



SANYO Semiconductors

## DATA SHEET

# DBA500G

 — Diffused Junction Silicon Diode  

## 50A Single-Phase Bridge Rectifier

### Features

- Plastic molded structure.
- Peak reverse voltage :  $V_{RM}=600V$ .
- Average output current :  $I_O=50A$ .

### Specifications

**Absolute Maximum Ratings** at  $T_c=25^\circ C$

| Parameter                   | Symbol    | Conditions  | Ratings     | Unit       |
|-----------------------------|-----------|---|-------------|------------|
| Peak Reverse Voltage        | $V_{RM}$  |   | 600         | V          |
| Average Output Current      | $I_O$     | 50Hz sine 1cycle peak value, $T_c=95^\circ C$ , with heatsink       | 50          | A          |
| Surge Forward Current       | $I_{FSM}$ | 50Hz sine wave, non-repetitive, 1cycle peak value, $T_j=25^\circ C$ | 500         | A          |
| Current Squared Time        | $I^2t$    | $1ms \leq t < 10ms$ , $T_j=25^\circ C$ , Rating of per diode        | 800         | $A^2s$     |
| Junction Temperature        | $T_j$     |   | 150         | $^\circ C$ |
| Storage Temperature         | $T_{stg}$ |   | -40 to +150 | $^\circ C$ |
| Dillective Strength Voltage | $V_{dis}$ | Terminals to case, AC 1 minute                                      | 2           | kV         |
| Tightening Torque           | TOR       | ( ): recommended value  | 0.8(0.6)    | N•m        |

**Electrical Characteristics** at  $T_c=25^\circ C$  Per Constituent element of bridge.

| Parameter          | Symbol        | Conditions                    | Ratings |     |      | Unit           |
|--------------------|---------------|-------------------------------|---------|-----|------|----------------|
|                    |               |                               | min     | typ | max  |                |
| Forward Voltage    | $V_F$         | $I_F=25A$                     |         |     | 1.05 | V              |
| Reverse Current    | $I_R$         | $V_R=600V$                    |         |     | 10   | $\mu A$        |
| Thermal Resistance | $R_{th(j-c)}$ | With heatsink (Junction-Case) |         |     | 0.5  | $^\circ C / W$ |

Marking: BA500G

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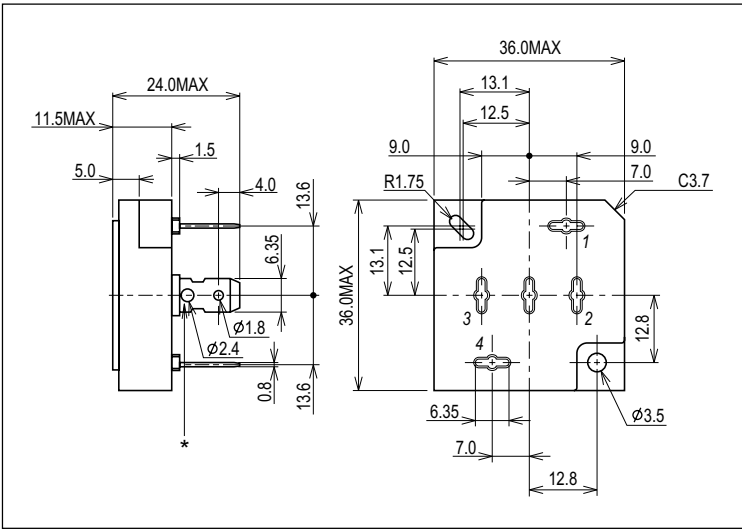
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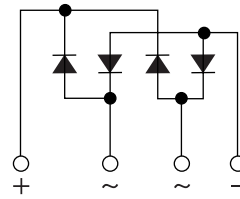
# DBA500G

## Package Dimensions

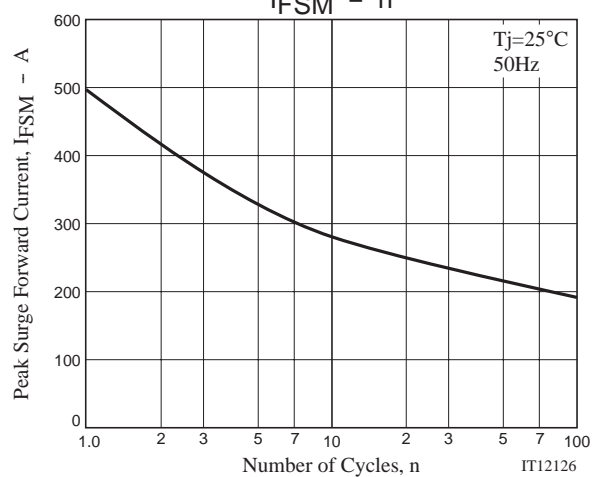
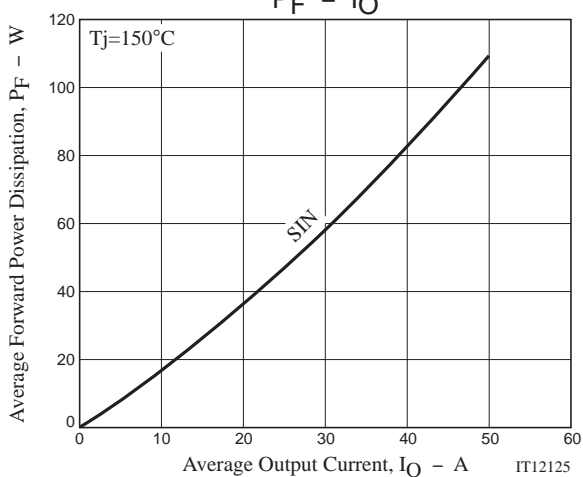
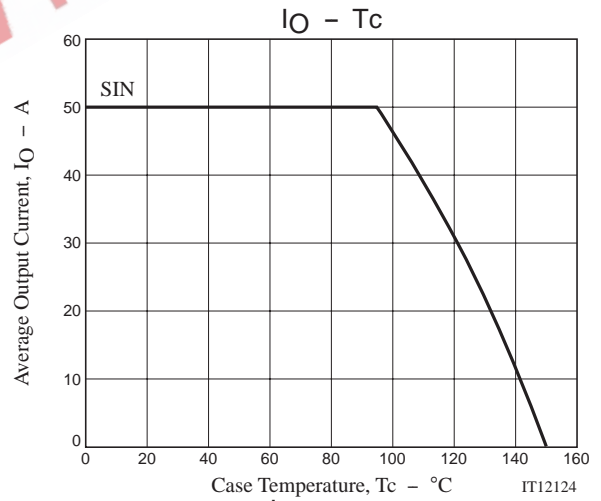
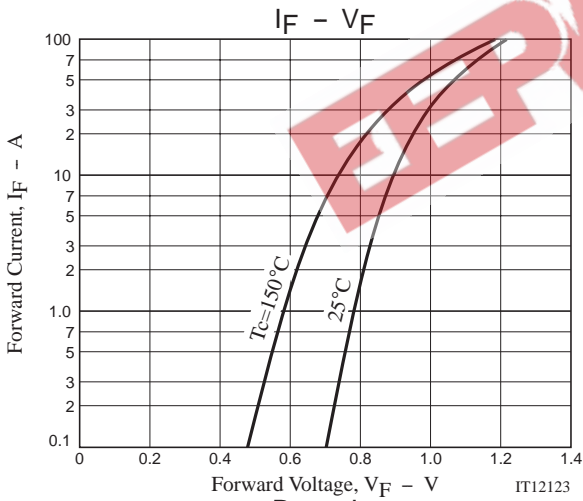
unit : mm (typ)  
7806-001



## Electrical Connection



\* : In case of over 30A of  $I_O$ , bigger fasten hole should be filled by solder.  
Lead-Wire with solder connection also requested for over 30A of  $I_O$ .



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