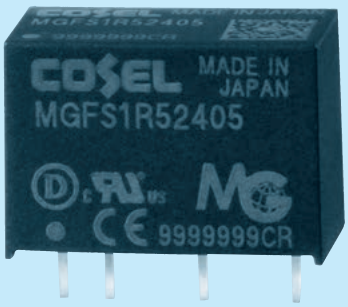
COSEL DC-DC Converters PCB Mount Type

# MGFS1R5

## Ordering information

| MGF | S | 1R5 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

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




| MODEL | | MGFS1R5243R3 | MGFS1R52405 | MGFS1R52412 | MGFS1R52415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.32 | 1.50 | 1.56 | 1.50 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.4 | 0.3 | 0.13 | 0.1 |

## SPECIFICATIONS

| | MODEL | | MGFS1R5243R3 | MGFS1R52405 | MGFS1R52412 | MGFS1R52415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36(Surge voltage 50V,100ms max) | | | |
| | CURRENT[A] | *1 | 0.072typ | 0.079typ | 0.079typ | 0.077typ |
| | EFFICIENCY[%] | *1 | 77typ | 80typ | 83typ | 82typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.4 | 0.3 | 0.13 | 0.1 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | *2 | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | *2 | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +85℃ | 50max | 50max | 150max | 180max |
| | | -40 to +85℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |

| MODEL | | MGFS1R5483R3 | MGFS1R54805 | MGFS1R54812 | MGFS1R54815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.32 | 1.50 | 1.56 | 1.50 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.4 | 0.3 | 0.13 | 0.1 |

## SPECIFICATIONS

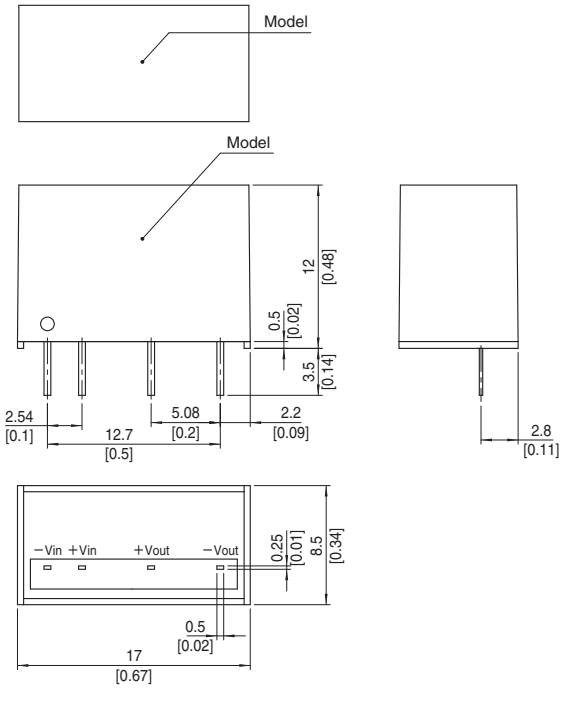
| | MODEL | | MGFS1R5483R3 | MGFS1R54805 | MGFS1R54812 | MGFS1R54815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76(Surge voltage 100V,100ms max) | | | |
| | CURRENT[A] | *1 | 0.037typ | 0.040typ | 0.040typ | 0.039typ |
| | EFFICIENCY[%] | *1 | 76typ | 79typ | 82typ | 81typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.4 | 0.3 | 0.13 | 0.1 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | *2 | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | *2 | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +85℃ | 50max | 50max | 150max | 180max |
| | | -40 to +85℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |

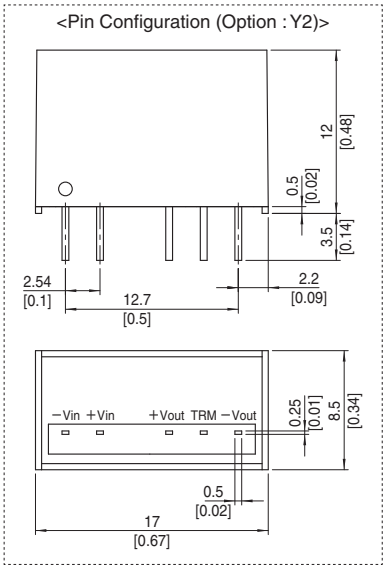
## GENERAL SPECIFICATIONS

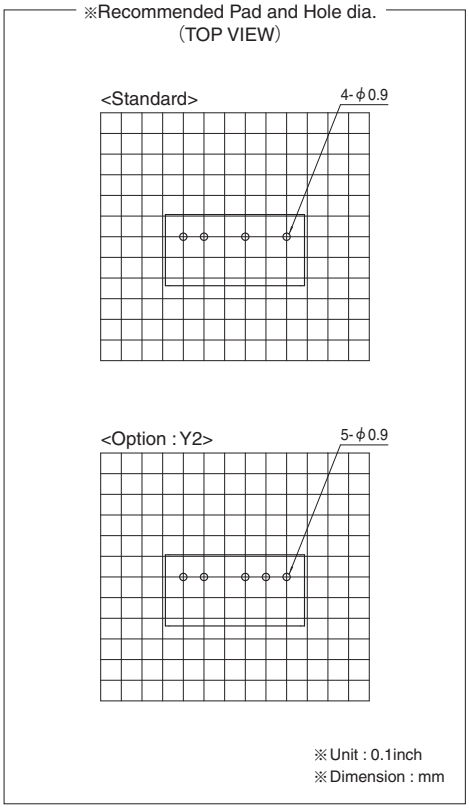
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max |
| | STORAGE TEMP.,HUMID.AND 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 Rated input 24V or 48V DC Io=100%
*2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
*3 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.
* MGFW1R5xx12/MGFW1R5xx15 is available as single output, +24V/+30V

## 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

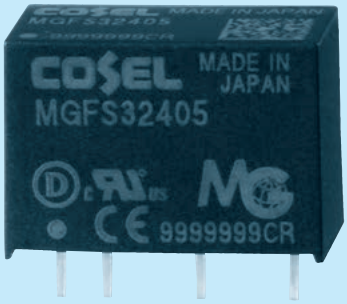
COSEL DC-DC Converters PCB Mount Type

# MGFS3

## Ordering information

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

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




| MODEL | | MGFS3243R3 | MGFS32405 | MGFS32412 | MGFS32415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 2.64 | 3.00 | 3.00 | 3.00 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.8 | 0.6 | 0.25 | 0.2 |

## SPECIFICATIONS

| | MODEL | | MGFS3243R3 | MGFS32405 | MGFS32412 | MGFS32415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max) (Refer to the instruction manual for input voltage derating.) | | | |
| | CURRENT[A] | *1 | 0.15typ | 0.16typ | 0.15typ | 0.15typ |
| | EFFICIENCY[%] | *1 | 78typ | 81typ | 85typ | 84typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.8 | 0.6 | 0.25 | 0.2 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | *2 | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | *2 | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +75℃ | 50max | 50max | 150max | 180max |
| | | -40 to +75℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |

| MODEL | | MGFS3483R3 | MGFS34805 | MGFS34812 | MGFS34815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 2.64 | 3.00 | 3.00 | 3.00 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.8 | 0.6 | 0.25 | 0.2 |

## SPECIFICATIONS

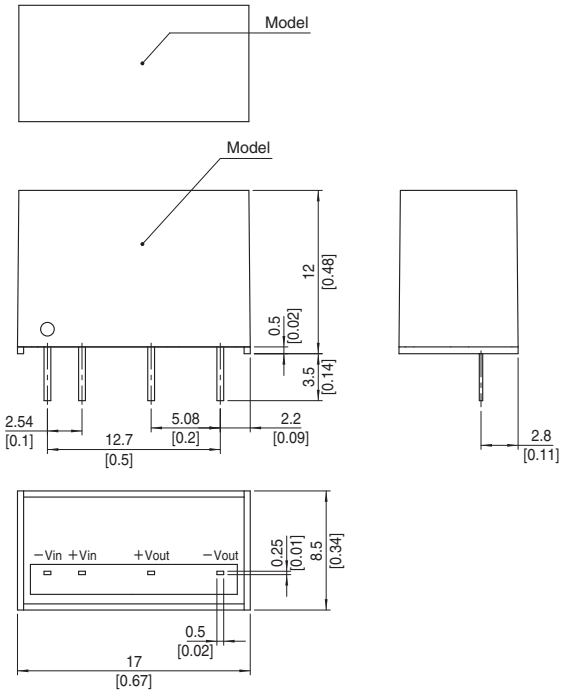
| | MODEL | | MGFS3483R3 | MGFS34805 | MGFS34812 | MGFS34815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 (Surge voltage 100V,100ms max) (Refer to the instruction manual for input voltage derating.) | | | |
| | CURRENT[A] | *1 | 0.072typ | 0.079typ | 0.076typ | 0.076typ |
| | EFFICIENCY[%] | *1 | 77typ | 80typ | 83typ | 83typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.8 | 0.6 | 0.25 | 0.2 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | *2 | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | *2 | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +75℃ | 50max | 50max | 150max | 180max |
| | | -40 to +75℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |

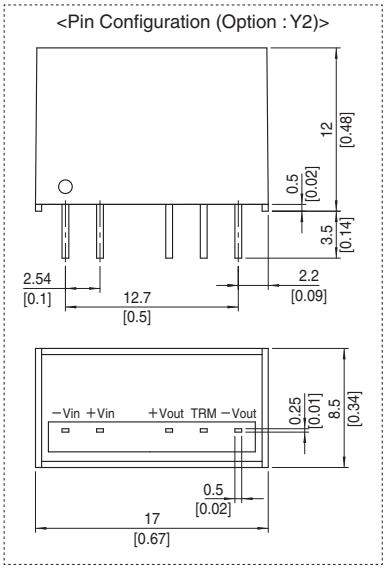
## GENERAL SPECIFICATIONS

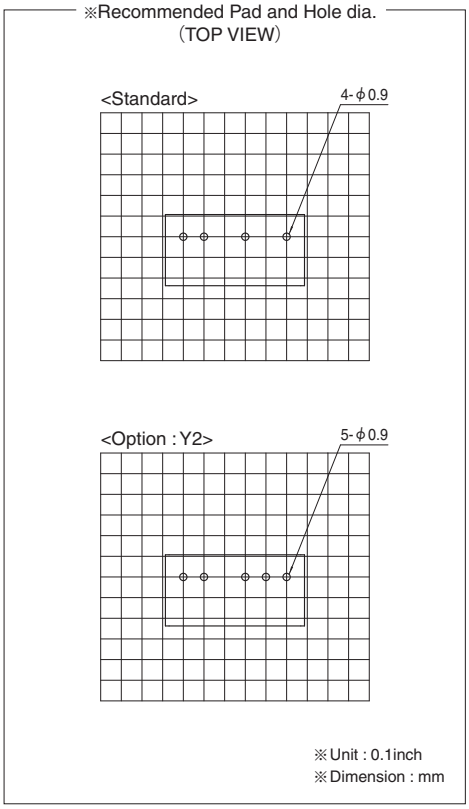
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | DC1,500V or AC1,000V 1minute, Cutoff current=10mA, DC500V 1,000MΩ min (20±15℃) |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | -40 to +85℃, 20 to 95%RH (Non condensing) (Required derating), 5,000m (16,400feet) max |
| | STORAGE TEMP.,HUMID.AND 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 Rated input 24V or 48V DC Io=100%
*2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
*3 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.
* MGFW3xx12/MGFW3xx15 is available as single output, +24V/+30V

## 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

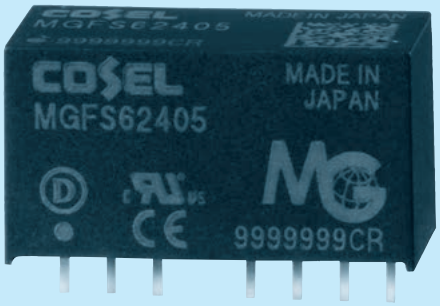
COSEL DC-DC Converters PCB Mount Type

# MGFS6

## Ordering information

| MGF | S | 6 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑧ |

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




| MODEL | | MGFS6243R3 | MGFS62405 | MGFS62412 | MGFS62415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 5.28 | 6.0 | 6.0 | 6.0 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.6 | 1.2 | 0.5 | 0.4 |

## SPECIFICATIONS

| | MODEL | | MGFS6243R3 | MGFS62405 | MGFS62412 | MGFS62415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max) | | | |
| | CURRENT[A] | *1 | 0.28typ | 0.30typ | 0.29typ | 0.29typ |
| | EFFICIENCY[%] | *1 | 80typ | 84typ | 88typ | 88typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 1.6 | 1.2 | 0.5 | 0.4 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | Io=30% - | 75max | 75max | 100max | 100max |
| | | *2 Io=0 - 30% | 225max | 225max | 300max | 300max |
| | RIPPLE NOISE[mVp-p] | Io=30% - | 120max | 120max | 150max | 150max |
| | | *2 Io=0 - 30% | 300max | 300max | 400max | 400max |
| | TEMPERATURE REGULATION[mV] | -20 to +65℃ | 50max | 50max | 150max | 180max |
| | | -40 to +65℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 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) | | | |

| MODEL | | MGFS6483R3 | MGFS64805 | MGFS64812 | MGFS64815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 5.28 | 6.0 | 6.0 | 6.0 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.6 | 1.2 | 0.5 | 0.4 |

## SPECIFICATIONS

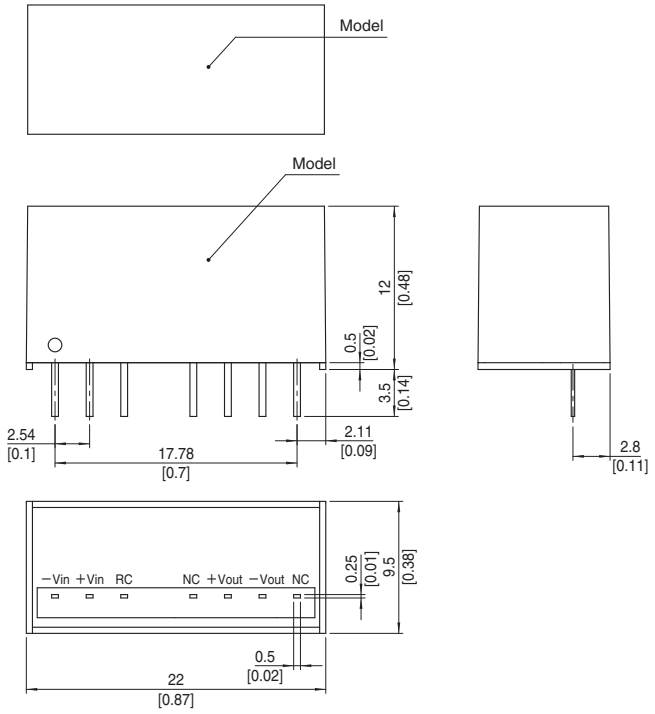
| | MODEL | | MGFS6483R3 | MGFS64805 | MGFS64812 | MGFS64815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 (Surge voltage 100V, 100ms max) | | | |
| | CURRENT[A] | *1 | 0.14typ | 0.15typ | 0.15typ | 0.15typ |
| | EFFICIENCY[%] | *1 | 80typ | 84typ | 88typ | 88typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 1.6 | 1.2 | 0.5 | 0.4 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | Io=30% - | 75max | 75max | 100max | 100max |
| | | *2 Io=0 - 30% | 225max | 225max | 300max | 300max |
| | RIPPLE NOISE[mVp-p] | Io=30% - | 120max | 120max | 150max | 150max |
| | | *2 Io=0 - 30% | 300max | 300max | 400max | 400max |
| | TEMPERATURE REGULATION[mV] | -20 to +65℃ | 50max | 50max | 150max | 180max |
| | | -40 to +65℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 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) | | | |

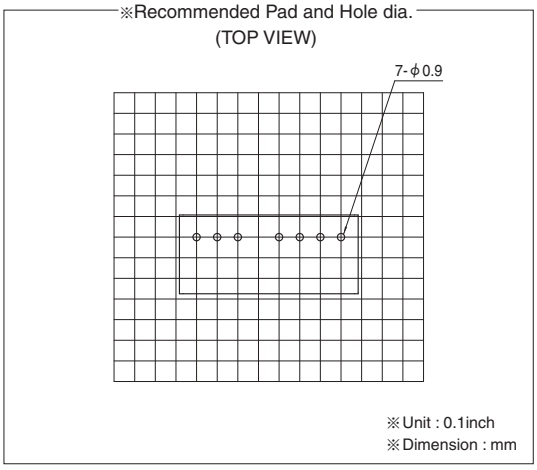
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| 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 Rated input 24V or 48V DC Io=100%
*2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
*3 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.
* MGFW6xx12/MGFW6xx15 is available as single output, +24V/+30V

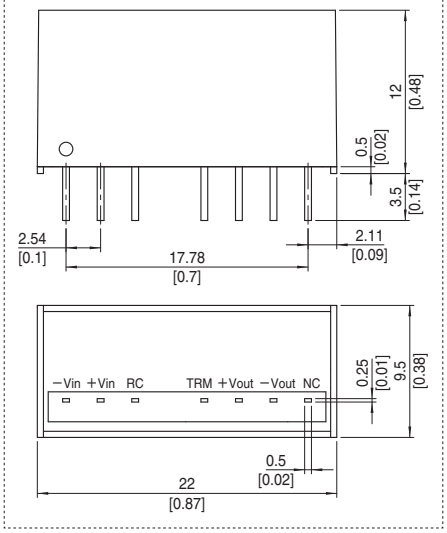
## External view




※ 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

<Pin Configuration (Option : Y2)>



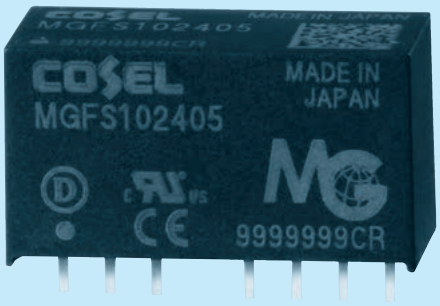
COSEL DC-DC Converters PCB Mount Type

# MGFS10

**Ordering information**

| MGF | S | 10 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑧ |

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




| MODEL | | MGFS10243R3 | MGFS102405 | MGFS102412 | MGFS102415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 8.58 | 10.0 | 10.8 | 10.5 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 2.6 | 2.0 | 0.9 | 0.7 |

## SPECIFICATIONS

| | MODEL | | MGFS10243R3 | MGFS102405 | MGFS102412 | MGFS102415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge voltage 50V,100ms max) (Refer to the instruction manual for input voltage derating.) | | | |
| | CURRENT[A] | *1 | 0.42typ | 0.48typ | 0.51typ | 0.50typ |
| | EFFICIENCY[%] | *1 | 86typ | 88typ | 89typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 2.6 | 2.0 | 0.9 | 0.7 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | Io=30% - | 75max | 75max | 100max | 100max |
| | | *2 Io=0 - 30% | 225max | 225max | 300max | 300max |
| | RIPPLE NOISE[mVp-p] | Io=30% - | 120max | 120max | 150max | 150max |
| | | *2 Io=0 - 30% | 300max | 300max | 400max | 400max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 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) | | | |

| MODEL | | MGFS10483R3 | MGFS104805 | MGFS104812 | MGFS104815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 8.58 | 10.0 | 10.8 | 10.5 |
| DC OUTPUT | VOLTAGE[V] | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 2.6 | 2.0 | 0.9 | 0.7 |

## SPECIFICATIONS

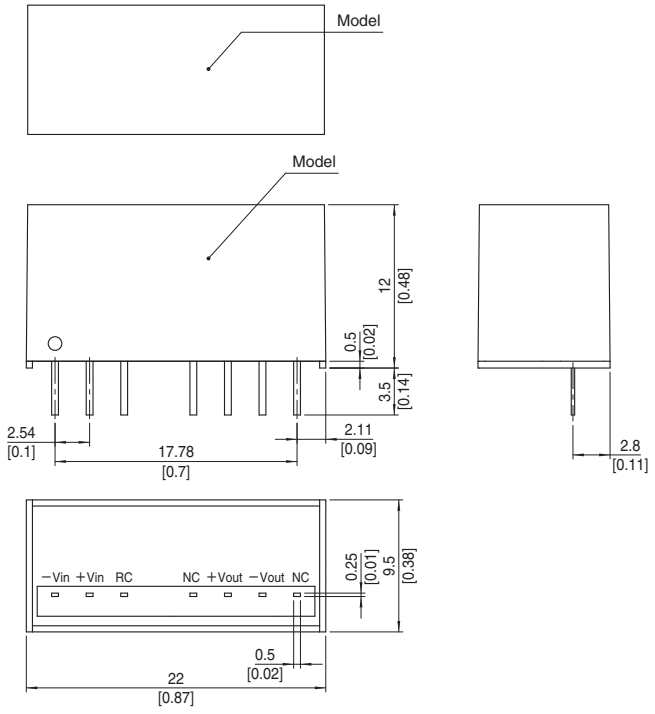
| | MODEL | | MGFS10483R3 | MGFS104805 | MGFS104812 | MGFS104815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 (Surge voltage 100V,100ms max) (Refer to the instruction manual for input voltage derating.) | | | |
| | CURRENT[A] | *1 | 0.21typ | 0.24typ | 0.26typ | 0.25typ |
| | EFFICIENCY[%] | *1 | 86typ | 88typ | 89typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 2.6 | 2.0 | 0.9 | 0.7 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | Io=30% - | 75max | 75max | 100max | 100max |
| | | *2 Io=0 - 30% | 225max | 225max | 300max | 300max |
| | RIPPLE NOISE[mVp-p] | Io=30% - | 120max | 120max | 150max | 150max |
| | | *2 Io=0 - 30% | 300max | 300max | 400max | 400max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *3 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE SETTING[V] | | 3.21 - 3.42 | 4.90 - 5.21 | 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) | | | |

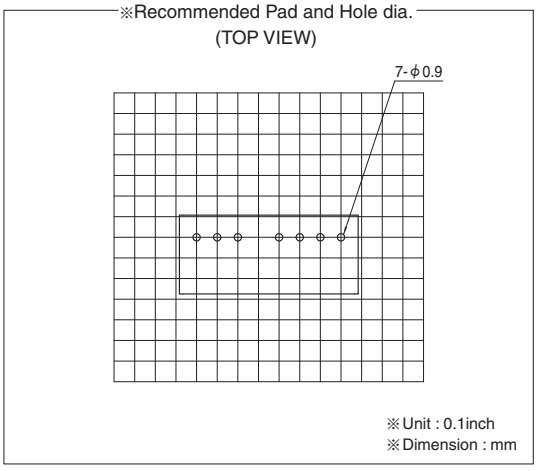
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| 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 |

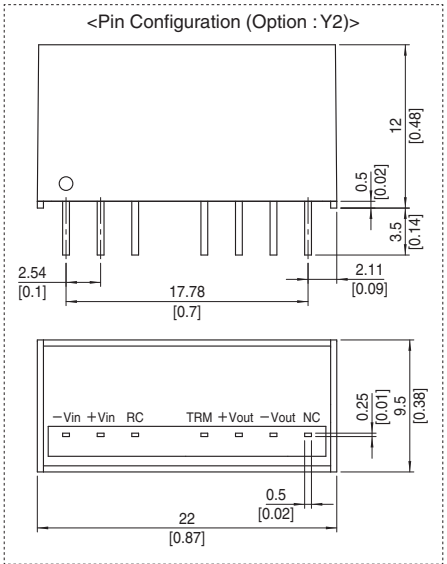
*1 Rated input 24V or 48V DC Io=100%
*2 Ripple and ripple noise is measured by using test board with ceramic capacitor 1μF at 50mm from output pins.
*3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
* Parallel operation with other model is not possible.
* MGFW10xx12/MGFW10xx15 is available as single output, +24V/+30V

## 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



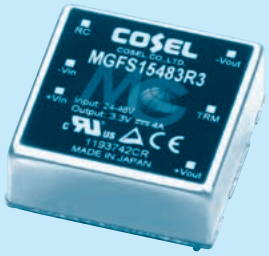
COSEL DC-DC Converters PCB Mount Type

# MGFS15

**Ordering information**

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

①Series name
②Single 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 | | MGFS15243R3 | MGFS152405 | MGFS152412 | MGFS152415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 13.2 | 15 | 15.6 | 15 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 4 | 3 | 1.3 | 1 |

## SPECIFICATIONS

| | MODEL | | MGFS15243R3 | MGFS152405 | MGFS152412 | MGFS152415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 | | | |
| | CURRENT[A] | *2 | 0.63typ | 0.71typ | 0.73typ | 0.70typ |
| | EFFICIENCY[%] | *2 | 87typ | 88typ | 89typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 4 | 3 | 1.3 | 1 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] | *5 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

| MODEL | | MGFS15483R3 | MGFS154805 | MGFS154812 | MGFS154815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 13.2 | 15 | 15.6 | 15 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 4 | 3 | 1.3 | 1 |

## SPECIFICATIONS

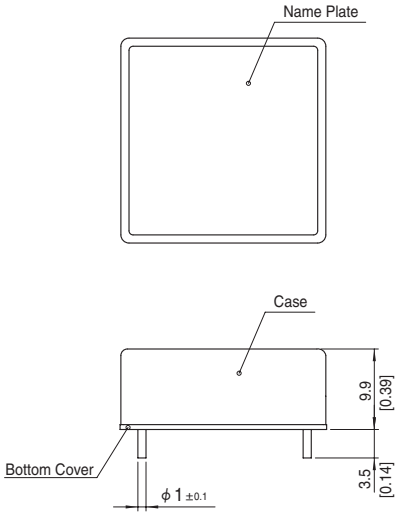
| | MODEL | | MGFS15483R3 | MGFS154805 | MGFS154812 | MGFS154815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 | | | |
| | CURRENT[A] | *2 | 0.32typ | 0.36typ | 0.37typ | 0.35typ |
| | EFFICIENCY[%] | *2 | 87typ | 88typ | 88typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 4 | 3 | 1.3 | 1 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] | *5 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

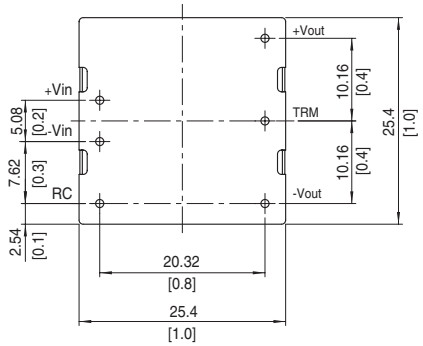
## GENERAL SPECIFICATIONS

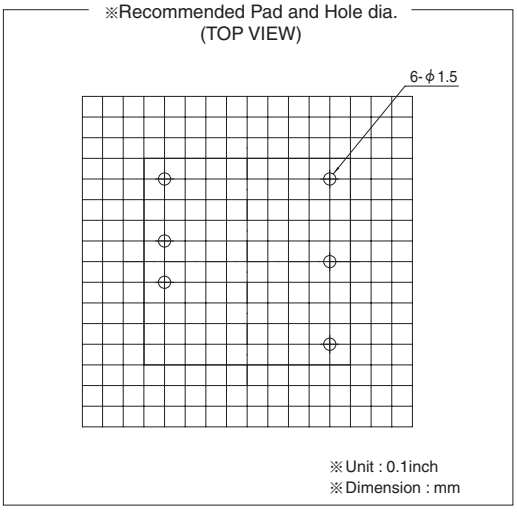
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| | INPUT-CASE | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| | OUTPUT-CASE | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| 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 MGFW15xx05/MGFW15xx12/MGFW15xx15 is available as single output, +10V/+24V/+30V
*2 Rated input 12V, 24V or 48V DC Io=100%
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Osilloscope)
*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature 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
※ 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

# MGFS30

**Ordering information**

| MGF | S | 30 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑧ |

①Series name
②Single 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 | | MGFS30243R3 | MGFS302405 | MGFS302412 | MGFS302415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 24.75 | 30 | 30 | 30 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 7.5 | 6 | 2.5 | 2 |

## SPECIFICATIONS

| | MODEL | | MGFS30243R3 | MGFS302405 | MGFS302412 | MGFS302415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 | | | |
| | CURRENT[A] *2 | | 1.16typ | 1.39typ | 1.40typ | 1.40typ |
| | EFFICIENCY[%] *2 | | 89typ | 90typ | 89typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 7.5 | 6 | 2.5 | 2 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] *4 | | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] *5 | | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION | | Works over 120 to 160% of rating | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

| MODEL | | MGFS30483R3 | MGFS304805 | MGFS304812 | MGFS304815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 24.75 | 30 | 30 | 30 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 7.5 | 6 | 2.5 | 2 |

## SPECIFICATIONS

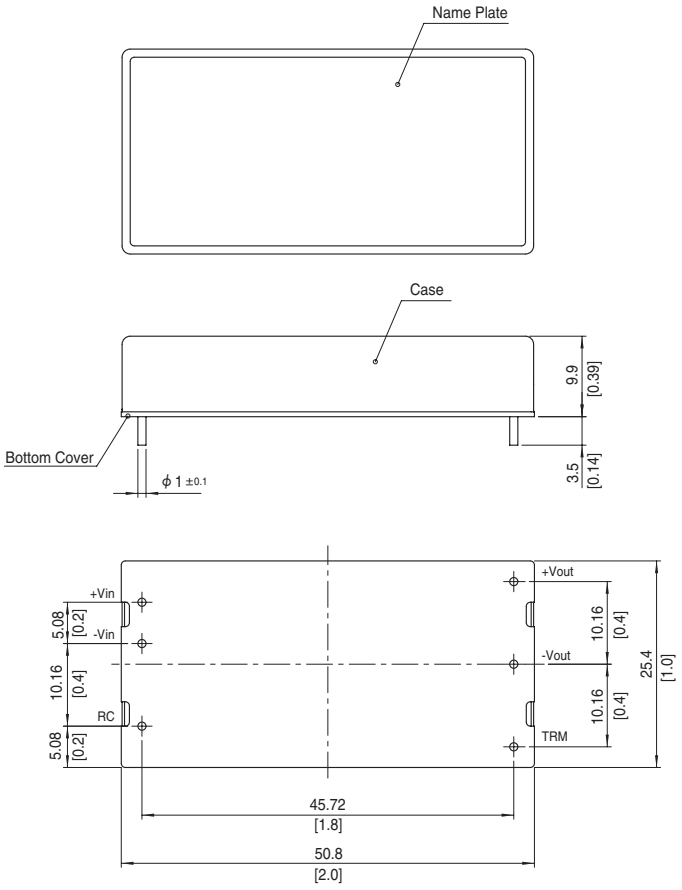
| | MODEL | | MGFS30483R3 | MGFS304805 | MGFS304812 | MGFS304815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 | | | |
| | CURRENT[A] *2 | | 0.58typ | 0.70typ | 0.70typ | 0.70typ |
| | EFFICIENCY[%] *2 | | 89typ | 90typ | 89typ | 89typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 7.5 | 6 | 2.5 | 2 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] *4 | | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] *5 | | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION | | Works over 120 to 160% of rating | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

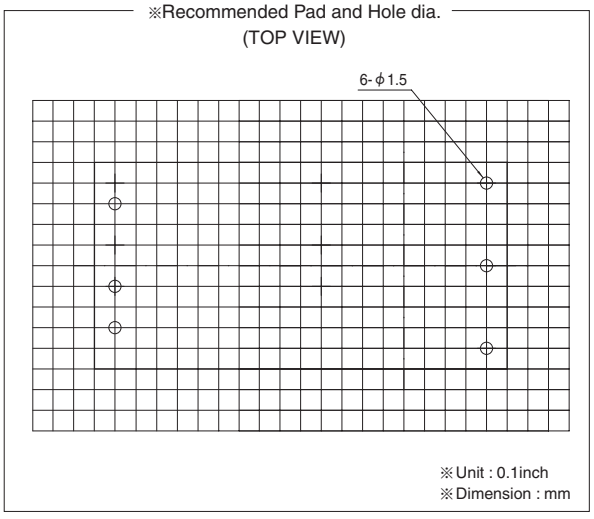
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| 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 MGFW30xx05/MGFW30xx12/MGFW30xx15 is available as single output, +10V/+24V/+30V
*2 Rated input 12V, 24V or 48V DC Io=100%
*3 Ripple and Ripple Noise is measured by using test board with ceramic capacitor 22μF at 50mm from output pins. (20MHz Osilloscope)
*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25℃.
*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature 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
※ 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

# MGFS40

**Ordering information**

| MGF | S | 40 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

①Series name
②Single 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 | | MGFS40053R3 | MGFS400505 | MGFS400512 | MGFS400515 | MGFS40243R3 | MGFS402405 | MGFS402412 | MGFS402415 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 26.4 | 30 | 30 | 30 | 33 | 40 | 40.8 | 40.5 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 8 | 6 | 2.5 | 2 | 10 | 8 | 3.4 | 2.7 |

## SPECIFICATIONS

| | MODEL | | MGFS40053R3 | MGFS400505 | MGFS400512 | MGFS400515 | MGFS40243R3 | MGFS402405 | MGFS402412 | MGFS402415 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC4.5 - 13 (Surge Voltage 15V, 100ms max) | | | | DC9 - 36 (Surge Voltage 50V, 100ms max) | | | |
| | CURRENT[A] | *2 | 6.21typ | 6.90typ | 6.90typ | 6.82typ | 1.54typ | 1.83typ | 1.85typ | 1.83typ |
| | EFFICIENCY[%] | *2 | 85typ | 87typ | 87typ | 88typ | 89typ | 91typ | 92typ | 92typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 8 | 6 | 2.5 | 2 | 10 | 8 | 3.4 | 2.7 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 100max | 100max | 120max | 120max | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 150max | 150max | 150max | 150max | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Rated load) | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | | | | | |
| | OUTPUT VOLTAGE SETTING[V] | *5 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | OVERVOLTAGE PROTECTION | | Work over 115 to 140% of rating | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | | | | | |

| MODEL | | MGFS40483R3 | MGFS404805 | MGFS404812 | MGFS404815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 33 | 40 | 40.8 | 40.5 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 10 | 8 | 3.4 | 2.7 |

## SPECIFICATIONS

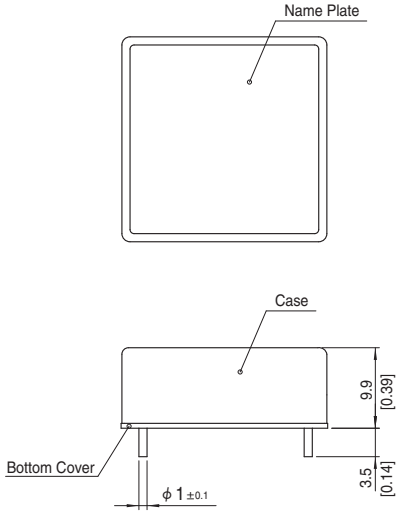
| | MODEL | | MGFS40483R3 | MGFS404805 | MGFS404812 | MGFS404815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 (Surge Voltage 100V, 100ms max) | | | |
| | CURRENT[A] | *2 | 0.77typ | 0.92typ | 0.92typ | 0.92typ |
| | EFFICIENCY[%] | *2 | 89typ | 91typ | 92typ | 92typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 10 | 8 | 3.4 | 2.7 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | RIPPLE NOISE[mVp-p] | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | *3 | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Rated load) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] | *5 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION | | Work over 115 to 140% of rating | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

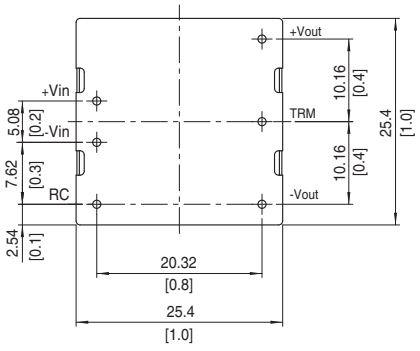
## GENERAL SPECIFICATIONS

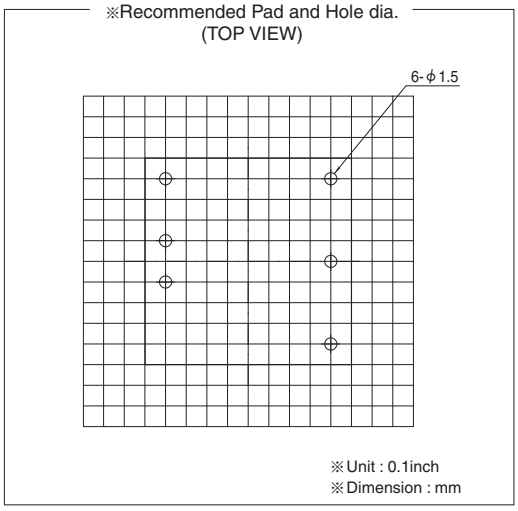
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| | INPUT-CASE | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| | OUTPUT-CASE | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15℃) |
| 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 MGFW40xx12/MGFW40xx15 is available as single output +24V/+30V
*2 Rated input voltage (DC5V, DC24V, DC48V) Io=100%
*3 Riple and Ripple Noise is measured by using test board with ceramic capacitor 22μF and Recommended Capacitance at 50mm from output pins. (20MHz Oscilloscope)
*4 Drift is the DC output accuracy for eight hour period after a half-hour warm-up at 25℃
*5 Rated input voltage (DC5V, DC24V, DC48V), rated output wattage, ambient temperature 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
※ 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

# MGFS80

## Ordering information

| MGF | S | 80 | 24 | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |

①Series name
②Single 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 | | MGFS80243R3 | MGFS802405 | MGFS802412 | MGFS802415 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 59.4 | 80 | 80.4 | 81 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 18 | 16 | 6.7 | 5.4 |

## SPECIFICATIONS

| | MODEL | | MGFS80243R3 | MGFS802405 | MGFS802412 | MGFS802415 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC9 - 36 (Surge Voltage 50V, 100ms max) | | | |
| | CURRENT[A] | *2 | 2.69typ | 3.60typ | 3.56typ | 3.59typ |
| | EFFICIENCY[%] | *2 | 92typ | 93typ | 94typ | 94typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 18 | 16 | 6.7 | 5.4 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | | Io=0 to 10% | 200max | 200max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | | Io=0 to 10% | 250max | 250max | 270max | 270max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Rated load) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
| | OUTPUT VOLTAGE SETTING[V] | *5 | 3.296 - 3.404 | 4.975 - 5.137 | 11.857 - 12.243 | 14.839 - 15.321 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION | | Work over 115 to 140% of rating | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

| MODEL | | MGFS80483R3 | MGFS804805 | MGFS804812 | MGFS804815 |
|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 59.4 | 80 | 80.4 | 81 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 18 | 16 | 6.7 | 5.4 |

## SPECIFICATIONS

| | MODEL | | MGFS80483R3 | MGFS804805 | MGFS804812 | MGFS804815 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 76 (Surge Voltage 100V, 100ms max) | | | |
| | CURRENT[A] | *2 | 1.35typ | 1.80typ | 1.78typ | 1.80typ |
| | EFFICIENCY[%] | *2 | 92typ | 93typ | 94typ | 94typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 18 | 16 | 6.7 | 5.4 |
| | LINE REGULATION[mV] | | 13.2max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 20max | 20max | 48max | 60max |
| | RIPPLE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 100max | 100max | 120max | 120max |
| | | Io=0 to 10% | 200max | 200max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] *3 | -20 to +60℃ | 75max | 75max | 100max | 100max |
| | | -40 to -20℃ | 150max | 150max | 150max | 150max |
| | | Io=0 to 10% | 250max | 250max | 270max | 270max |
| | TEMPERATURE REGULATION[mV] | -20 to +60℃ | 50max | 50max | 150max | 180max |
| | | -40 to +60℃ | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max |
| | START-UP TIME[ms] | | 30max (Minimum input, Rated load) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE | | Fixed (TRM pin open) ±10% adjustable by external VR | | | |
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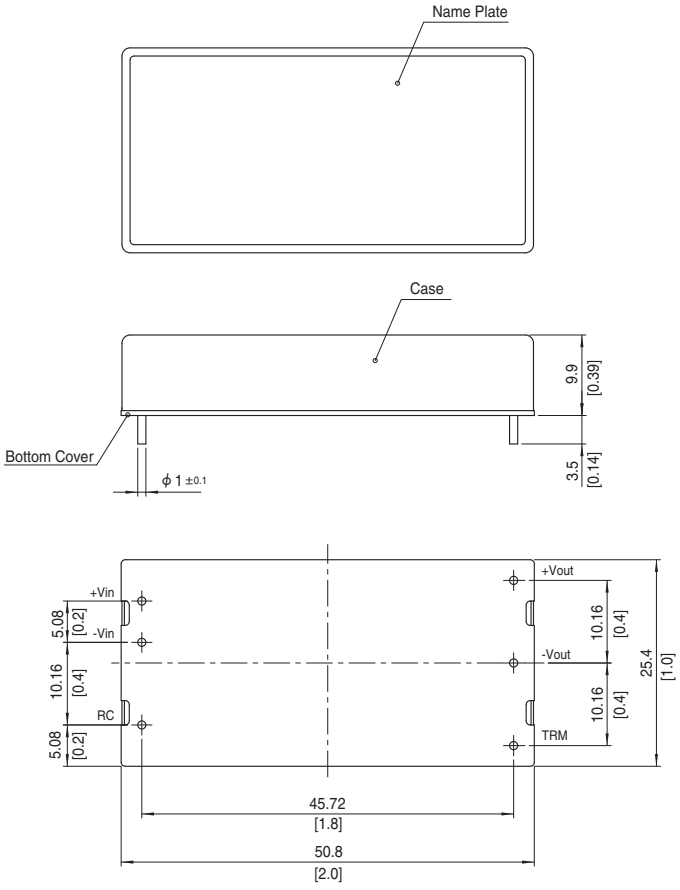
| | OVERVOLTAGE PROTECTION | | Work over 115 to 140% of rating | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L:ON, H:OFF) | | | |

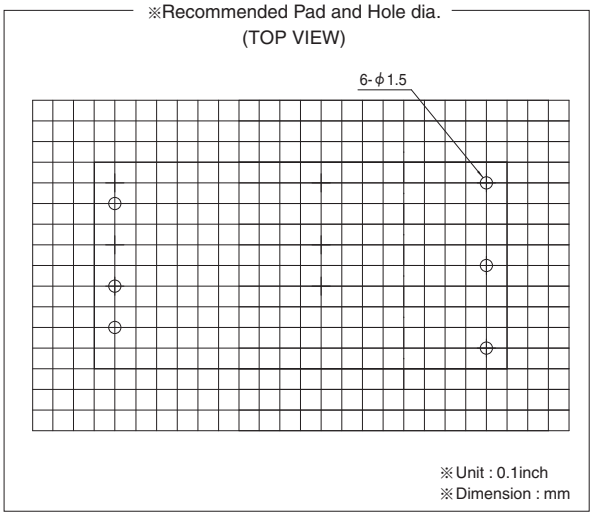
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| 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 MGFW80xx12/MGFW80xx15 is available as single output +24V/+30V
*2 Rated input voltage (DC24V, DC48V) Io=100%
*3 Riple and Ripple Noise is measured by using test board with ceramic capacitor 22μF and Recommended Capacitance at 50mm from output pins. (20MHz Oscilloscope)
*4 Drift is the DC output accuracy for eight hour period after a half-hour warm-up at 25℃
*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature 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
※ 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

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Cosel:

MGFS1R54805 MGFS102415 MGFS1R54812 MGFS104815 MGFS34812 MGFS1R5243R3 MGFS62412 MGFS64805 MGFS1R52412 MGFS6243R3 MGFS64812 MGFS1R54815 MGFS3243R3 MGFS34805 MGFS102405 MGFS32415 MGFS6483R3 MGFS102412 MGFS104805 MGFS32405 MGFS62405 MGFS1R52405 MGFS34815 MGFS104812 MGFS62415 MGFS1R52415 MGFS10483R3 MGFS1R5483R3 MGFS64815 MGFS3483R3 MGFS32412 MGFS10243R3 MGFS402412 MGFS802405 MGFS802412 MGFS802415 MGFS80243R3 MGFS804805 MGFS804812 MGFS804815 MGFS80483R3 MGFS102405-Y2

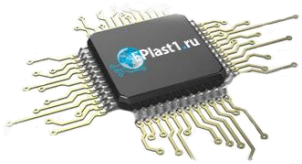
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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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