

**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

**Part No. Y35ZPC-ZT33cT**

|                          |              |              |
|--------------------------|--------------|--------------|
| <b>I<sub>F(AV)</sub></b> | <b>1290A</b> |              |
| <b>V<sub>RRM</sub></b>   | <b>1200V</b> | <b>1400V</b> |
|                          | <b>1600V</b> | <b>1800V</b> |
|                          | <b>2000V</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 | 175                 |       |      | 1290  | A                                |
| V <sub>RRM</sub>     | Repetitive peak reverse voltage          | tp=10ms                                                                   |                      | 175                 | 1100  |      | 2000  | V                                |
| I <sub>RRM</sub>     | Repetitive peak current                  | at V <sub>RRM</sub>                                                       |                      | 175                 |       |      | 40    | mA                               |
| I <sub>FSM</sub>     | Surge forward current                    | 10ms half sine wave                                                       |                      | 175                 |       |      | 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                        |                                                                           |                      | 175                 |       |      | 1.05  | V                                |
| r <sub>F</sub>       | Forward slope resistance                 |                                                                           |                      |                     |       |      | 0.30  | mΩ                               |
| V <sub>FM</sub>      | Peak forward voltage                     | I <sub>FM</sub> =1800A, F=15kN                                            |                      | 25                  |       |      | 1.80  | V                                |
| Q <sub>rr</sub>      | Recovery charge                          | I <sub>FM</sub> =1000A, tp=4000μs, di/dt=-20A/μs,<br>V <sub>R</sub> =100V |                      | 175                 |       | 1900 |       | μC                               |
| R <sub>th(j-c)</sub> | Thermal resistance<br>Junction to case   | At 180° sine double side cooled<br>Clamping force 15.0kN                  |                      |                     |       |      | 0.035 | °C /W                            |
| R <sub>th(c-h)</sub> | Thermal resistance<br>case to heat sink  |                                                                           |                      |                     |       |      | 0.008 |                                  |
| F <sub>m</sub>       | Mounting force                           |                                                                           |                      |                     | 10    |      | 20    | kN                               |
| T <sub>vj</sub>      | Junction temperature                     |                                                                           |                      |                     | -40   |      | 175   | °C                               |
| T <sub>stg</sub>     | Stored temperature                       |                                                                           |                      |                     | -40   |      | 175   | °C                               |
| W <sub>i</sub>       | Weight                                   |                                                                           |                      |                     |       | 240  |       | g                                |
| Outline              | ZT33cT                                   |                                                                           |                      |                     |       |      |       |                                  |

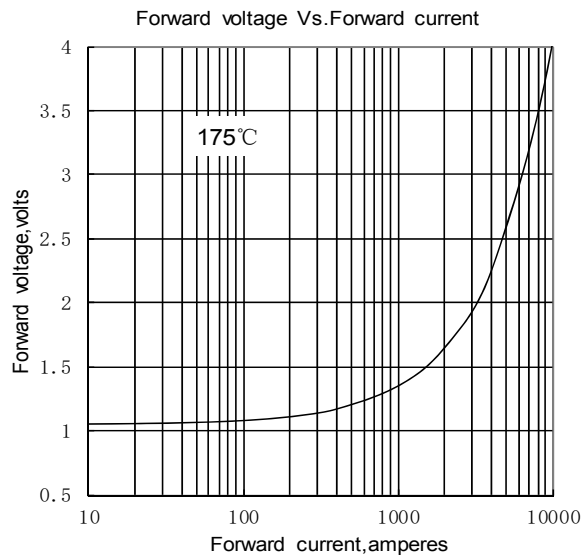


Fig.1

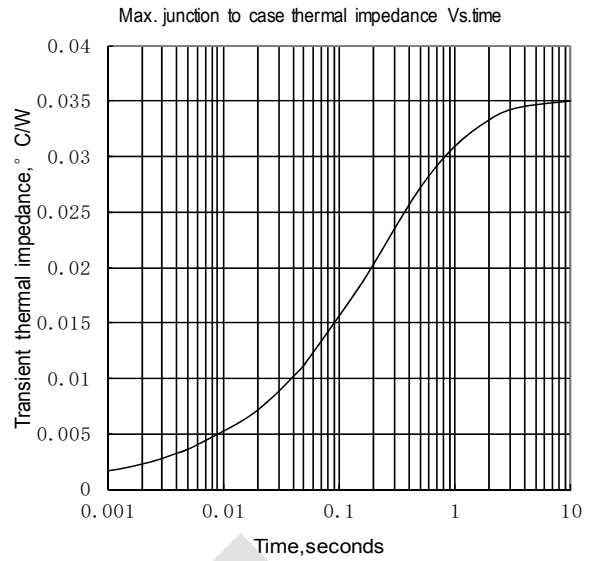


Fig.2

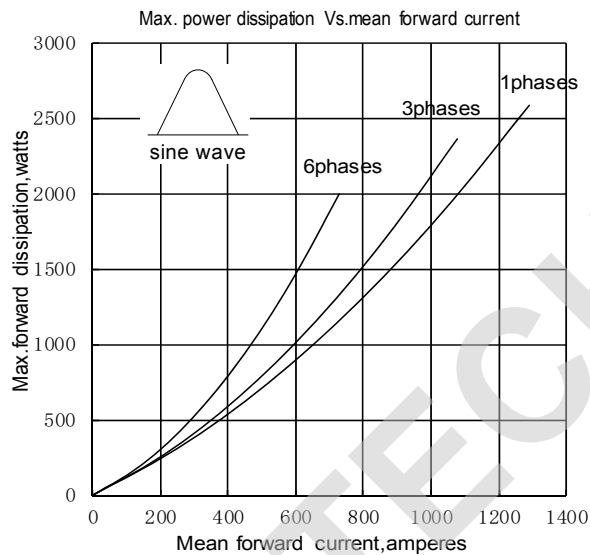


Fig.3

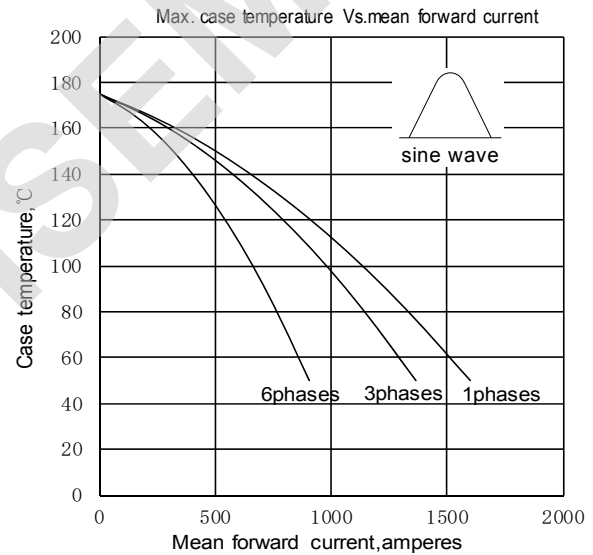


Fig.4

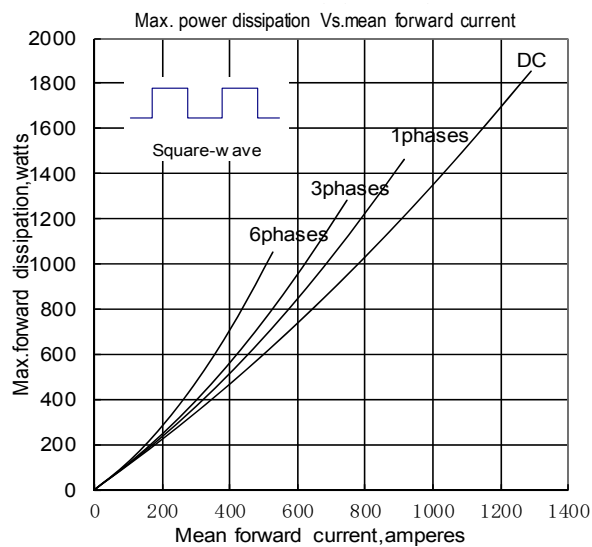


Fig.5

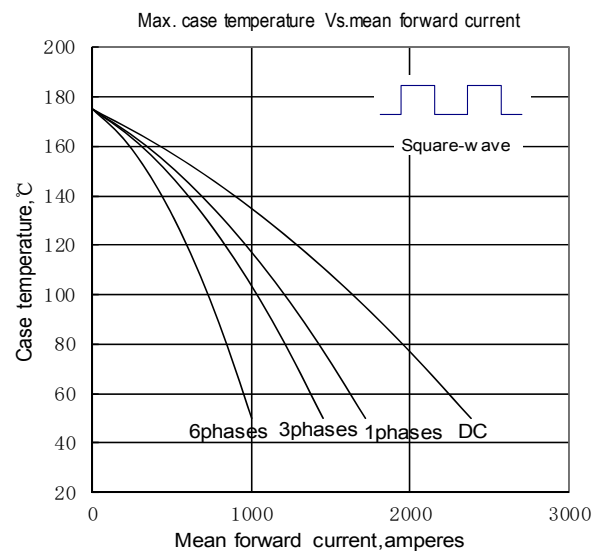


Fig.6

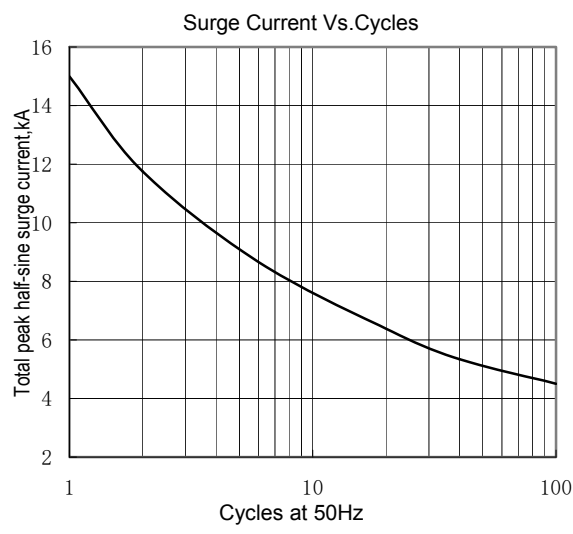


Fig.7

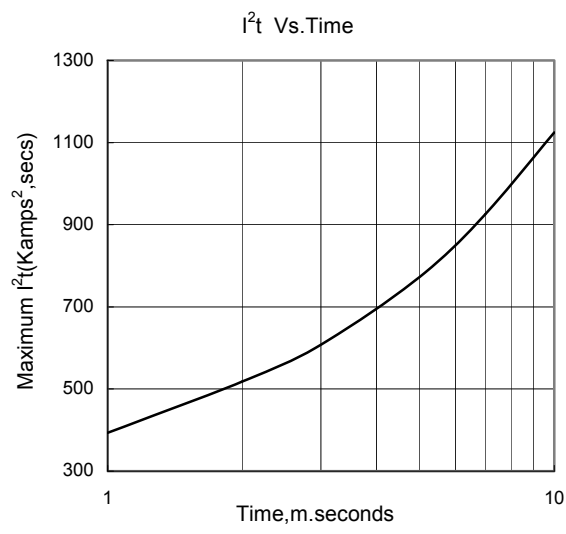
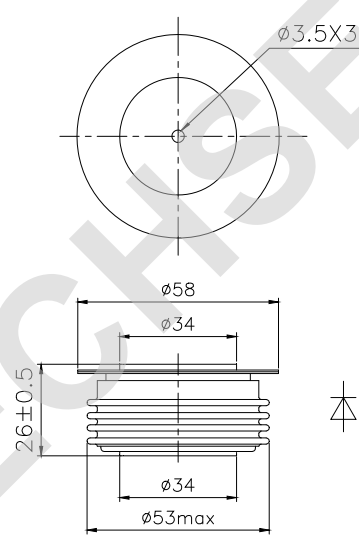


Fig.8

Outline:



TECHSEM reserves the right to change specifications without notice.