

MGFS15

MGF S 15 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)

MG

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

## 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] *3                | -20 to +60°C                                         | 75max         | 75max           | 100max          |
|                                     |                                 | -40 to -20°C                                         | 100max        | 100max          | 120max          |
|                                     | RIPPLE NOISE[mVp-p] *3          | -20 to +60°C                                         | 75max         | 75max           | 100max          |
|                                     |                                 | -40 to -20°C                                         | 150max        | 150max          | 150max          |
|                                     | TEMPERATURE REGULATION[mV]      | -20 to +60°C                                         | 50max         | 50max           | 150max          |
|                                     |                                 | -40 to +60°C                                         | 80max         | 80max           | 240max          |
|                                     | DRIFT[mV] *4                    | 20max                                                | 20max         | 48max           | 60max           |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | 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 |
|                                     | OVERCURRENT PROTECTION          | Works over 105% of rating and recovers automatically |               |                 |                 |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | 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         |
|                       | CURRENT[A]    | 4          | 3          | 1.3        |

## SPECIFICATIONS

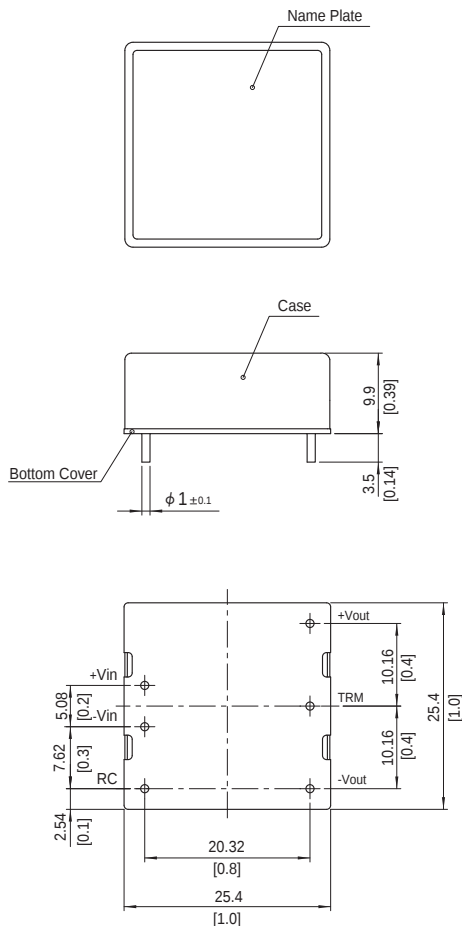
|                                     | MODEL                           | MGFS15483R3                                          | MGFS154805    | MGFS154812      | MGFS154815      |
|-------------------------------------|---------------------------------|------------------------------------------------------|---------------|-----------------|-----------------|
| 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] *3                | -20 to +60°C                                         | 75max         | 75max           | 100max          |
|                                     |                                 | -40 to -20°C                                         | 100max        | 100max          | 120max          |
|                                     | RIPPLE NOISE[mVp-p] *3          | -20 to +60°C                                         | 75max         | 75max           | 100max          |
|                                     |                                 | -40 to -20°C                                         | 150max        | 150max          | 150max          |
|                                     | TEMPERATURE REGULATION[mV]      | -20 to +60°C                                         | 50max         | 50max           | 150max          |
|                                     |                                 | -40 to +60°C                                         | 80max         | 80max           | 240max          |
|                                     | DRIFT[mV] *4                    | 20max                                                | 20max         | 48max           | 60max           |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | 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 |
|                                     | OVERCURRENT PROTECTION          | Works over 105% of rating and recovers automatically |               |                 |                 |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | REMOTE ON/OFF                   | Provided (Negative logic L:ON, H:OFF)                |               |                 |                 |

## GENERAL SPECIFICATIONS

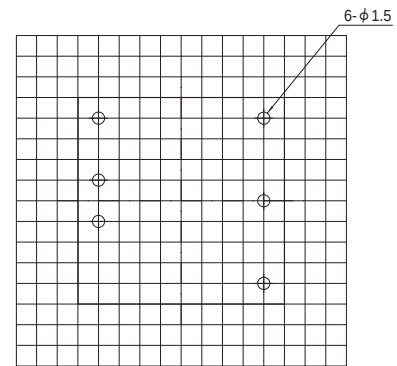
|             |                                      |                                                                                              |
|-------------|--------------------------------------|----------------------------------------------------------------------------------------------|
| 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/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                     | UL60950-1, C-UL, EN60950-1                                                                   |
| OTHERS      | CASE SIZE/WEIGHT                     | 25.4 X 9.9 X 25.4mm [1 X 0.39 X 1 inches] (W X H X 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 Oscilloscope)
- \*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



※Recommended Pad and Hole dia.  
(TOP VIEW)



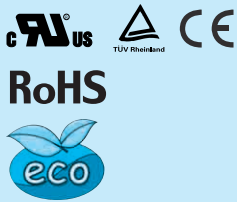
※ Unit : 0.1inch  
※ Dimension : mm

- ※ Tolerance  $\pm 0.5$  [ $\pm 0.02$ ]
- ※ 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

## MGFS30

MGF S 30 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                 | MGFS30243R3   | MGFS302405 | MGFS302412 | MGFS302415 |
|-----------------------|---------------|------------|------------|------------|
| MAX OUTPUT WATTAGE[W] | 24.75         | 30         | 30         | 30         |
| DC OUTPUT             | VOLTAGE[V] *1 | 3.3        | 5          | 12         |
|                       | CURRENT[A]    | 7.5        | 6          | 2.5        |

## 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°C 75max                                   | 75max         | 100max          | 100max          |
|                                     |                                 | -40 to -20°C 100max                                  | 100max        | 120max          | 120max          |
|                                     | RIPPLE NOISE[mVp-p] *3          | -20 to +60°C 75max                                   | 75max         | 100max          | 100max          |
|                                     |                                 | -40 to -20°C 150max                                  | 150max        | 150max          | 150max          |
|                                     | 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           |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | 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 |
|                                     | OVERCURRENT PROTECTION          | Works over 105% of rating and recovers automatically |               |                 |                 |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | OVERVOLTAGE PROTECTION[V]       | 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         |
|                       | CURRENT[A]    | 7.5        | 6          | 2.5        |

## SPECIFICATIONS

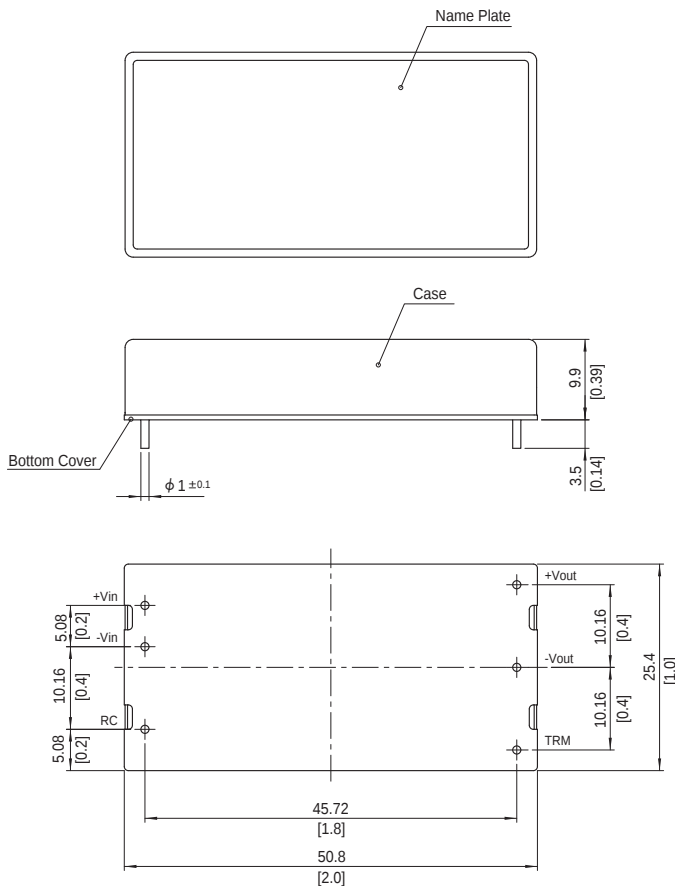
|                                     | MODEL                           | MGFS30483R3                                          | MGFS304805    | MGFS304812      | MGFS304815      |
|-------------------------------------|---------------------------------|------------------------------------------------------|---------------|-----------------|-----------------|
| 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°C 75max                                   | 75max         | 100max          | 100max          |
|                                     |                                 | -40 to -20°C 100max                                  | 100max        | 120max          | 120max          |
|                                     | RIPPLE NOISE[mVp-p] *3          | -20 to +60°C 75max                                   | 75max         | 100max          | 100max          |
|                                     |                                 | -40 to -20°C 150max                                  | 150max        | 150max          | 150max          |
|                                     | 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           |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | 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 |
|                                     | OVERCURRENT PROTECTION          | Works over 105% of rating and recovers automatically |               |                 |                 |
| PROTECTION<br>CIRCUIT AND<br>OTHERS | OVERVOLTAGE PROTECTION[V]       | Works over 120 to 160% of rating                     |               |                 |                 |
|                                     | REMOTE ON/OFF                   | Provided (Negative logic L:ON, H:OFF)                |               |                 |                 |

## GENERAL SPECIFICATIONS

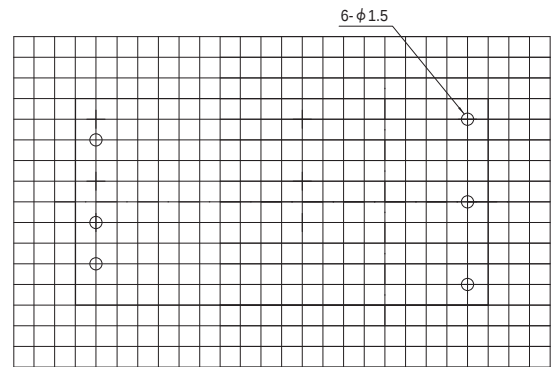
|             |                                      |                                                                                                    |
|-------------|--------------------------------------|----------------------------------------------------------------------------------------------------|
| ISOLATION   | INPUT-OUTPUT                         | DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000M $\Omega$ min (20 $\pm$ 15 $^{\circ}$ C)     |
|             | INPUT-CASE                           | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M $\Omega$ min (20 $\pm$ 15 $^{\circ}$ C)     |
|             | OUTPUT-CASE                          | DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000M $\Omega$ min (20 $\pm$ 15 $^{\circ}$ C)     |
| ENVIRONMENT | OPERATING TEMP., HUMID. AND ALTITUDE | -40 to +85 $^{\circ}$ C, 20 to 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max |
|             | STORAGE TEMP., HUMID. AND ALTITUDE   | -40 to +100 $^{\circ}$ C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max                    |
|             | VIBRATION                            | 10 - 55Hz, 98.0m/s $^2$ (10G), 3minutes period, 60minutes each along X, Y and Z axis               |
|             | IMPACT                               | 490.3m/s $^2$ (50G), 11ms, once each along X, Y and Z axis                                         |
| SAFETY      | AGENCY APPROVALS                     | UL60950-1, C-UL, EN60950-1                                                                         |
| OTHERS      | CASE SIZE/WEIGHT                     | 25.4 X 9.9 X 50.8mm [1 X 0.39 X 2 inches] (W X H X 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 22 $\mu$ F at 50mm from output pins. (20MHz Oscilloscope)
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25 $^{\circ}$ C.
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25 $^{\circ}$ C.
- \* Parallel operation with other model is not possible.

## External view



※Recommended Pad and Hole dia.  
(TOP VIEW)



※ Unit : 0.1inch  
※ Dimension : mm

- ※ Tolerance  $\pm 0.5$  [ $\pm 0.02$ ]
- ※ 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

# Mouser Electronics

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[MGFS30243R3](#) [MGFS30243R3-R](#) [MGFS304805](#) [MGFS302405](#) [MGFS302405-G](#) [MGFS302405-R](#) [MGFS302412](#)  
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