

Date : Jan.30,2017

## Temperature increase of main components

Model: MGFS348□□

### 1. Conditions

- (1) Input :DC 48 [V]
- (2) Output :Rated output
- (3) Cooling method :Convection cooling
- (4) Mounting method :Shown as Fig.1.1

### 2. Result

Table 2.1 Temperature increase of main components

| Table 2-1 Temperature increase of main components |                          |            |                         |    |     |     |                  |                    |
|---|--------------------------|------------|-------------------------|----|-----|-----|------------------|--------------------|
| No.   | Parts name               | Symbol No. | Increase ( $\Delta T$ ) |    |     |     | Rated temp. [°C] | Reference          |
|   |                          |            | [deg]                   |    |     |     |                  |                    |
|   |                          |            | 3.3V                    | 5V | 12V | 15V |                  |                    |
| 1   | Switching MOS-FET        | TR11       | 31                      | 30 | 27  | 25  | 150              | Junction Temp.     |
| 2   | Switching MOS-FET        | TR101      | 33                      | 33 | 30  | 27  | 150              | Junction Temp.     |
| 3   | Power control IC         | IC12       | 33                      | 32 | 29  | 27  | 150              | Junction Temp.     |
| 4   | Rectified diode (Output) | D201       | 39                      | 36 | 32  | 29  | 150              | Junction Temp.     |
| 5   | Rectified diode (Output) | D202       | 40                      | 39 | 33  | 29  | 150              | Junction Temp.     |
| 6   | Photocoupler             | PC11       | 32                      | 31 | 27  | 25  | 125              | Junction Temp.     |
| 7   | Transformer (PCB)        | P2         | 36                      | 35 | 32  | 29  | 130              |                    |
| 8   | CASE                     | CASE       | 32                      | 31 | 27  | 26  | 110              | Top Surface Center |
| 9   |                          |            |                         |    |     |     |                  |                    |
| 10  |                          |            |                         |    |     |     |                  |                    |
| 11  |                          |            |                         |    |     |     |                  |                    |
| 12  |                          |            |                         |    |     |     |                  |                    |
| 13  |                          |            |                         |    |     |     |                  |                    |
| 14  |                          |            |                         |    |     |     |                  |                    |
| 15  |                          |            |                         |    |     |     |                  |                    |
| 16  |                          |            |                         |    |     |     |                  |                    |
| 17  |                          |            |                         |    |     |     |                  |                    |
| 18  |                          |            |                         |    |     |     |                  |                    |
| 19  |                          |            |                         |    |     |     |                  |                    |
| 20  |                          |            |                         |    |     |     |                  |                    |

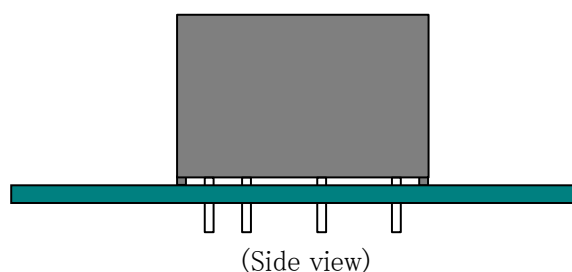


Fig.1.1 Mounting method  
(Normal position)