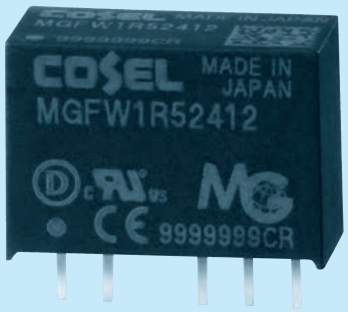
COSEL DC-DC Converters PCB Mount Type

# MGFW1R5

## Ordering information

| MGF | W | 1R5 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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



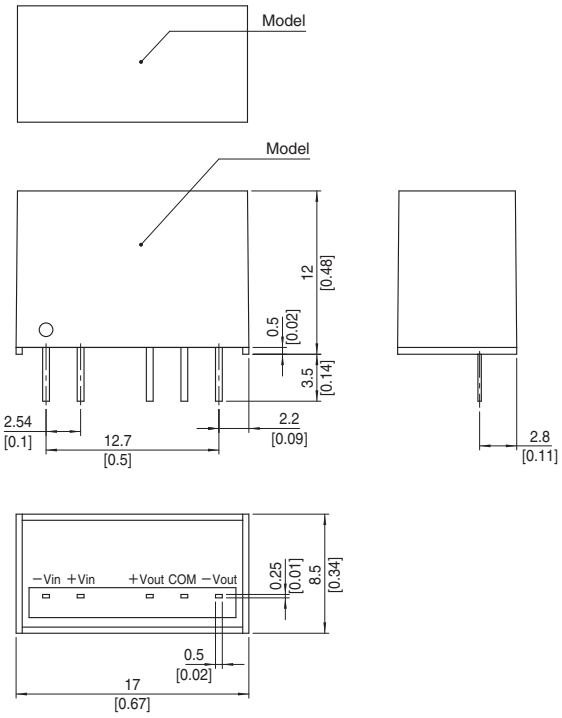

| MODEL | | MGFW1R52412 | MGFW1R52415 | MGFW1R54812 | MGFW1R54815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.56 | 1.50 | 1.56 | 1.50 |
| DC OUTPUT | VOLTAGE[V] *1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A] | 0.065 | 0.05 | 0.065 | 0.05 |

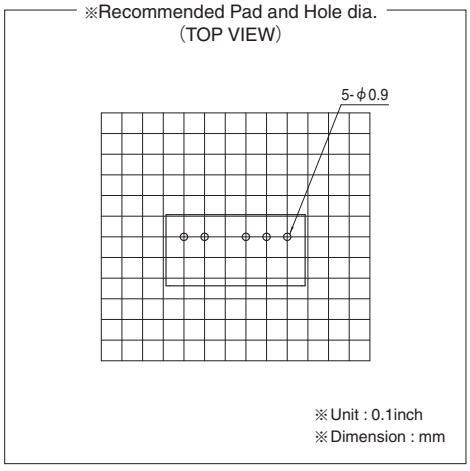
## SPECIFICATIONS

| | 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℃ | 210max | 260max | 150max | 180max |
| | | -40 to +85℃ | 320max | 390max | 240max | 290max |
| | 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 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| ISOLATION | INPUT-OUTPUT | | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) 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/s² (10G), 3minute period, 60minutes each along X, Y and Z axis | | | |
| | IMPACT | | 490.3m/s² (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 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℃.
* 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

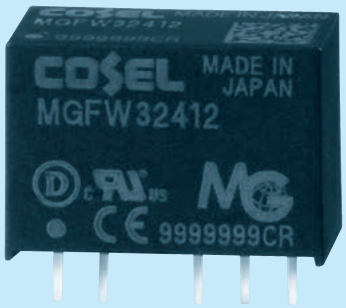
COSEL DC-DC Converters PCB Mount Type

# MGFW3

## Ordering information

| MGF | W | 3 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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



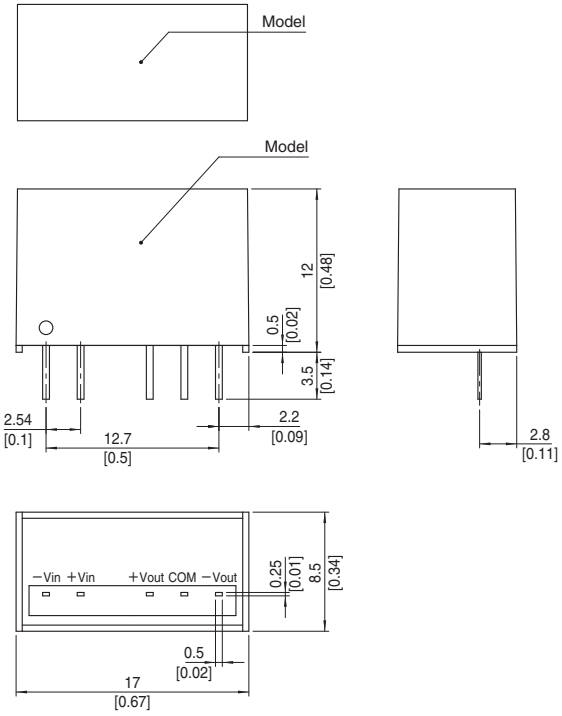

| MODEL | | MGFW32412 | MGFW32415 | MGFW34812 | MGFW34815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 3.12 | 3.00 | 3.12 | 3.00 |
| DC OUTPUT | VOLTAGE[V] ※1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A] | 0.13 | 0.1 | 0.13 | 0.1 |

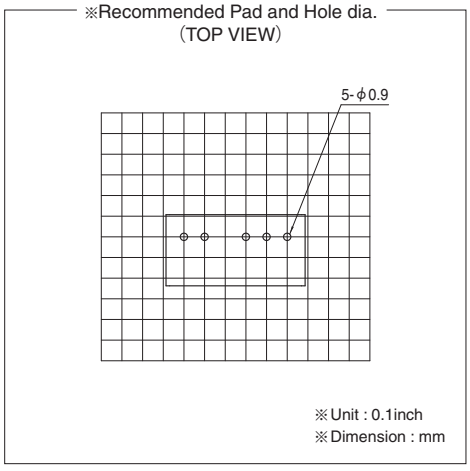
## SPECIFICATIONS

| | MODEL | | MGFW32412 | MGFW32415 | MGFW34812 | MGFW34815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max)<br>(Refer to the instruction manual for input voltage derating.) | | DC18 - 76 (Surge voltage 100V,100ms max)<br>(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℃ | 180max | 220max | 180max | 220max |
| | | -40 to +70℃ | 290max | 340max | 290max | 340max |
| | 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 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| ISOLATION | INPUT-OUTPUT | | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) 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/s² (10G), 3minute period, 60minutes each along X, Y and Z axis | | | |
| | IMPACT | | 490.3m/s² (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 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℃.
※ 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

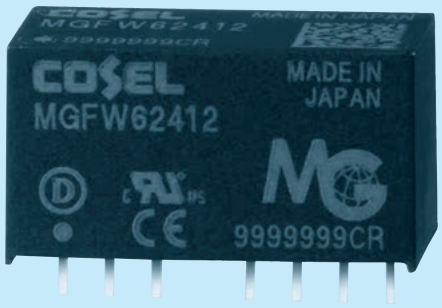
COSEL DC-DC Converters PCB Mount Type

# MGFW6

**Ordering information**

| MGF | W | 6 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑧ |

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



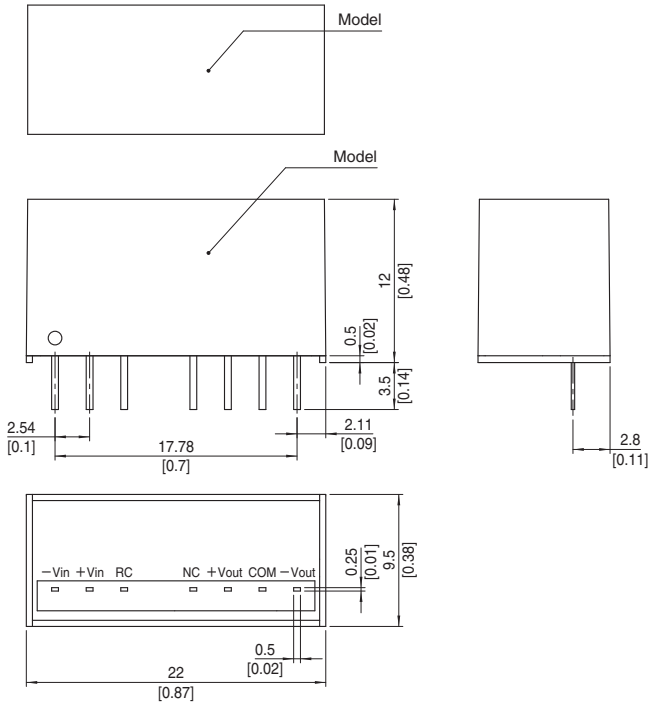

| MODEL | | MGFW62412 | MGFW62415 | MGFW64812 | MGFW64815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 6.00 | 6.00 | 6.00 | 6.00 |
| DC OUTPUT | VOLTAGE[V] ※1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A] | 0.25 | 0.2 | 0.25 | 0.2 |

## SPECIFICATIONS

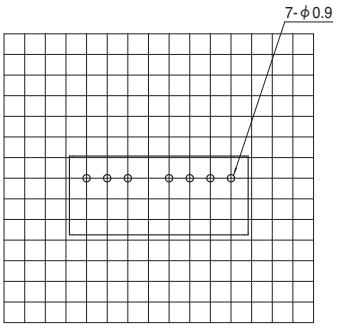
| | MODEL | | MGFW62412 | MGFW62415 | MGFW64812 | MGFW64815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max) | | DC18 - 76 (Surge voltage 100V,100ms max) | |
| | CURRENT[A] | ※2 | 0.29typ | 0.29typ | 0.15typ | 0.15typ |
| | EFFICIENCY[%] | ※2 | 87typ | 88typ | 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℃ | 190max | 230max | 190max | 230max |
| | | -40 to +75℃ | 300max | 360max | 300max | 360max |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | |
| ISOLATION | INPUT-OUTPUT | | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) 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/s² (10G), 3minute period, 60minutes each along X, Y and Z axis | | | |
| | IMPACT | | 490.3m/s² (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℃.
※ Parallel operation with other model is not possible.

## External view



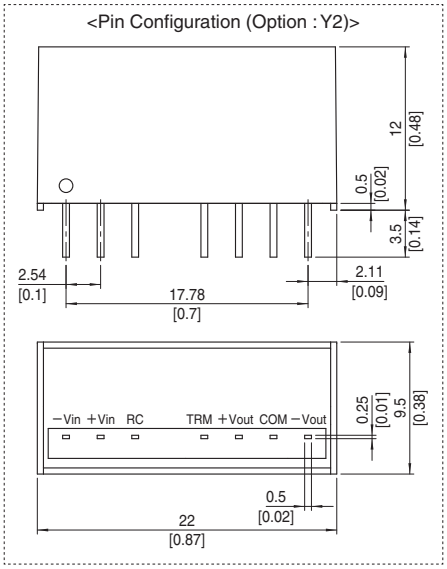

※Recommended Pad and Hole dia.
(TOP VIEW)




※Unit : 0.1inch
※Dimension : mm

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

<Pin Configuration (Option : Y2)>



COSEL DC-DC Converters PCB Mount Type

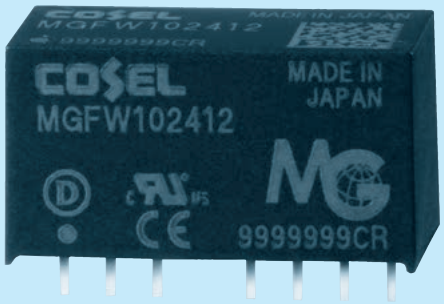
# MGFW10

## Ordering information

| MGF | W | 10 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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

RoHS



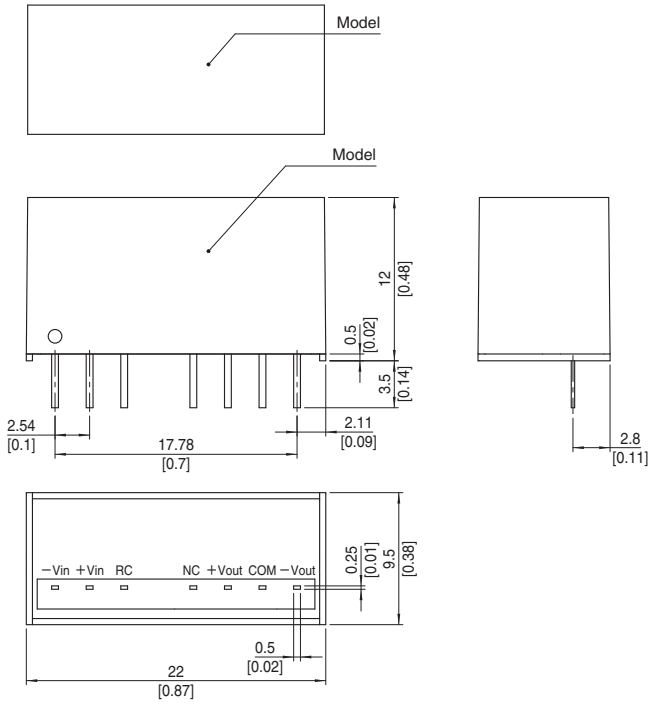

| MODEL | | | MGFW102412 | MGFW102415 | MGFW104812 | MGFW104815 |
|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | | 10.08 | 10.20 | 10.08 | 10.20 |
| DC OUTPUT | VOLTAGE[V] | *1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A] | | 0.42 | 0.34 | 0.42 | 0.34 |

## SPECIFICATIONS

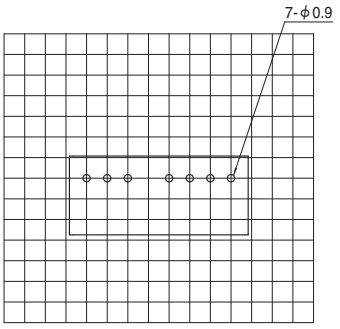
| | MODEL | | MGFW102412 | MGFW102415 | MGFW104812 | MGFW104815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max) (Refer to the instruction manual for input voltage derating.) | | DC18 - 76 (Surge voltage 100V,100ms max) (Refer to the instruction manual for 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] *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 +50℃ | 150max | 180max | 150max | 180max |
| | | -40 to +50℃ | 240max | 290max | 240max | 290max |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | |
| ISOLATION | INPUT-OUTPUT | | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) 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/s² (10G), 3minute period, 60minutes each along X, Y and Z axis | | | |
| | IMPACT | | 490.3m/s² (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℃.
* Parallel operation with other model is not possible.

## External view



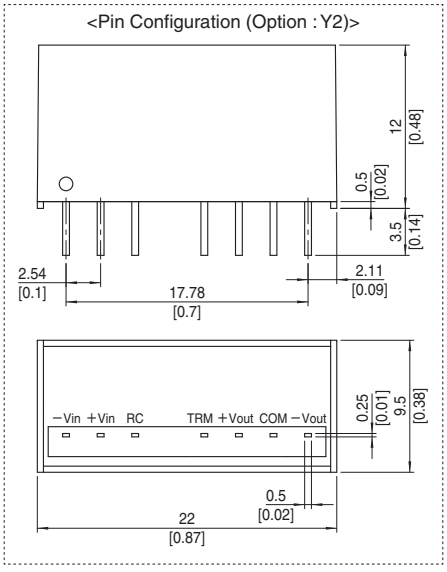

※Recommended Pad and Hole dia.
(TOP VIEW)




※Unit : 0.1inch
※Dimension : mm

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

<Pin Configuration (Option : Y2)>



COSEL DC-DC Converters PCB Mount Type

# MGFW15

**Ordering information**

| MGF | W | 15 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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

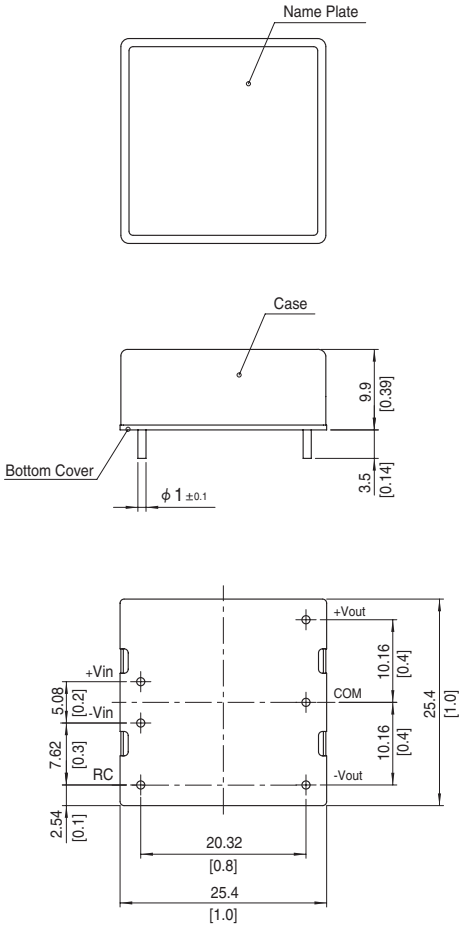
| MODEL | | MGFW152405 | MGFW152412 | MGFW152415 | MGFW154805 | MGFW154812 | MGFW154815 |
|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 15 | 15.6 | 15 | 15 | 15.6 | 15 |
| DC OUTPUT | VOLTAGE[V] *1 | ±5 or +10 | ±12 or +24 | ±15 or +30 | ±5 or +10 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A]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

## SPECIFICATIONS

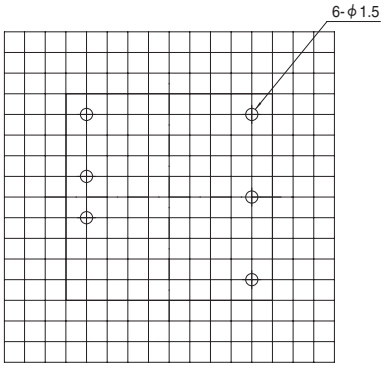
| | MODEL | | MGFW152405 | MGFW152412 | MGFW152415 | MGFW154805 | MGFW154812 | MGFW154815 |
|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 | | | DC18 - 76 | | |
| | CURRENT[A] | *2 | 0.74typ | 0.74typ | 0.70typ | 0.37typ | 0.37typ | 0.36typ |
| | EFFICIENCY[%] | *2 | 84typ | 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℃ | 100max | 100max | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | 120max | 120max | 120max | 120max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] *6 | -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 |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | | | |
| ISOLATION | 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℃) | | | | | |
| | OUTPUT-CASE | | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) | | | | | |
| ENVIRONMENT | 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/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | |
| | IMPACT | | 490.3m/s² (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 Osilloscope)
*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 20g max

COSEL DC-DC Converters PCB Mount Type

# MGFW30

**Ordering information**

| MGF | W | 30 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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

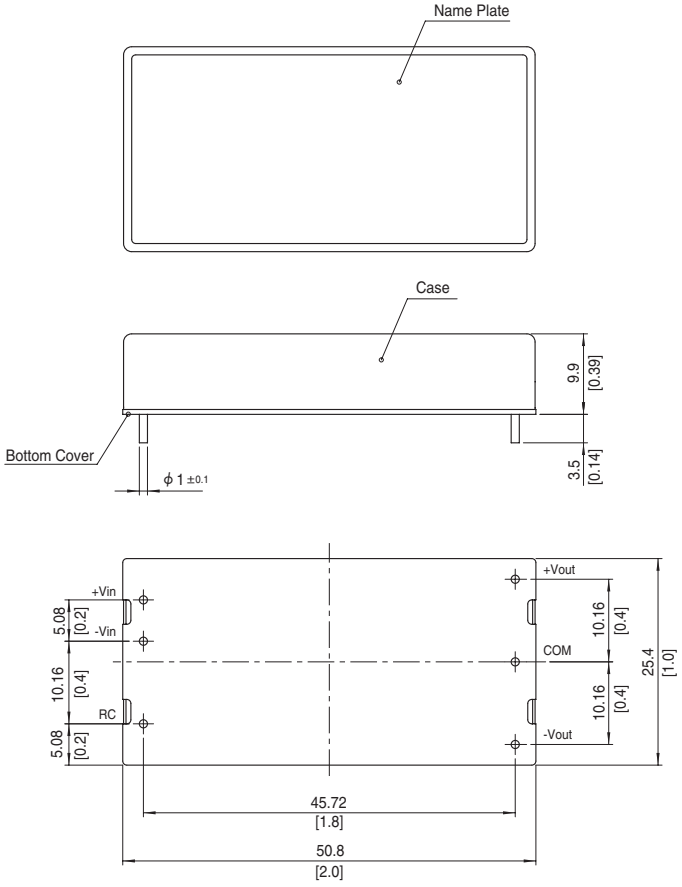
| MODEL | | MGFW302405 | MGFW302412 | MGFW302415 | MGFW304805 | MGFW304812 | MGFW304815 |
|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 20 | 30 | 30 | 20 | 30 | 30 |
| DC OUTPUT | VOLTAGE[V] *1 | ±5 or +10 | ±12 or +24 | ±15 or +30 | ±5 or +10 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A]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

## SPECIFICATIONS

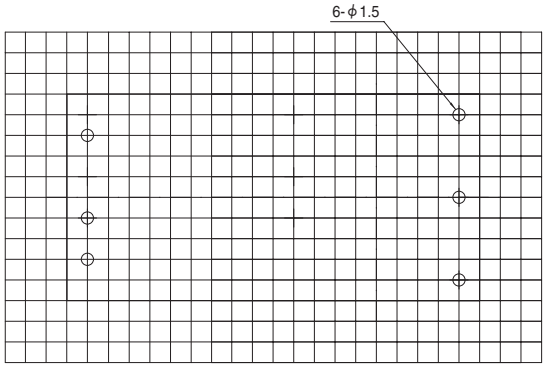
| | MODEL | | MGFW302405 | MGFW302412 | MGFW302415 | MGFW304805 | MGFW304812 | MGFW304815 |
|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 | | | DC18 - 76 | | |
| | CURRENT[A] | *2 | 0.98typ | 1.42typ | 1.44typ | 0.49typ | 0.71typ | 0.72typ |
| | EFFICIENCY[%] | *2 | 85typ | 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] *6 | -20 to +60℃ | 100max | 100max | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | 120max | 120max | 120max | 120max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] *6 | -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 |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION | | Works over 120 to 160% of rating (Total of +V and -V) | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | | | |
| ISOLATION | 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℃) | | | | | |
| | OUTPUT-CASE | | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) | | | | | |
| ENVIRONMENT | 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/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | |
| | IMPACT | | 490.3m/s² (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 Osilloscope)
*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

COSEL DC-DC Converters PCB Mount Type

# MGFW40

**Ordering information**

| MGF | W | 40 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑧ |

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

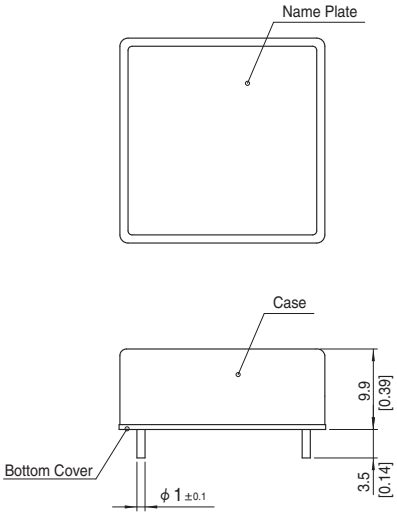
| MODEL | | | MGFW400512 | MGFW400515 | MGFW402412 | MGFW402415 | MGFW404812 | MGFW404815 |
|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | | 31.2 | 30 | 40.8 | 42 | 40.8 | 42 |
| DC OUTPUT | VOLTAGE[V] | *1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30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

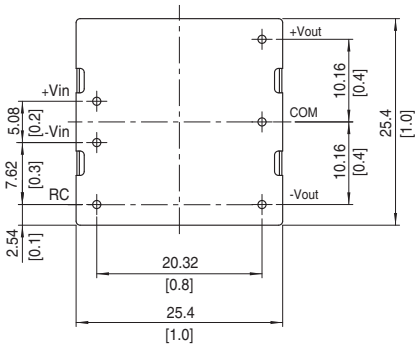
## SPECIFICATIONS

| | 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 |
| | | *4 | 480max | 600max | 480max | 600max | 480max | 600max |
| | RIPPLE[mVp-p] *5 | -20 to +60℃ | 100max | 100max | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | 120max | 120max | 120max | 120max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] *5 | -20 to +60℃ | 100max | 100max | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | 150max | 150max | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 150max | 180max | 150max | 180max | 150max | 180max |
| | | -40 to +60℃ | 240max | 290max | 240max | 290max | 240max | 290max |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION | | Work over 115 to 140% of rating (Total of +Vo and -Vo) | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | | | |
| ISOLATION | 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℃) | | | | | |
| | OUTPUT-CASE | | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 5,000m (16,400feet) 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/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | |
| | IMPACT | | 490.3m/s² (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 | | | | | |

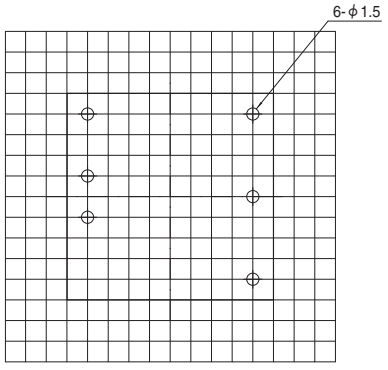
*1 Single output +24V/+30V with no use of COM
*2 Rated input voltage(DC5V , DC24V, DC48V) Io=100%
*3 Symmetrical loading from 0% to 100%
*4 Symmetrical loading from 20% to 100%
*5 Riple and Ripple Noise is measured by using test board with ceramic capacitor 22μF and Recommended Capacitance at 50mm from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

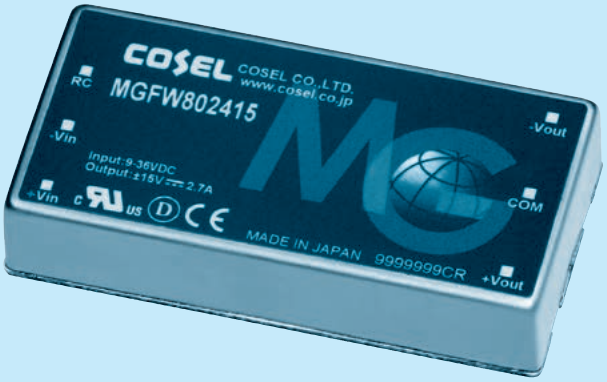
※ Tolerance ±0.5 [±0.02]
※ Dimensions in mm, [ ]=inches
※ Pin terminal material : Copper
※ Plating treatment of terminal : Lead free plating
※ Case material : Brass
※ Plating treatment of case : Nickel plating
※ Bottom Cover : FR4 (t=0.6) [t=0.024]
※ Please keep enough creepage distance with the pattern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

COSEL DC-DC Converters PCB Mount Type

# MGFW80

## Ordering information

| MGF | W | 80 | 24 | 12 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |




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

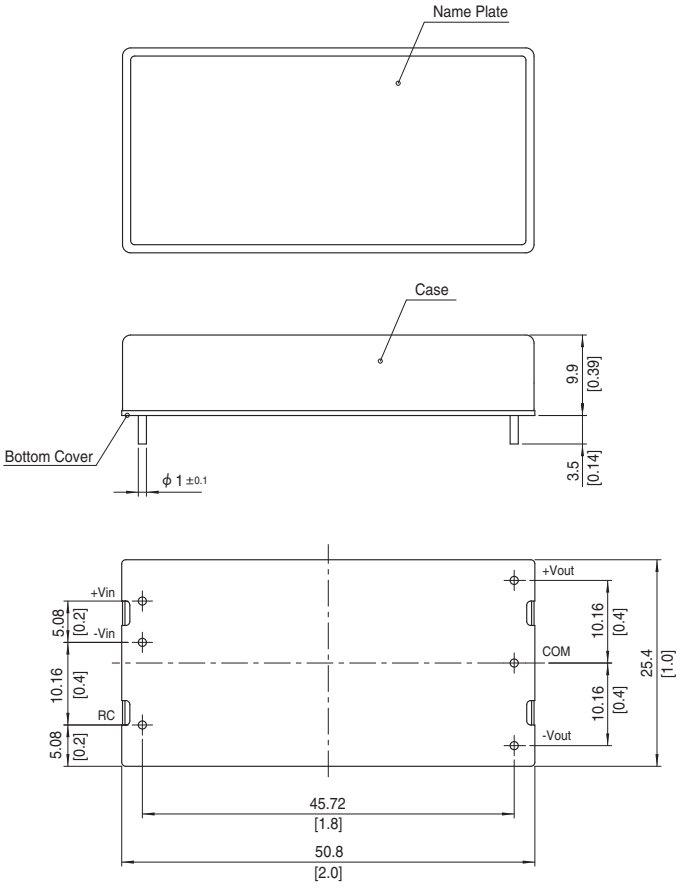
| MODEL | | | MGFW802412 | MGFW802415 | MGFW804812 | MGFW804815 |
|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | | 81.6 | 81 | 81.6 | 81 |
| DC OUTPUT | VOLTAGE[V] | *1 | ±12 or +24 | ±15 or +30 | ±12 or +24 | ±15 or +30 |
| | CURRENT[A] | | 3.4 | 2.7 | 3.4 | 2.7 |

## SPECIFICATIONS

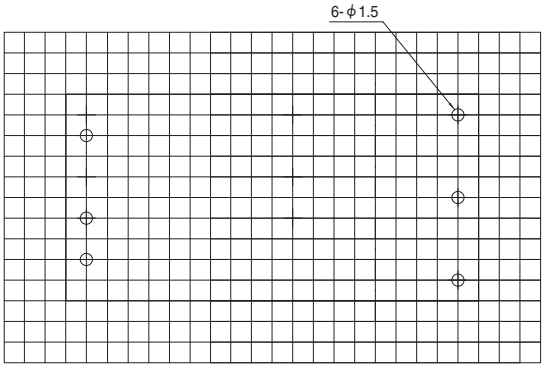
| | MODEL | | | MGFW802412 | MGFW802415 | MGFW804812 | MGFW804815 |
|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | | DC9 - 36 (Surge Voltage 50V, 100ms max) | | DC18 - 76 (Surge Voltage 100V, 100ms max) | |
| | CURRENT[A] | | *2 | 3.62typ | 3.59typ | 1.81typ | 1.80typ |
| | EFFICIENCY[%] | | *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] | -20 to +60℃ | *5 | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | | 120max | 120max | 120max | 120max |
| | | Io=0 to 10% | | 240max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | -20 to +60℃ | *5 | 100max | 100max | 100max | 100max |
| | | -40 to -20℃ | | 150max | 150max | 150max | 150max |
| | | Io=0 to 10% | | 270max | 270max | 270max | 270max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | | 150max | 180max | 150max | 180max |
| | | -40 to +60℃ | | 240max | 290max | 240max | 290max |
| | 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 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION | | | Work over 115 to 140% of rating (Total of +Vo and -Vo) | | | |
| | REMOTE ON/OFF | | | Provided (Negative logic L:ON, H:OFF) | | | |
| ISOLATION | 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℃) | | | |
| | OUTPUT-CASE | | | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | | -40 to +85℃, 20 to 95%RH (Non condensing) (Required Derating), 5,000m (16,400feet) 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/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis | | | |
| | IMPACT | | | 490.3m/s² (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 | | | 25.4×9.9×50.8mm (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 Riple 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℃
*7 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 50g max

# Mouser Electronics

Authorized Distributor

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Cosel:

MGFW1R54815 MGFW1R54812 MGFW64812 MGFW34812 MGFW104812 MGFW104815 MGFW64815 MGFW102415 MGFW32412 MGFW1R52412 MGFW1R52415 MGFW32415 MGFW62412 MGFW34815 MGFW102412 MGFW62415 MGFW802412 MGFW802415 MGFW804812 MGFW804815 MGFW400515 MGFW402412 MGFW400512 MGFW404812 MGFW402415 MGFW404815

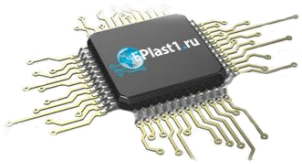
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

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**Электронная почта:** org@eplast1.ru
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