**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

**Part No. Y40ZPD-ZT39cT**

|                          |              |              |
|--------------------------|--------------|--------------|
| <b>I<sub>F(AV)</sub></b> | <b>1100A</b> |              |
| <b>V<sub>RRM</sub></b>   | <b>2200V</b> | <b>2500V</b> |
|                          | <b>2800V</b> | <b>3000V</b> |

| SYMBOL               | CHARACTERISTIC                           | TEST CONDITIONS                                                        |                      | T <sub>j</sub> ( C) | VALUE |      |        | UNIT                             |
|----------------------|------------------------------------------|------------------------------------------------------------------------|----------------------|---------------------|-------|------|--------|----------------------------------|
|                      |                                          |                                                                        |                      |                     | Min   | Type | Max    |                                  |
| I <sub>F(AV)</sub>   | Mean forward current                     | 180 half sine wave 50Hz<br>Double side cooled,                         | T <sub>C</sub> =85 C | 160                 |       |      | 1100   | A                                |
| V <sub>RRM</sub>     | Repetitive peak reverse voltage          | tp=10ms                                                                |                      | 160                 | 2100  |      | 3000   | V                                |
| I <sub>RRM</sub>     | Repetitive peak current                  | At V <sub>RRM</sub>                                                    |                      | 160                 |       |      | 50     | mA                               |
| I <sub>FSM</sub>     | Surge forward current                    | 10ms half sine wave                                                    |                      | 160                 |       |      | 15     | kA                               |
| I <sup>2</sup> t     | I <sup>2</sup> t for fusing coordination | V <sub>R</sub> =0.6V <sub>RRM</sub>                                    |                      |                     |       |      | 1125   | A <sup>2</sup> s*10 <sup>3</sup> |
| V <sub>FO</sub>      | Threshold voltage                        |                                                                        |                      | 160                 |       |      | 0.87   | V                                |
| r <sub>F</sub>       | Forward slope resistance                 |                                                                        |                      |                     |       |      | 0.48   | mΩ                               |
| V <sub>FM</sub>      | Peak forward voltage                     | I <sub>FM</sub> =1500A, F=18kN                                         |                      | 25                  |       |      | 1.80   | V                                |
| Q <sub>rr</sub>      | Recovery charge                          | I <sub>FM</sub> =1000A, tp=4000μs, di/dt=-20A/μs, V <sub>R</sub> =100V |                      | 160                 |       | 2200 |        | μC                               |
| R <sub>th(j-c)</sub> | Thermal resistance<br>Junction to case   | At 180° sine double side cooled<br>Clamping force 15.0kN               |                      |                     |       |      | 0.028  | C /W                             |
| R <sub>th(c-h)</sub> | Thermal resistance<br>case to heat sink  |                                                                        |                      |                     |       |      | 0.0075 |                                  |
| F <sub>m</sub>       | Mounting force                           |                                                                        |                      |                     | 15    |      | 20     | kN                               |
| T <sub>vj</sub>      | Junction temperature                     |                                                                        |                      |                     | -40   |      | 160    | C                                |
| T <sub>stg</sub>     | Stored temperature                       |                                                                        |                      |                     | -40   |      | 160    | C                                |
| W <sub>t</sub>       | Weight                                   |                                                                        |                      |                     |       | 320  |        | g                                |
| Outline              | ZT39cT                                   |                                                                        |                      |                     |       |      |        |                                  |

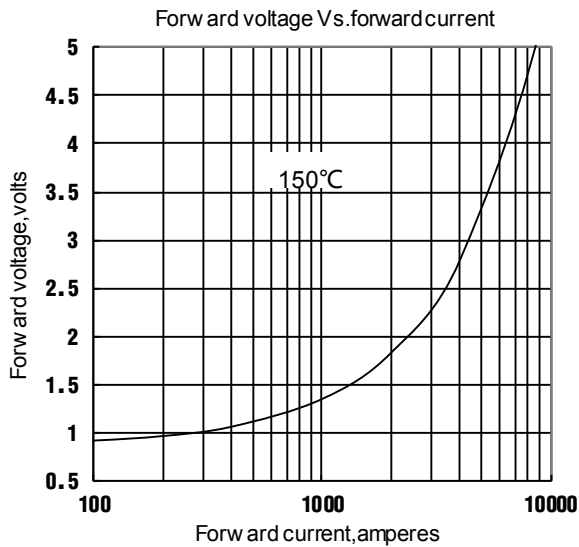


Fig.1

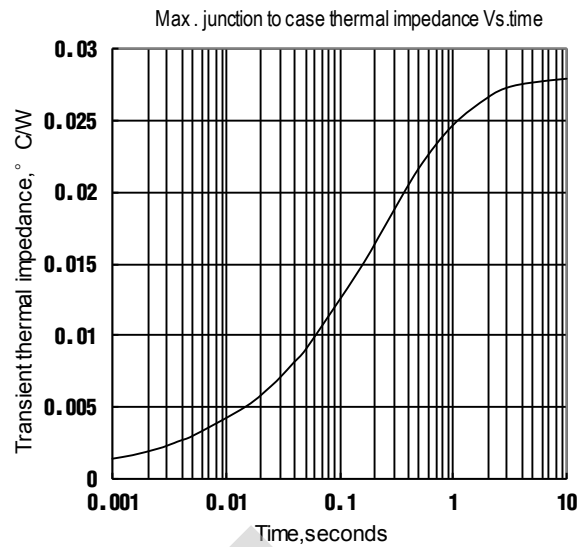


Fig.2

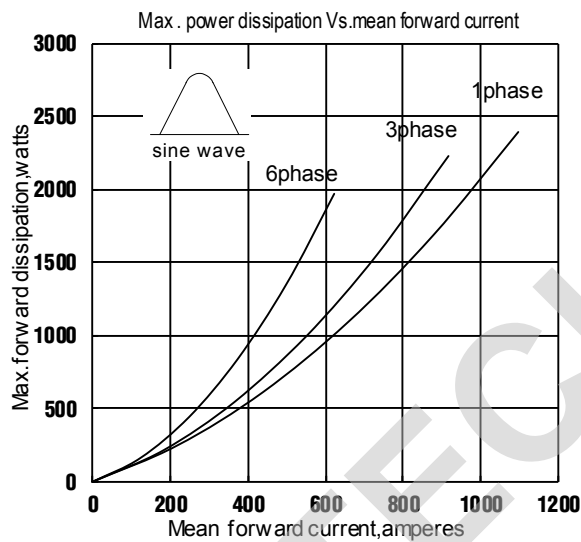


Fig.3

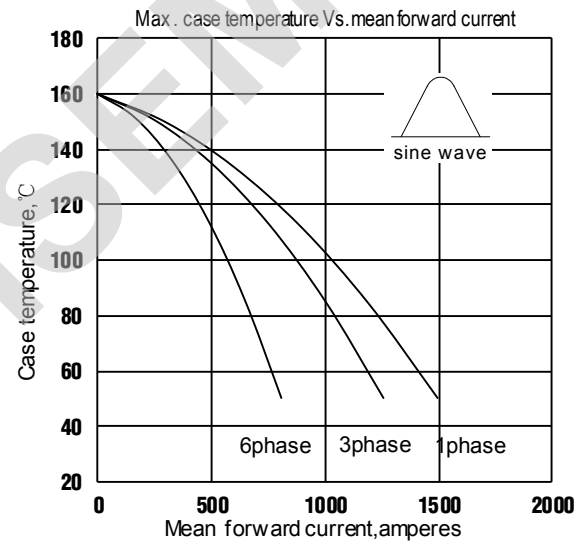


Fig.4

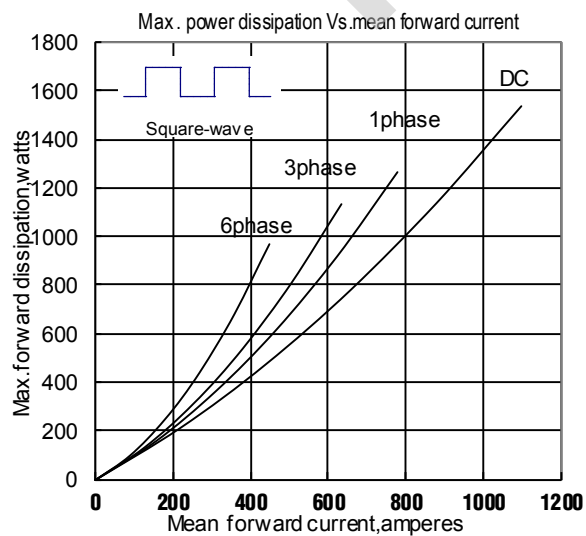


Fig.5

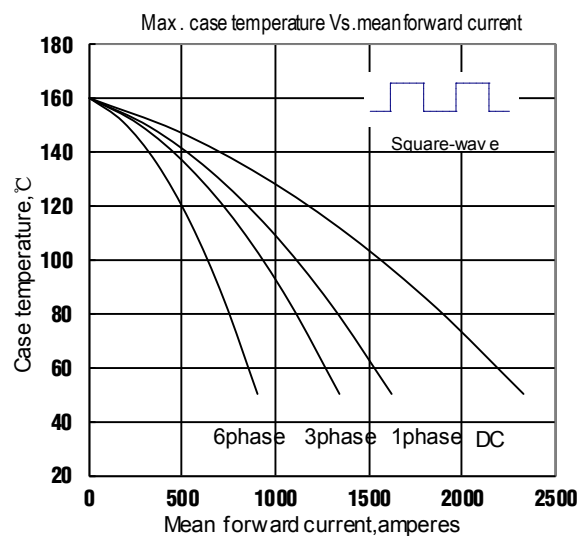


Fig.6

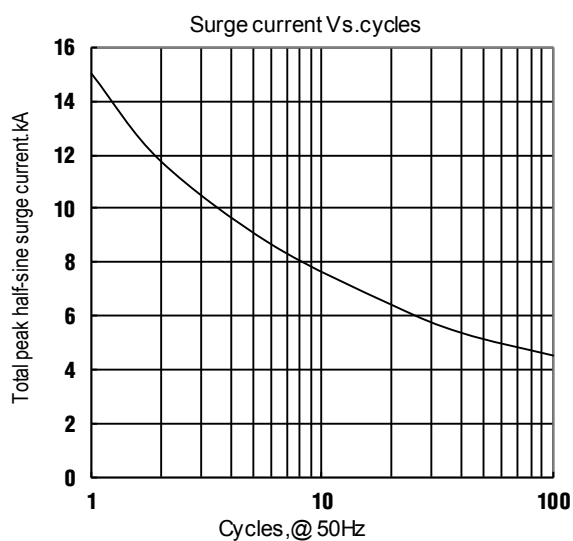


Fig.7

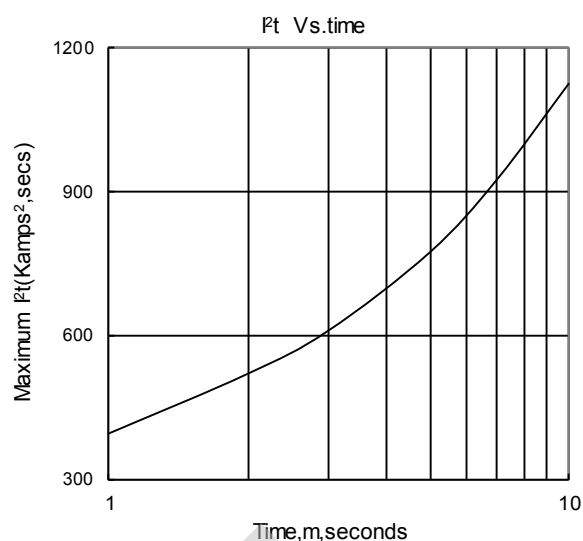
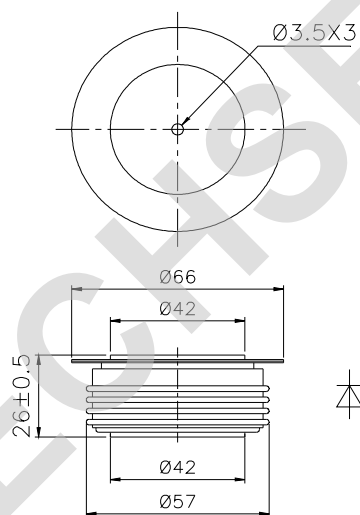


Fig.8

Outline:



TECHSEM reserves the right to change specifications without notice.