**Features:**

- n Isolated mounting base 3000V~
- n Pressure contact technology with Increased power cycling capability
- n Space and weight saving

**Typical Applications**

- n Various rectifiers
- n DC supply for PWM inverter

| $V_{RRM}$ | Type & Outline  |
|-----------|-----------------|
| 2000V     | MD1000-20-432F2 |
| 2200V     | MD1000-22-432F2 |
| 2500V     | MD1000-25-432F2 |

| SYMBOL        | CHARACTERISTIC                         | TEST CONDITIONS                                                    | $T_J(^{\circ}C)$ | VALUE |      |       | UNIT          |
|---------------|----------------------------------------|--------------------------------------------------------------------|------------------|-------|------|-------|---------------|
|               |                                        |                                                                    |                  | Min   | Type | Max   |               |
| $I_{F(AV)}$   | Mean forward current                   | 180° half sine wave 50Hz<br>Single side cooled, $T_C=100^{\circ}C$ | 150              |       |      | 1000  | A             |
| $I_{F(RMS)}$  | RMS forward current                    |                                                                    |                  |       |      | 1570  | A             |
| $I_{RRM}$     | Repetitive peak current                | at $V_{RRM}$                                                       | 150              |       |      | 50    | mA            |
| $I_{FSM}$     | Surge forward current                  | $V_R=60\%V_{RRM}$ , $t=10ms$ half sine                             | 150              |       |      | 28    | kA            |
| $I^2t$        | $I^2t$ for fusing coordination         |                                                                    |                  |       |      | 3920  | $10^3A^2s$    |
| $V_{FO}$      | Threshold voltage                      |                                                                    | 150              |       |      | 0.83  | V             |
| $r_F$         | Forward slope resistance               |                                                                    |                  |       |      | 0.12  | mΩ            |
| $V_{FM}$      | Peak forward voltage                   | $I_{FM}=3000A$                                                     | 25               |       |      | 1.44  | V             |
| $R_{th(j-c)}$ | Thermal resistance<br>Junction to case | Single side cooled per chip                                        |                  |       |      | 0.045 | $^{\circ}C/W$ |
| $R_{th(c-h)}$ | Thermal resistance<br>case to heatsink | Single side cooled per chip                                        |                  |       |      | 0.020 | $^{\circ}C/W$ |
| $V_{iso}$     | Isolation voltage                      | 50Hz, R.M.S, $t=1min$ , $I_{iso}:1mA(MAX)$                         |                  | 3000  |      |       | V             |
| $F_m$         | Terminal connection torque(M12)        |                                                                    |                  | 12    |      | 14    | N·m           |
|               | Mounting torque(M6)                    |                                                                    |                  | 4.5   |      | 6.0   | N·m           |
| $T_{vj}$      | Junction temperature                   |                                                                    |                  | -40   |      | 150   | $^{\circ}C$   |
| $T_{stg}$     | Stored temperature                     |                                                                    |                  | -40   |      | 125   | $^{\circ}C$   |
| $W_t$         | Weight                                 |                                                                    |                  |       | 2700 |       | g             |
| Outline       | 432F2                                  |                                                                    |                  |       |      |       |               |

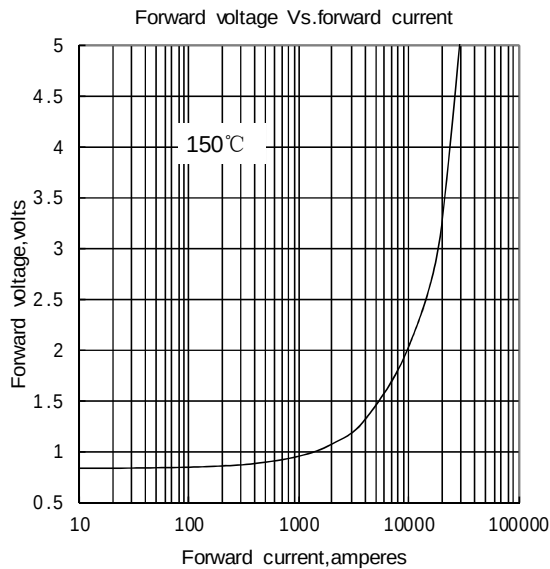


Fig.1

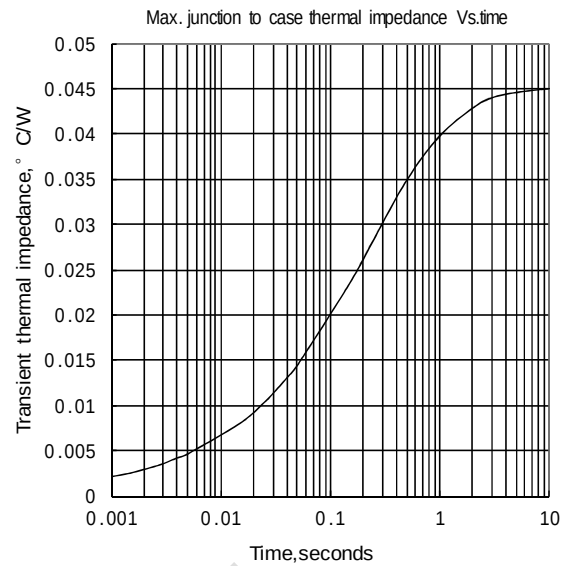


Fig.2

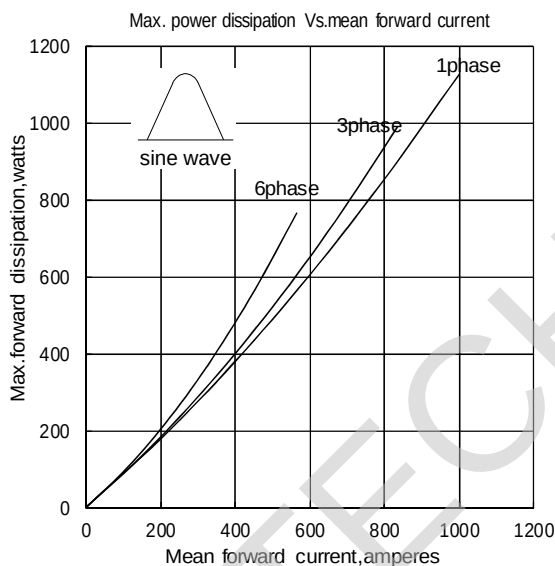


Fig.3

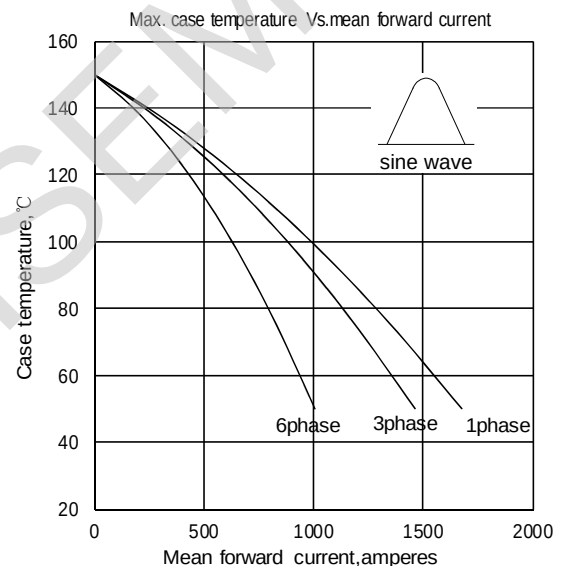


Fig.4

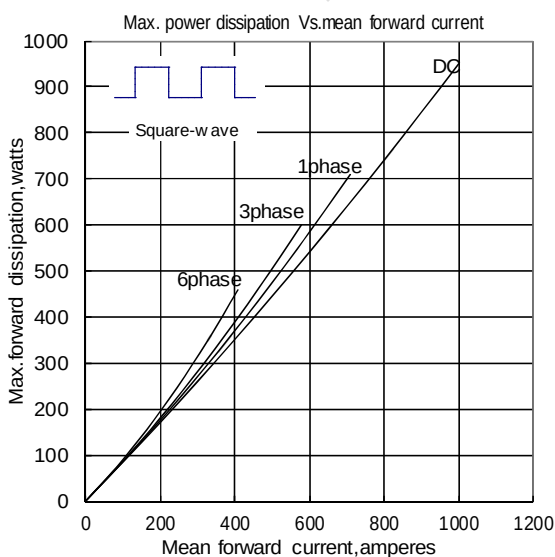


Fig.5

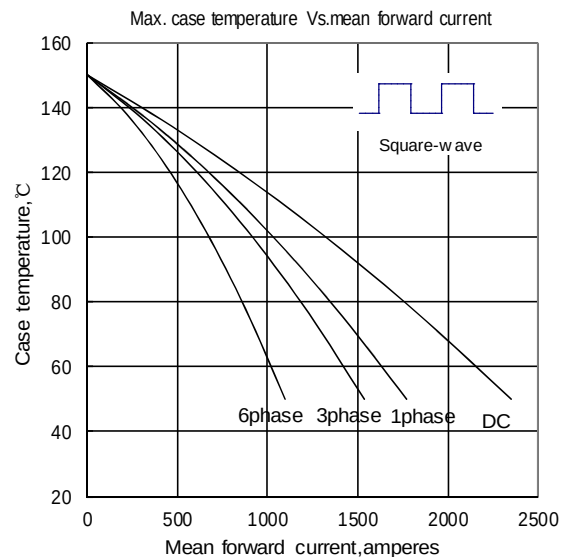


Fig.6

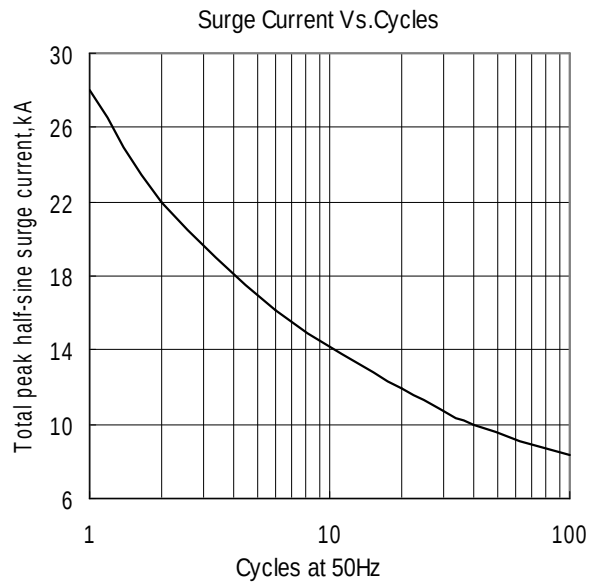


Fig.7

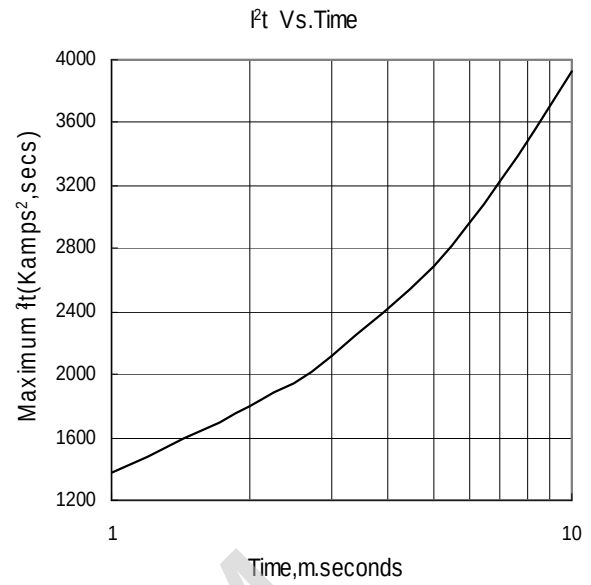
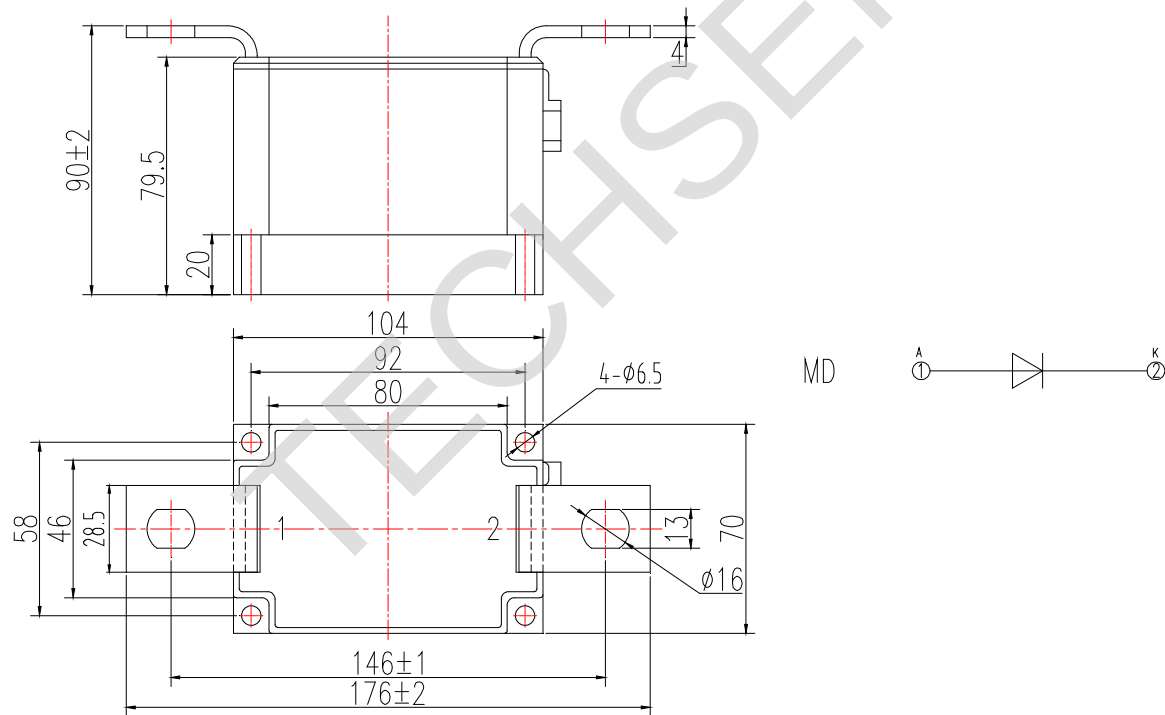


Fig.8

**Outline:**

Unmarked dimensional tolerance:  $\pm 0.5\text{mm}$