

**Features :**

- Low forward voltage drop
- High reverse voltage
- Hermetic metal cases with ceramic insulators

**Typical Applications**

- All purpose high power rectifier diodes
- High power resistance welding equipment
- Non-controllable and half-controllable rectifiers
- Controlled rectifiers

**$I_{F(AV)}$       4520 A**  
 **$V_{RRM}$         1100~2000 V**  
 **$I_{FSM}$           44 kA**  
 **$I^2t$              9680 10<sup>3</sup>A<sup>2</sup>S**



| SYMBOL        | CHARACTERISTIC                          | TEST CONDITIONS   |                        | T <sub>j</sub> (°C) | VALUE |       |       | UNIT                             |
|---------------|---|---|------------------------|---------------------|-------|-------|-------|----------------------------------|
|               |   |   |                        |                     | Min   | Type  | Max   |                                  |
| $I_{F(AV)}$   | Mean forward current                    | 180° half sine wave 50Hz<br>Double side cooled,   | $T_c=85^\circ\text{C}$ | 175                 |       |       | 4520  | A                                |
| $V_{RRM}$     | Repetitive peak reverse voltage         | tp=10ms   |                        | 175                 | 1100  |       | 2000  | V                                |
| $I_{RRM}$     | Repetitive peak current                 | at $V_{RRM}$  |                        | 175                 |       |       | 160   | mA                               |
| $I_{FSM}$     | Surge forward current                   | 10ms half sine wave   |                        | 175                 |       |       | 44    | kA                               |
| $I^2t$        | $I^2t$ for fusing coordination          | $V_R=0.6V_{RRM}$  |                        |                     |       |       | 9680  | A <sup>2</sup> s*10 <sup>3</sup> |
| $V_{FO}$      | Threshold voltage                       |   |                        | 175                 |       |       | 0.85  | V                                |
| $r_F$         | Forward slope resistance                |   |                        |                     |       |       | 0.073 | mΩ                               |
| $V_{FM}$      | Peak forward voltage                    | $I_{FM}=5000\text{A}, F=35\text{kN}$  |                        | 175                 |       |       | 1.22  | V                                |
| $Q_{rr}$      | Recovery charge                         | $I_{FM}=2000\text{A}, t_p=2000\mu\text{s}, di/dt=-20\text{A}/\mu\text{s}, V_R=50\text{V}$ |                        | 175                 |       | 5000  |       | μC                               |
| $R_{th(j-c)}$ | Thermal resistance<br>Junction to case  | At 180° sine double side cooled<br>Clamping force 35kN                                    |                        |                     |       |       | 0.012 | °C /W                            |
| $R_{th(c-h)}$ | Thermal resistance<br>case to heat sink |   |                        |                     |       | 0.003 |       |                                  |
| $F_m$         | Mounting force                          |   |                        |                     | 30    |       | 40    | kN                               |
| $T_{stg}$     | Stored temperature                      |   |                        |                     | -40   |       | 175   | °C                               |
| $W_t$         | Weight                                  |   |                        |                     |       | 880   |       | g                                |
| Outline       | P44                                     |   |                        |                     |       |       |       |                                  |

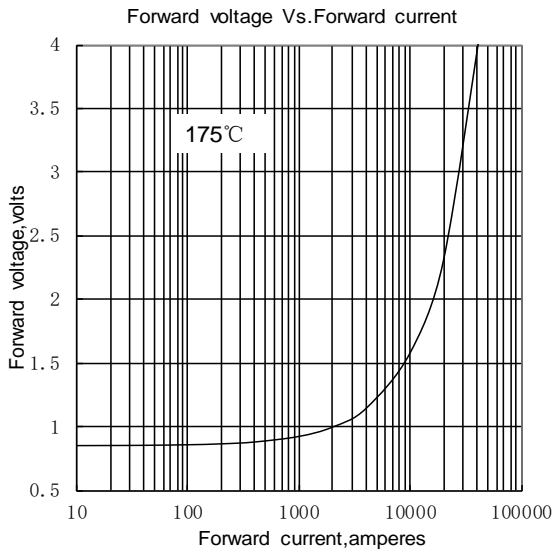


Fig.1

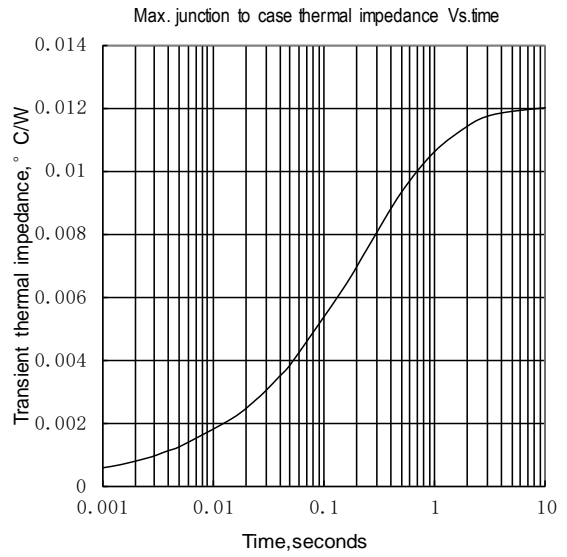


Fig.2

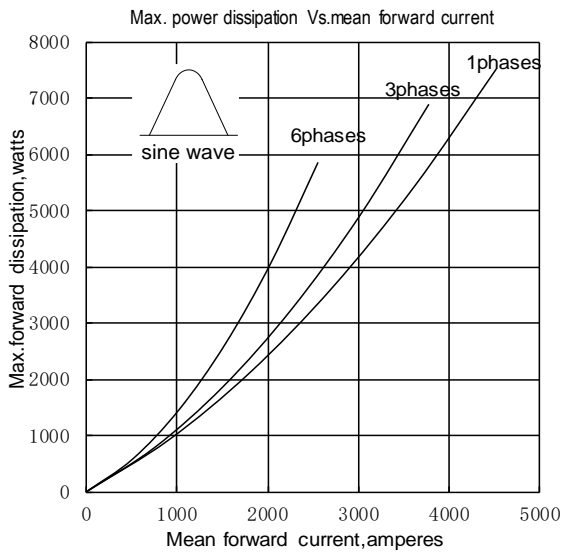


Fig.3

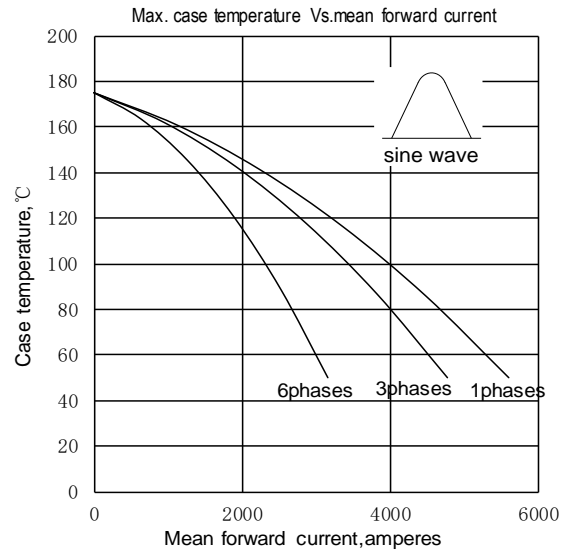


Fig.4

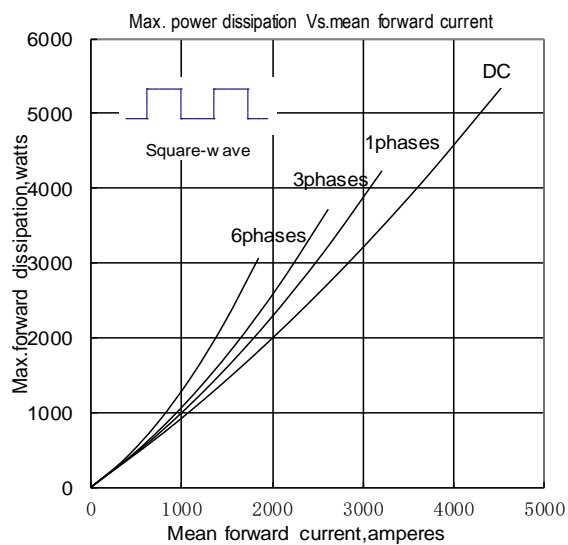


Fig.5

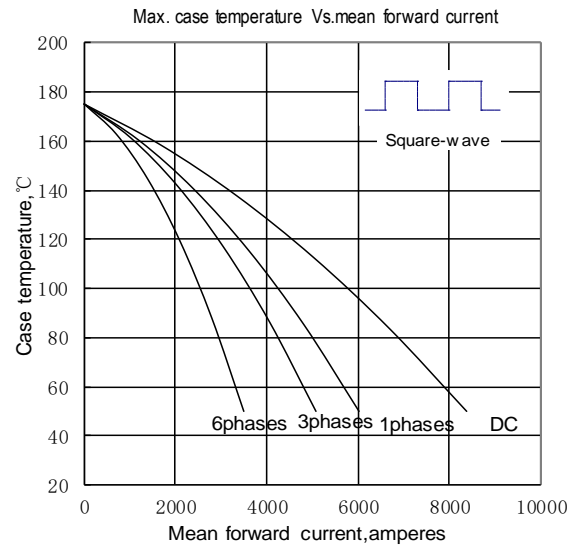


Fig.6

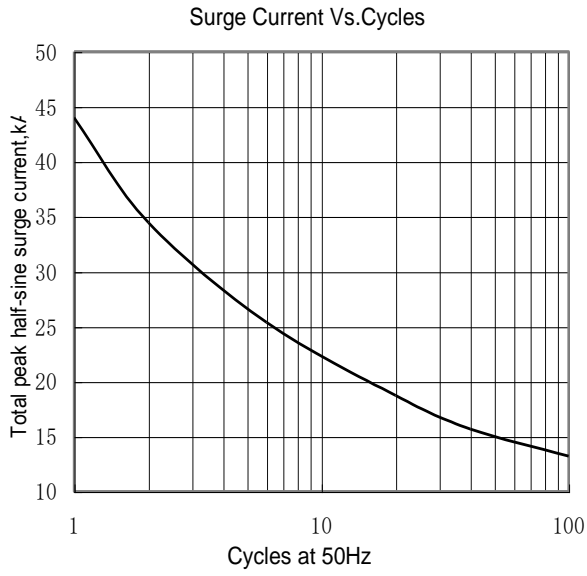


Fig.7

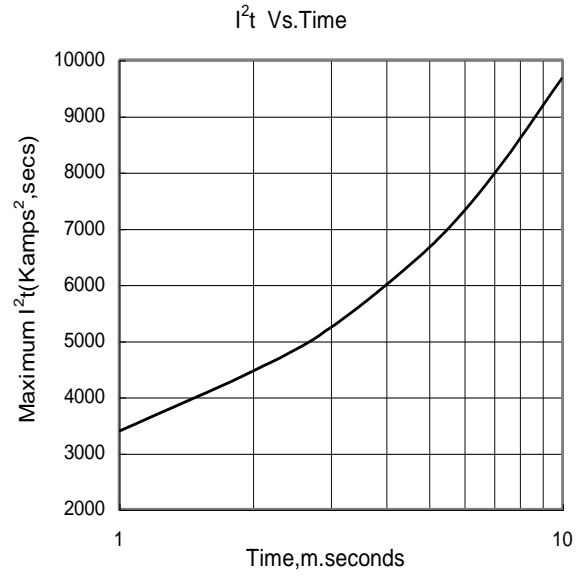


Fig.8

