

Temperature increase of main components

Model: SUCS/SUCW1005

1. Conditions

- (1) Input :DC 4.5 - 9 [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

| No. | Parts name | Symbol No. | Increase (ΔT) | | | | | | Rated temp. [°C] | Reference |
|-----|----------------------|------------|-------------------------|----|-----|-----|-----------|-----------|------------------|----------------|
| | | | [deg] | | | | | | | |
| | | | 3.3V | 5V | 12V | 15V | $\pm 12V$ | $\pm 15V$ | | |
| 1 | Switching Transistor | TR31 | 53 | 51 | 49 | 46 | 47 | 43 | 150 | Junction Temp. |
| 2 | Transformer | T11 | 60 | 53 | 55 | 50 | 51 | 49 | 155 | |
| 3 | Rectifying MOS-FET | TR51 | 60 | 48 | - | - | - | - | 150 | Junction Temp. |
| 4 | Rectifying Diode | D52 | 58 | 47 | 51 | 48 | 38 | 34 | 150 | Junction Temp. |
| 5 | Photocoupler | PC11 | 47 | 42 | 43 | 39 | 35 | 31 | 125 | Junction Temp. |
| 6 | Input Choke Coil | L11 | 47 | 44 | 45 | 40 | 42 | 38 | 120 | |
| 7 | Output Choke Coil | L51 | 45 | 42 | 34 | 28 | 29 | 27 | 120 | |
| 8 | Output Capacitor | C51 | 50 | 42 | 39 | 34 | 33 | 31 | 125 | |
| 9 | Power Control IC | IC11 | 43 | 42 | 41 | 38 | 40 | 36 | 150 | |
| 10 | Current Transformer | T12 | 43 | 41 | 41 | 37 | 38 | 33 | 155 | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |



(Side view)

Fig.1.1 Mounting method
(Normal position)