		-40 to -20°C 120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	-20 to +60°C 100max	100max	100max	100max	100max	100max
		-40 to -20°C 150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60°C 50max	150max	180max	50max	150max	180max
		-40 to +60°C 80max	240max	290max	80max	240max	290max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *7	50max	50max	60max	50max	50max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)					
	OUTPUT VOLTAGE SETTING[V] *8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically					
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)					
	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max					
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max					
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis					
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1					
OTHERS	CASE SIZE/WEIGHT	25.4×9.9×25.4mm [1×0.39×1 inches] (W×H×D) / 20g max					
	COOLING METHOD	Convection/Forced air					

*1 Single output +10V, +24V, +30V with no use of COM.

*2 Rated input 12V, 24V or 48V DC Io=100%

*3 Symmetrical loading from 5% to 100%.

*4 Symmetrical loading from 20% to 100%.

*5 Refer to the instruction manual 11.

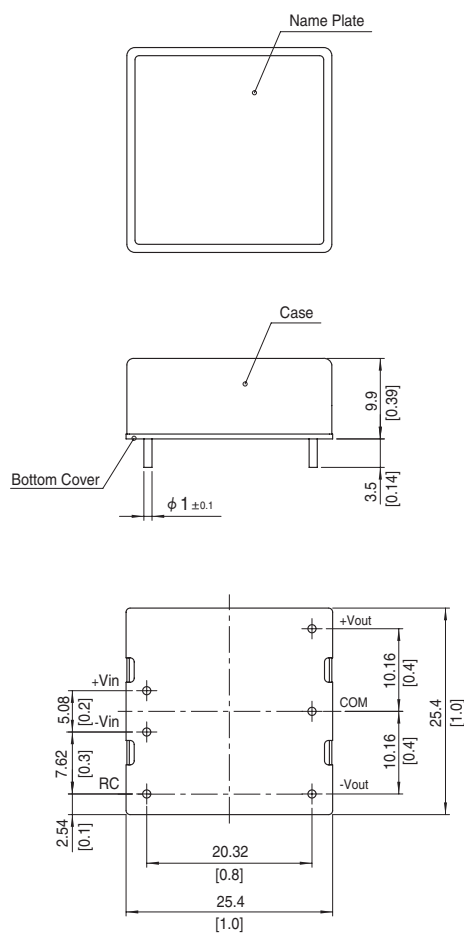
*6 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Oscilloscope)

*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

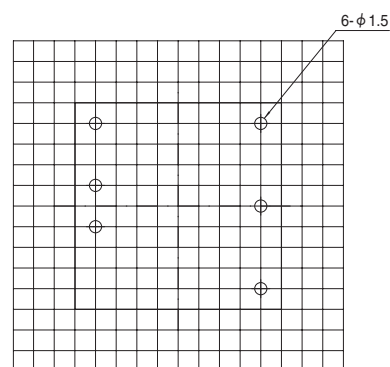
*8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.

* Parallel operation with other model is not possible.

External view



※Recommended Pad and Hole dia.
(TOP VIEW)



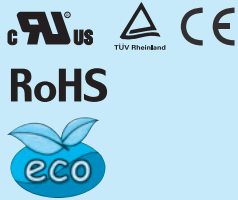
※ Unit : 0.1inch
※ Dimension : mm

- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 20g max

MGFW30

MGF W 30 24 05 - ☐

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
- G: Capacitor between Input and Output is removed.
- R: with Remote ON/OFF (Positive logic control)

MODEL	MGFW302405	MGFW302412	MGFW302415	MGFW304805	MGFW304812	MGFW304815
MAX OUTPUT WATTAGE[W]	20	30	30	20	30	30
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	2	1.25	1	2	1.25

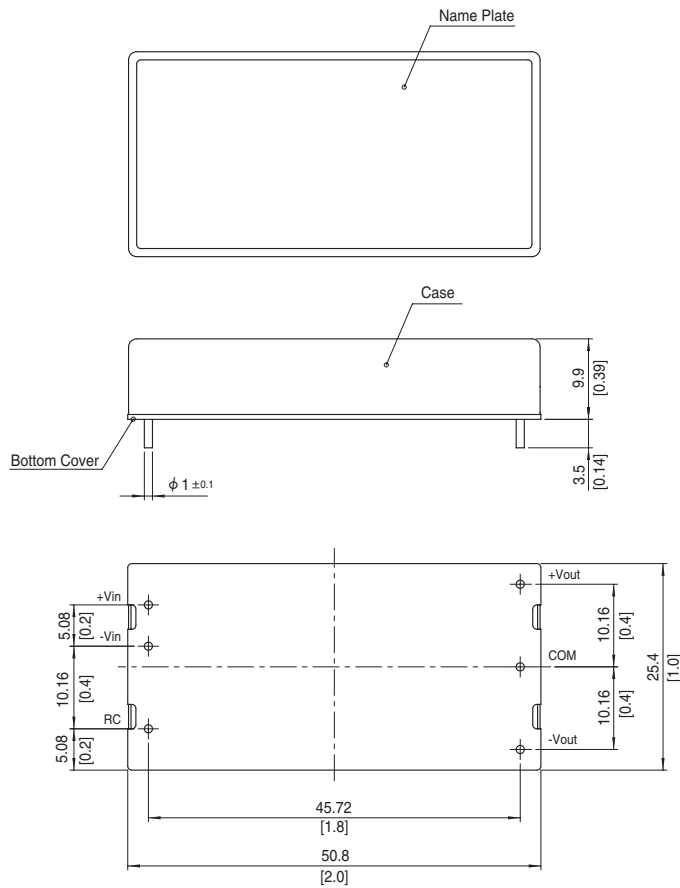
SPECIFICATIONS

	MODEL	MGFW302405	MGFW302412	MGFW302415	MGFW304805	MGFW304812	MGFW304815
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76		
	CURRENT[A] *2	0.98typ	1.42typ	1.44typ	0.49typ	0.71typ	0.72typ
	EFFICIENCY[%] *2	85typ	88typ	87typ	85typ	88typ	87typ
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)
	CURRENT[A]	2	1.25	1	2	1.25	1
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max
	LOAD REGULATION[mV]	*3 500max *5	600max	750max	500max *5	600max	750max
		*4 250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p]	-20 to +60℃ 100max	100max	100max	100max	100max	100max
		-40 to -20℃ 120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p]	-20 to +60℃ 100max	100max	100max	100max	100max	100max
		-40 to -20℃ 150max	150max	150max	150max	150max	150max
	TEMPERATURE REGULATION[mV]	-20 to +60℃ 50max	150max	180max	50max	150max	180max
		-40 to +60℃ 80max	240max	290max	80max	240max	290max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *7	50max	50max	60max	50max	50max	60max
	START-UP TIME[ms]	30max (Minimum input, Io=100%)					
	OUTPUT VOLTAGE SETTING[V]*8	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505	4.935 - 5.240	11.765 - 12.492	14.602 - 15.505
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION	Works over 120 to 160% of rating (Total of +V and -V)					
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)					
	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)					
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)					
ENVIRONMENT	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃)					
	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max					
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100℃, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max					
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis					
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1					
OTHERS	CASE SIZE/WEIGHT	25.4×9.9×50.8mm [1×0.39×2 inches] (W×H×D) / 40g max					
	COOLING METHOD	Convection/Forced air					

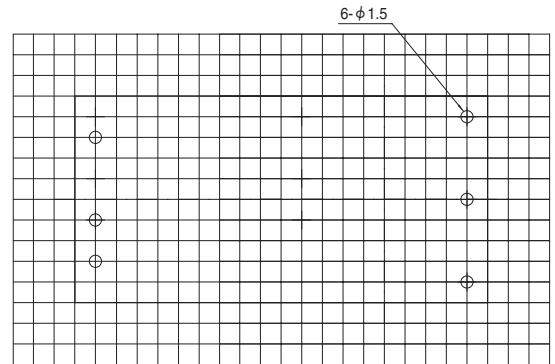
- *1 Single output +10V, +24V, +30V with no use of COM.
- *2 Rated input 12V, 24V or 48V DC Io=100%
- *3 Symmetrical loading from 5% to 100%.
- *4 Symmetrical loading from 20% to 100%.
- *5 Refer to the instruction manual 11.
- *6 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Oscilloscope)

- *7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
- *8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25℃.
- * Parallel operation with other model is not possible.

External view



※Recommended Pad and Hole dia.
(TOP VIEW)



※ Unit : 0.1inch
※ Dimension : mm

- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 40g max

MGFW40

MGF W 40 24 12 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 G: Capacitor between
 Input and Output is removed.
 R: with Remote ON/OFF
 (Positive logic control)

MODEL	MGFW400512	MGFW400515	MGFW402412	MGFW402415	MGFW404812	MGFW404815
MAX OUTPUT WATTAGE[W]	31.2	30	40.8	42	40.8	42
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24
	CURRENT[A]	1.3	1	1.7	1.4	1.7

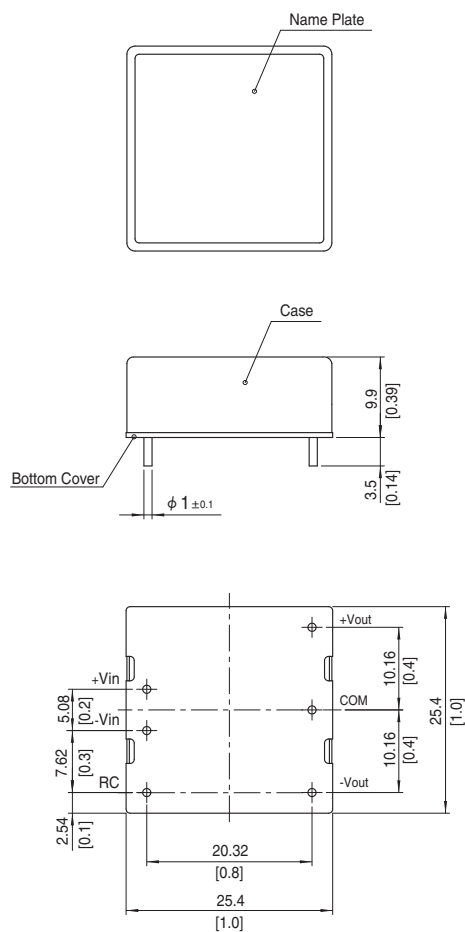
SPECIFICATIONS

	MODEL	MGFW400512	MGFW400515	MGFW402412	MGFW402415	MGFW404812	MGFW404815
INPUT	VOLTAGE[V]	DC4.5 - 13 (Surge Voltage 15V, 100ms max)		DC9 - 36 (Surge Voltage 50V, 100ms max)		DC18 - 76 (Surge Voltage 100V, 100ms max)	
	CURRENT[A] *2	7.26typ	6.90typ	1.87typ	1.92typ	0.93typ	0.96typ
	EFFICIENCY[%] *2	86typ	87typ	91typ	91typ	91typ	91typ
OUTPUT	VOLTAGE[V]	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)
	CURRENT[A]	1.3	1	1.7	1.4	1.7	1.4
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 600max	750max	600max	750max	600max	750max
	RIPPLE[mVp-p]	*4 480max	600max	480max	600max	480max	600max
	RIPPLE NOISE[mVp-p]	*5 -20 to +60°C 100max	100max	100max	100max	100max	100max
	TEMPERATURE REGULATION[mV]	*5 -40 to -20°C 120max	120max	120max	120max	120max	120max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *6	50max	60max	50max	60max	50max	60max
	START-UP TIME[ms]	30max (Minimum input, Rated load)					
	OUTPUT VOLTAGE SETTING[V] *7	11.765 - 12.492	14.602 - 15.505	11.765 - 12.492	14.602 - 15.505	11.765 - 12.492	14.602 - 15.505
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION	Work over 115 to 140% of rating (Total of +Vo and -Vo)					
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)					
	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
ENVIRONMENT	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)					
	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 5,000m (16,400feet) max					
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max					
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis					
SAFETY	AGENCY APPROVALS	UL62368-1, C-UL (CSA62368-1), EN62368-1					
OTHERS	CASE SIZE/WEIGHT	25.4×9.9×25.4mm (W×H×D) / 30g max					
	COOLING METHOD	Convection/Forced air					

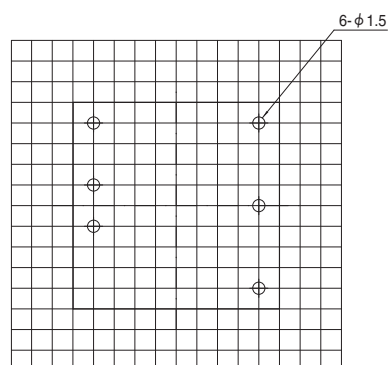
- *1 Single output +24V/+30V with no use of COM
 *2 Rated input voltage(DC5V, DC24V, DC48V) Io=100%
 *3 Symmetrical loading from 0% to 100%
 *4 Symmetrical loading from 20% to 100%
 *5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF and Recommended Capacitance at 50mm from output pins. (20MHz Oscilloscope)
 *6 Drift is the DC output accuracy for eight hour period after a half-hour warm-up at 25°C

- *7 Rated input voltage (DC5V, DC24V, DC48V), rated output wattage, ambient temperature at 25°C
 * Parallel operation with other model is not possible.

External view



※Recommended Pad and Hole dia.
(TOP VIEW)

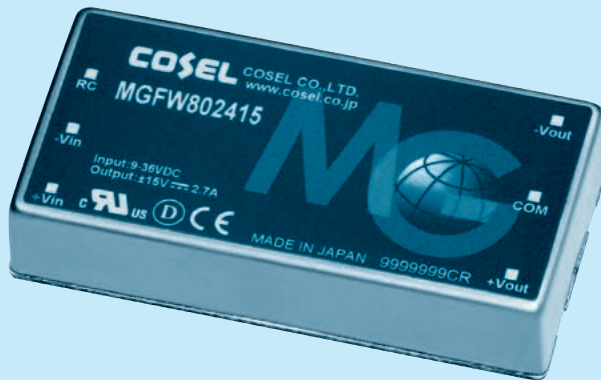


※ Unit : 0.1inch
※ Dimension : mm

- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 30g max

MGF W 80 24 12 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Optional
 G: Capacitor between Input and Output is removed.
 R: with Remote ON/OFF (Positive logic control)

MODEL	MGFW802412	MGFW802415	MGFW804812	MGFW804815
MAX OUTPUT WATTAGE[W]	81.6	81	81.6	81
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±12 or +24	±15 or +30
	CURRENT[A]	3.4	2.7	2.7

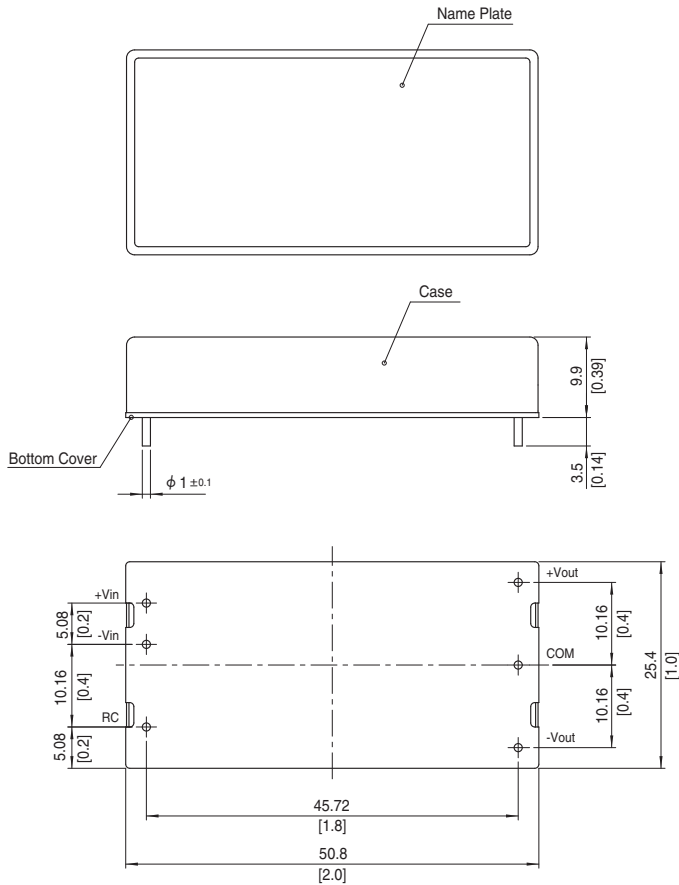
SPECIFICATIONS

	MODEL	MGFW802412	MGFW802415	MGFW804812	MGFW804815
INPUT	VOLTAGE[V]	DC9 - 36 (Surge Voltage 50V, 100ms max)		DC18 - 76 (Surge Voltage 100V, 100ms max)	
	CURRENT[A] *2	3.62typ	3.59typ	1.81typ	1.80typ
	EFFICIENCY[%] *2	94typ	94typ	94typ	94typ
OUTPUT	VOLTAGE[V]	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	3.4	2.7	3.4	2.7
	LINE REGULATION[mV]	60max	75max	60max	75max
	LOAD REGULATION[mV]	*3 600max	750max	600max	750max
		*4 480max	600max	480max	600max
	RIPPLE[mVp-p] *5	-20 to +60°C 100max	100max	100max	100max
		-40 to -20°C 120max	120max	120max	120max
		Io=0 to 10% 240max	240max	240max	240max
	RIPPLE NOISE[mVp-p] *5	-20 to +60°C 100max	100max	100max	100max
		-40 to -20°C 150max	150max	150max	150max
		Io=0 to 10% 270max	270max	270max	270max
	TEMPERATURE REGULATION[mV]	-20 to +60°C 150max	180max	150max	180max
		-40 to +60°C 240max	290max	240max	290max
PROTECTION CIRCUIT AND OTHERS	DRIFT[mV] *6	50max	60max	50max	60max
	START-UP TIME[ms]	30max (Minimum input, Rated load)			
	OUTPUT VOLTAGE SETTING[V] *7	11.765 - 12.492	14.602 - 15.505	11.765 - 12.492	14.602 - 15.505
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically			
ISOLATION	OVERVOLTAGE PROTECTION	Work over 115 to 140% of rating (Total of +Vo and -Vo)			
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)			
ENVIRONMENT	INPUT-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)			
	INPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)			
	OUTPUT-CASE	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)			
SAFETY	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 to 95%RH (Non condensing) (Required Derating), 5,000m (16,400feet) max			
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis			
	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis			
OTHERS	AGENCY APPROVALS	UL62368-1, C-UL (CSA62368-1), EN62368-1			
	CASE SIZE/WEIGHT	25.4×9.9×50.8mm (W×H×D) / 50g max			
	COOLING METHOD	Convection/Forced air			

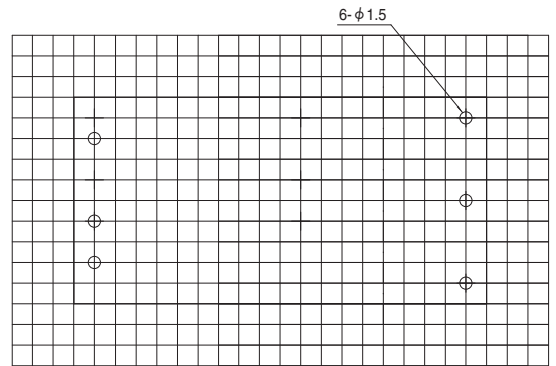
*1 Single output +24V/+30V with no use of COM
 *2 Rated input voltage(DC24V, DC48V) Io=100%
 *3 Symmetrical loading from 0% to 100%
 *4 Symmetrical loading from 20% to 100%
 *5 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF and

*6 Recommended Capacitance at 50mm from output pins. (20MHz Oscilloscope)
 *7 Drift is the DC output accuracy for eight hour period after a half-hour warm-up at 25°C
 * Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C
 * Parallel operation with other model is not possible.

External view



※Recommended Pad and Hole dia.
(TOP VIEW)



※ Unit : 0.1inch
※ Dimension : mm

- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal material : Copper
- ※ Plating treatment of terminal : Lead free plating
- ※ Case material : Brass
- ※ Plating treatment of case : Nickel plating
- ※ Bottom Cover : FR4 (t=0.6) [t=0.024]
- ※ Please keep enough creepage distance with the pattern on PCB and other components.
- ※ Weight 50g max



Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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