

## Feature

- Hermetic ceramics-metal stud structure
- Conform to national standard JB/T8949.2-1998
- Capacity of supporting high surge current
- Stud cathode and strd anode version

## Typical Application

- DC motor controls Controls DC power supplie
- AC switch and thermal control Synchronous motor exditation

|             |                       |
|-------------|-----------------------|
| $I_{F(AV)}$ | 40A                   |
| $V_{RRM}$   | 100-5000V             |
| $I_{FSM}$   | 8.25 KA               |
| $I^2t$      | 1450 A <sup>2</sup> s |

| SYMBOL        | CHARACTERISTIC                      | TEST CONDITIONS   | T <sub>j</sub><br>(°C) | VALUE |       | UNIT             |
|---------------|-------------------------------------|---|------------------------|-------|-------|------------------|
|               |                                     |   |                        | Min   | Max   |                  |
| $I_{F(AV)}$   | Mean forward current                | 180° half sine wave, 50HZ Single heat sink, T <sub>C</sub> =98°C              | 150                    |       | 40    | A                |
| $I_{F(RMS)}$  | RMS current                         |   | 150                    |       | 65    | A                |
| $V_{RRM}$     | Repetitive peak reverse voltage     | $V_{DRM} \& V_{RRM} t_p=10ms$<br>$V_{DSM} \& V_{RSM}=V_{DRM} \& V_{RRM}+200V$ | 150                    | 100   | 5000  | V                |
| $I_{RRM}$     | Repetitive peak current             | $V_{RM}=V_{RRM}$  | 150                    | 4.5   | 9     | mA               |
| $I_{FSM}$     | Surge on-state current              | 10ms half sine wave   | 150                    |       | 8.25  | KA               |
| $I^2t$        | $I^2t$ for fusing coordination      | $V_R=0.6V_{RRM}$  |                        |       | 1450  | A <sup>2</sup> S |
| $V_{TO}$      | Threshold voltage                   |   | 150                    |       | 0.80  | V                |
| $r_T$         | On-state slop resistance            |   |                        |       | 0.49  | mΩ               |
| $V_{FM}$      | Peak on-state voltage               | $I_{TM}=30A, F=9.0KN$   | 150                    | 1.3   | 1.5   | V                |
| $I_{rm}$      | Reverse recovery current            | $I_{TM}=30A, t_q=1000us$<br>$Di/dt=-20A/us.$<br>$V_i=50V$                     | 150                    |       | 70    | A                |
| $t_{rr}$      | Reverse recovery time               |   |                        |       | 4.0   | us               |
| $Q_{rr}$      | Recovered charge                    |   |                        |       | 140   | uC               |
| $R_{th(j-h)}$ | Thermal impedance node to the shell | 180 ° sine wave, single heat sink   |                        |       | 0.090 | °C/W             |
| $F_M$         | Mounting force                      |   |                        |       | 23    | N                |
| $T_{stq}$     | Stored temperature                  |   |                        | -65   | 190   | °C               |
| $W_t$         | Weight                              |   |                        | 140   |       | g                |
| Outline       |                                     |   |                        |       |       |                  |

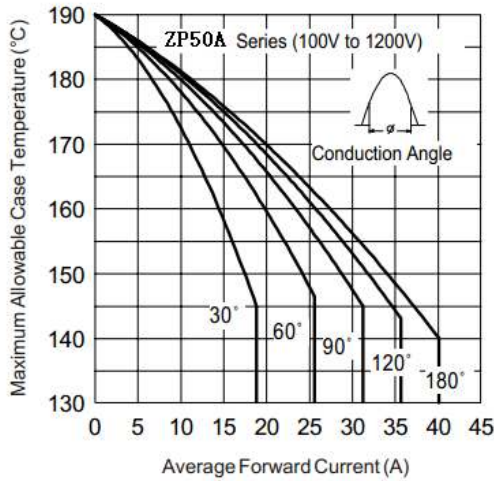


Fig. 1 - Current Ratings Characteristics

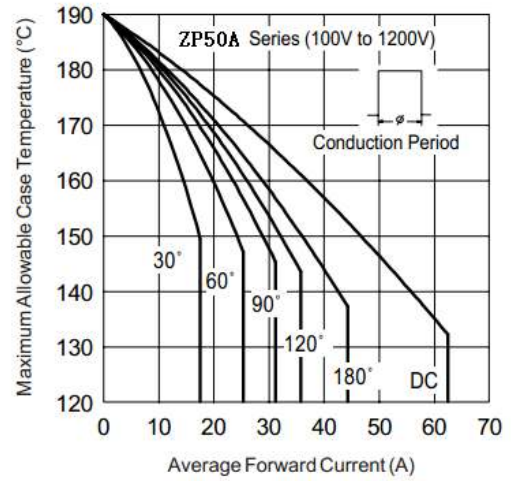


Fig. 2 - Current Ratings Characteristics

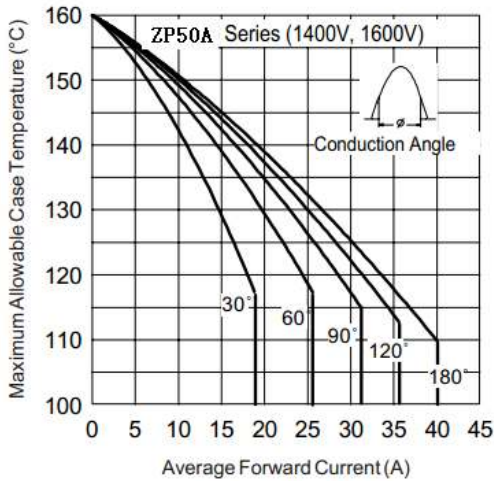


Fig. 3 - Current Ratings Characteristics

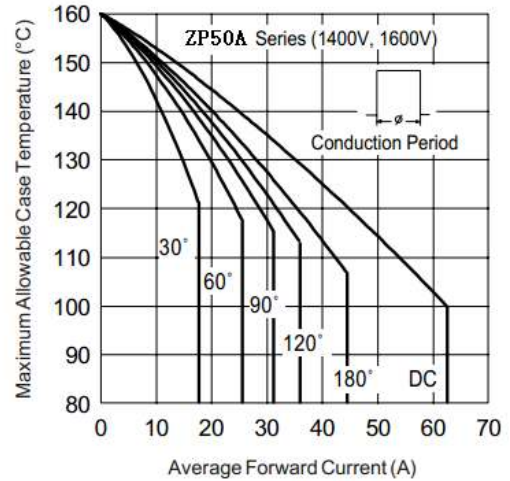


Fig. 4 - Current Ratings Characteristics

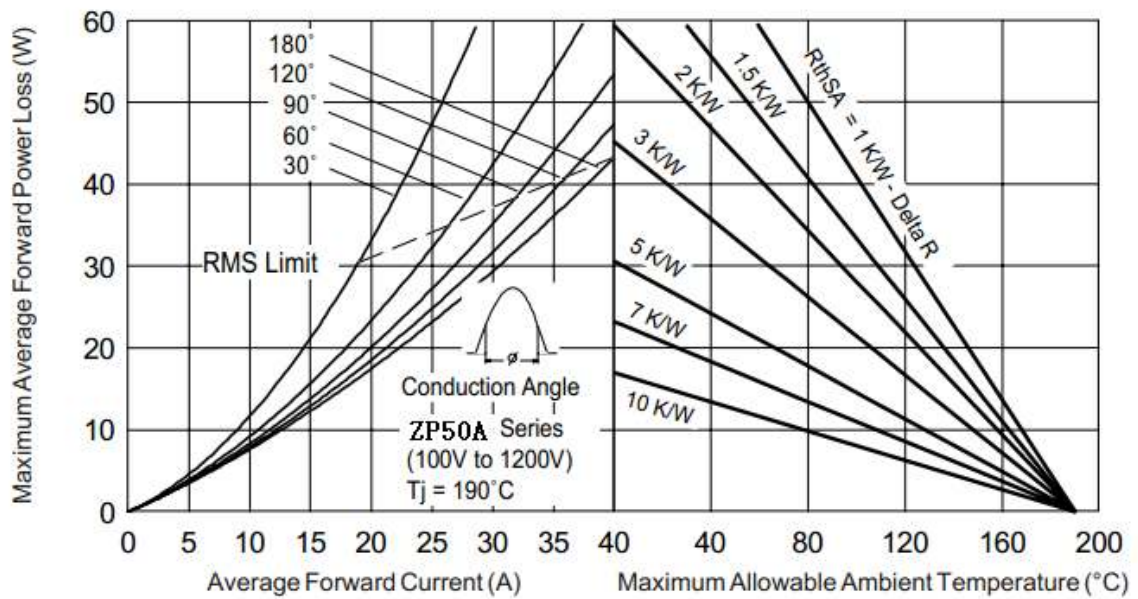


Fig. 5 - Forward Power Loss Characteristics

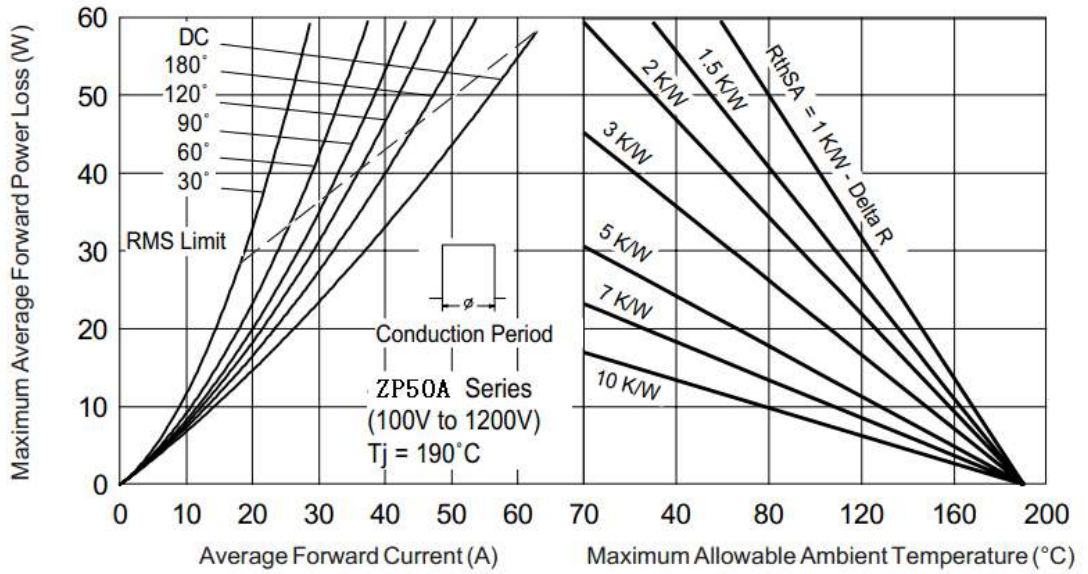


Fig. 6 - Forward Power Loss Characteristics

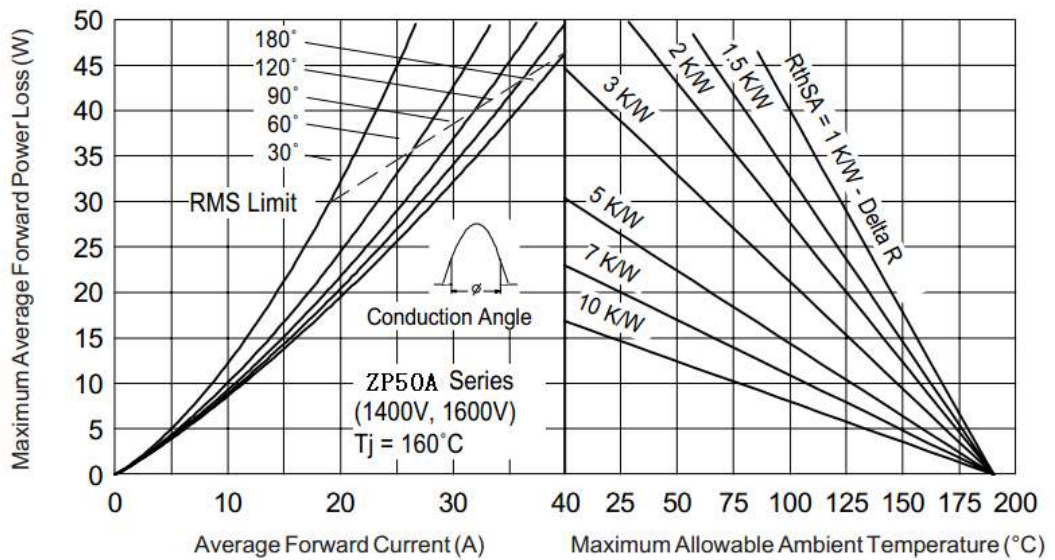


Fig. 7 - Forward Power Loss Characteristics

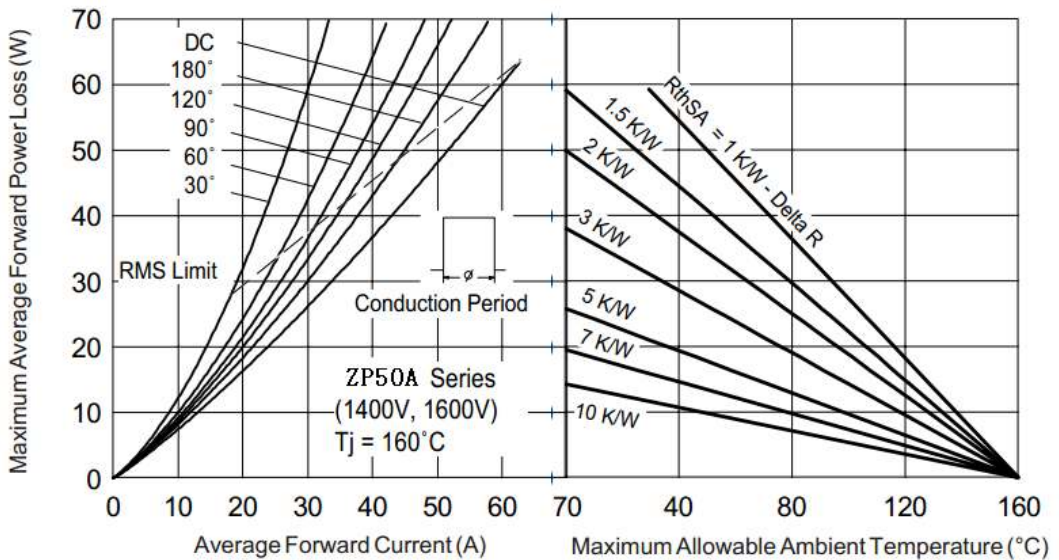


Fig. 8 - Forward Power Loss Characteristics

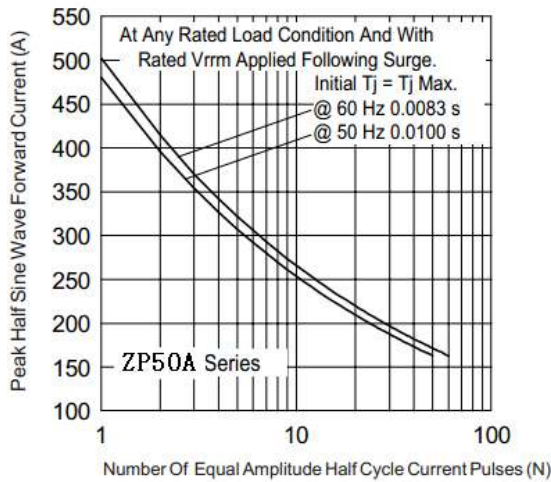


Fig. 9 - Maximum Non-Repetitive Surge Current

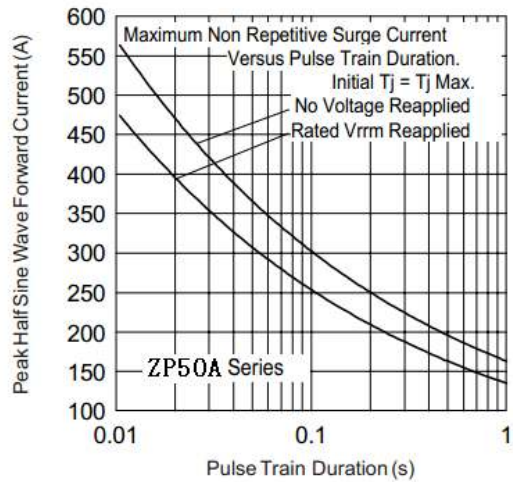


Fig. 10 - Maximum Non-Repetitive Surge Current

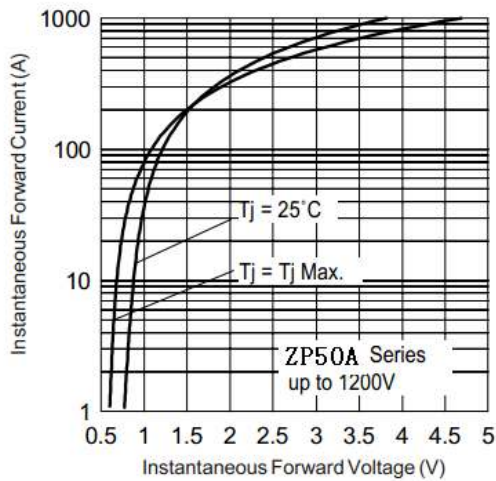


Fig. 11 - Forward Voltage Drop Characteristics (up to 1200V)

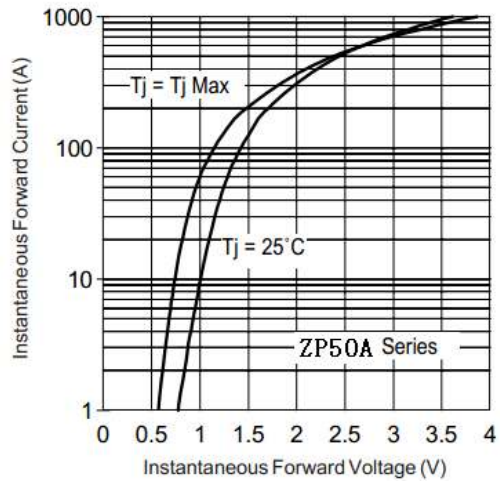


Fig. 12 - Forward Voltage Drop Characteristics (for 1400V, 1600V)

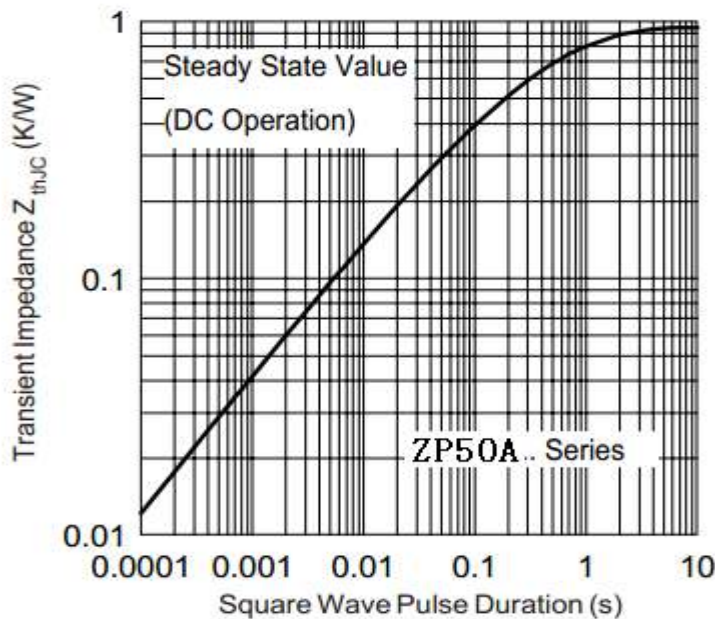


Fig. 13 - Thermal Impedance  $Z_{thJC}$  Characteristics