

**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

**$I_{F(AV)}$             8000A**  
 **$V_{RRM}$              1100~2000 V**  
 **$I_{FSM}$               94    kA**  
 **$I^2t$                  44180     $10^3 A^2S$**



| 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 <sub>C</sub> =85°C | 175                 |       |        | 8000  | A                 |
| $V_{RRM}$     | Repetitive peak reverse voltage         | tp=10ms                                                 |                      | 175                 | 1100  |        | 2000  | V                 |
| $I_{RRM}$     | Repetitive peak current                 | at $V_{RRM}$                                            |                      | 175                 |       |        | 250   | mA                |
| $I_{FSM}$     | Surge forward current                   | 10ms half sine wave                                     |                      | 175                 |       |        | 94    | kA                |
| $I^2t$        | $I^2t$ for fusing coordination          | $V_R=0.6V_{RRM}$                                        |                      |                     |       |        | 44180 | $A^2s \cdot 10^3$ |
| $V_{FO}$      | Threshold voltage                       |                                                         |                      | 175                 |       |        | 0.85  | V                 |
| $r_F$         | Forward slope resistance                |                                                         |                      |                     |       |        | 0.071 | mΩ                |
| $V_{FM}$      | Peak forward voltage                    | $I_{FM}=6000A, F=90kN$                                  |                      | 175                 |       |        | 1.28  | V                 |
| $Q_{rr}$      | Recovery charge                         | $I_{FM}=2000A, tp=2000\mu s, di/dt=-20A/\mu s, V_R=50V$ |                      | 175                 |       | 6500   |       | μC                |
| $R_{th(j-c)}$ | Thermal resistance<br>Junction to case  | At 180° sine- double side cooled<br>Clamping force 90kN |                      |                     |       |        | 0.005 | °C /W             |
| $R_{th(c-h)}$ | Thermal resistance<br>case to heat sink |                                                         |                      |                     |       | 0.0015 |       |                   |
| $F_m$         | Mounting force                          |                                                         |                      |                     | 81    |        | 108   | kN                |
| $T_{stg}$     | Stored temperature                      |                                                         |                      |                     | -40   |        | 175   | °C                |
| $W_i$         | Weight                                  |                                                         |                      |                     |       | 2000   |       | g                 |
| Outline       |                                         |                                                         |                      |                     |       |        |       |                   |

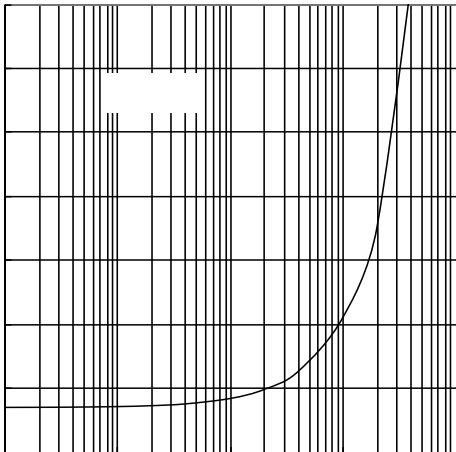


Fig.1

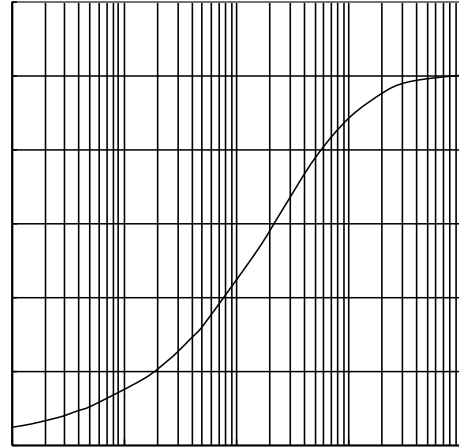


Fig.2

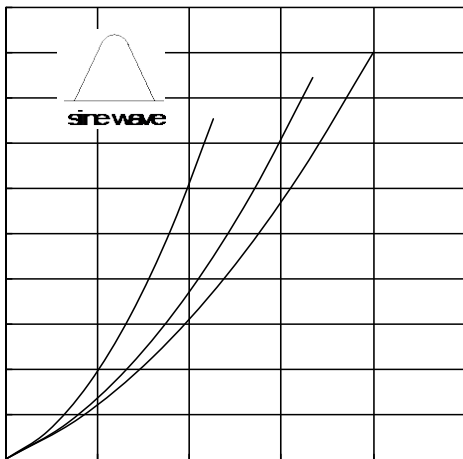


Fig.3

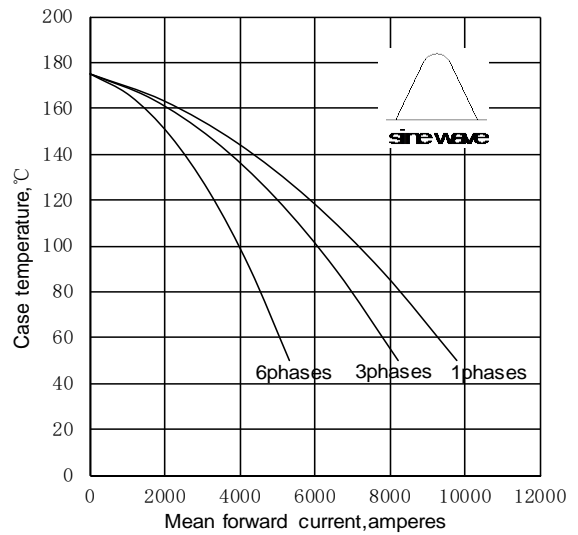


Fig.4

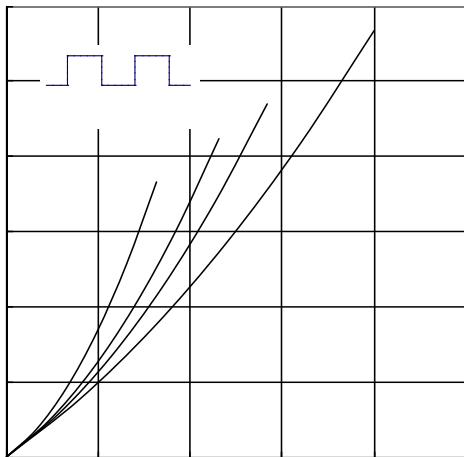


Fig.5

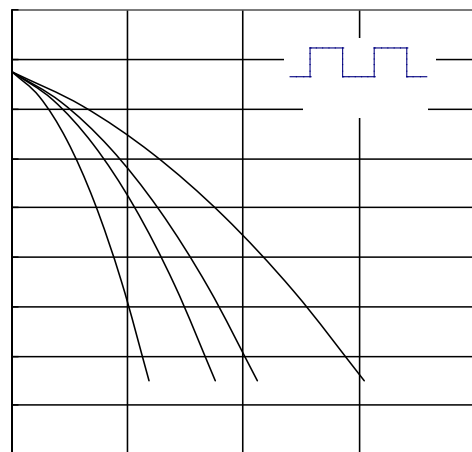
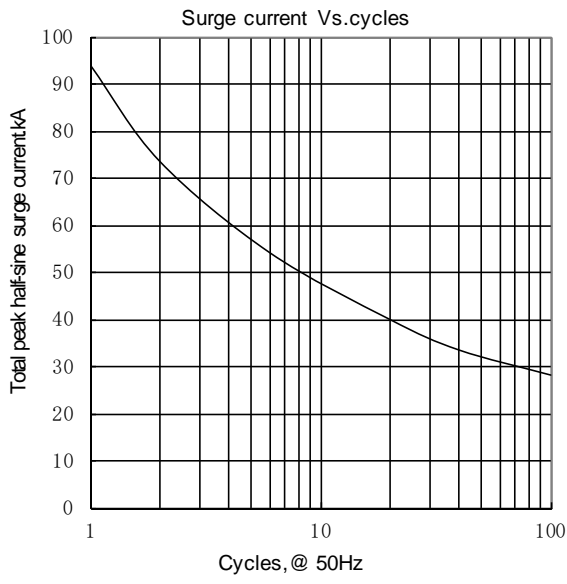
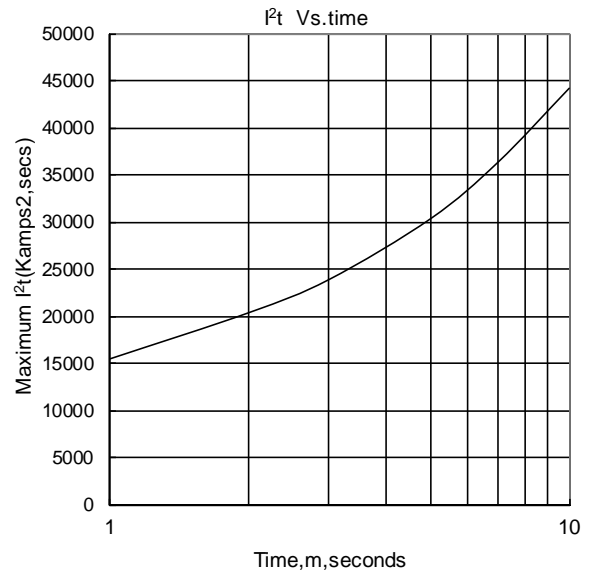


Fig.6



**Fig.7**



**Fig.8**

**Outline:**

