

# MGFS80

MGF S 80 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
  - ② Single 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                 | MGFS80243R3   | MGFS802405 | MGFS802412 | MGFS802415 |
|-----------------------|---------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 59.4          | 80         | 80.4       | 81         |
| DC OUTPUT             | VOLTAGE[V] *1 | 3.3        | 5          | 12         |
|                       | 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°C   | 75max           | 75max           | 100max     | 100max |
|                                 |   | -40 to -20°C   | 100max          | 100max          | 120max     | 120max |
|                                 |   | Io=0 to 10%  | 200max          | 200max          | 240max     | 240max |
|                                 | RIPPLE NOISE[mVp-p] *3                              | -20 to +60°C   | 75max           | 75max           | 100max     | 100max |
|                                 |   | -40 to -20°C   | 150max          | 150max          | 150max     | 150max |
|                                 |   | Io=0 to 10%  | 250max          | 250max          | 270max     | 270max |
|                                 | TEMPERATURE REGULATION[mV]                          | -20 to +60°C   | 50max           | 50max           | 150max     | 180max |
|                                 |   | -40 to +60°C   | 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         |
|                       | CURRENT[A]    | 18         | 16         | 6.7        |
|                       |               |            |            | 5.4        |

## SPECIFICATIONS

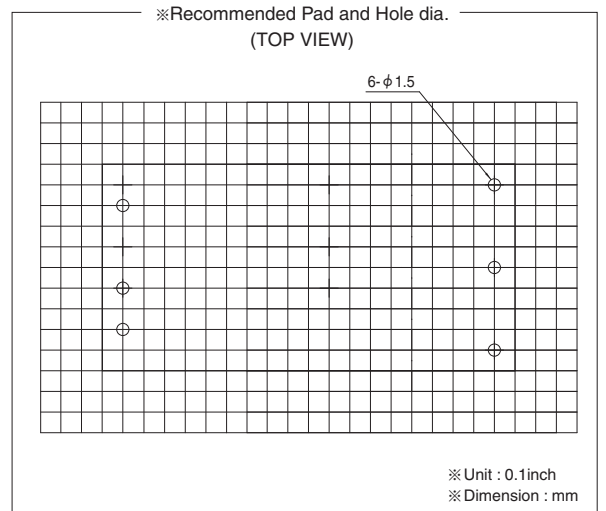
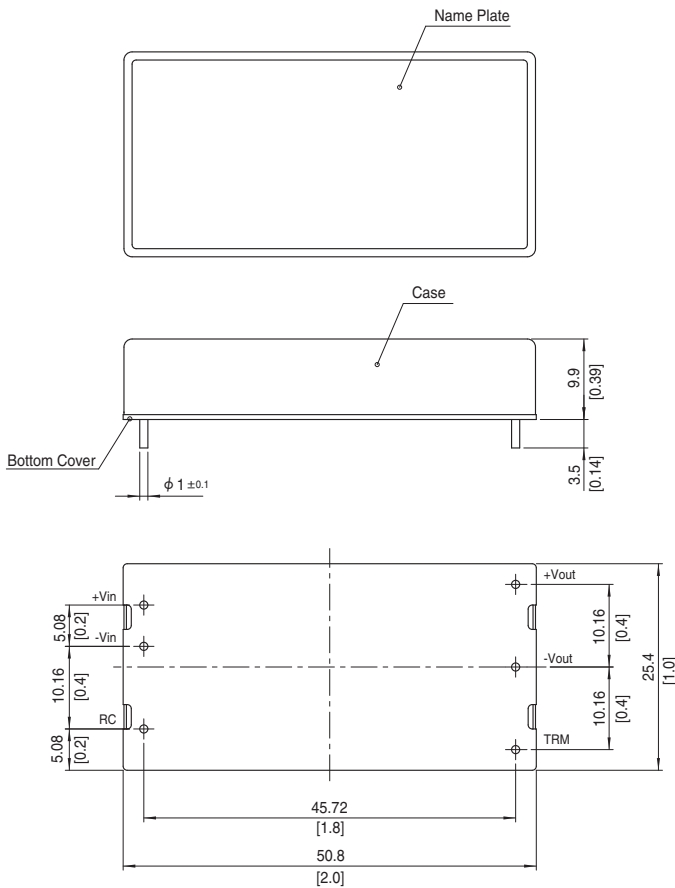
|                                 | MODEL   | MGFS80483R3  | MGFS804805      | MGFS804812      | MGFS804815 |        |
|---------------------------------|---|--|-----------------|-----------------|------------|--------|
| INPUT                           | VOLTAGE[V]  | DC18 - 76 (Surge Voltage 100V, 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°C   | 75max           | 75max           | 100max     | 100max |
|                                 |   | -40 to -20°C   | 100max          | 100max          | 120max     | 120max |
|                                 |   | Io=0 to 10%  | 200max          | 200max          | 240max     | 240max |
|                                 | RIPPLE NOISE[mVp-p] *3                              | -20 to +60°C   | 75max           | 75max           | 100max     | 100max |
|                                 |   | -40 to -20°C   | 150max          | 150max          | 150max     | 150max |
|                                 |   | Io=0 to 10%  | 250max          | 250max          | 270max     | 270max |
|                                 | TEMPERATURE REGULATION[mV]                          | -20 to +60°C   | 50max           | 50max           | 150max     | 180max |
|                                 |   | -40 to +60°C   | 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°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), 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 <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis |
|             | IMPACT                               | 490.3m/s <sup>2</sup> (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 X 9.9 X 50.8mm (W X H X 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 Ripple 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°C
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature 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
- ※ 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