

# ZK1500-RECTIFIER DIODE

Jiangsu Yangjie Runau Semiconductor Co.,Ltd

2000-3000 V<sub>RRM</sub>

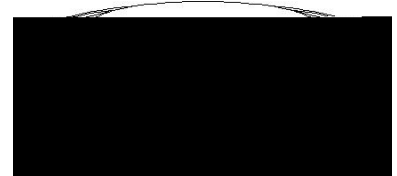
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## FAST RECOVERY RECTIFIER DIODE

### Features:

ZT65cT

- . All diffused structure
- . High surge rating
- . Blocking capability up to 3000 volts
- . Soft recovery
- . Ceramic housing hermetic package
- . Pressure assembled device



## ELECTRICAL CHARACTERISTICS AND RATINGS

### Reverse Blocking

V<sub>RRM</sub> = Repetitive peak reverse voltage

V<sub>RSM</sub> = Non repetitive peak reverse voltage (2)

|   |                  |                    |
|---|------------------|--------------------|
| Repetitive peak reverse leakage current | I <sub>RRM</sub> | 15 mA<br>60 mA (3) |
|---|------------------|--------------------|

### Conducting - on state

| Parameter                                     | Symbol             | Min. | Max.    | Typ. | Units            | Conditions   |
|---|--------------------|------|---------|------|------------------|--|
| Average forward current                       | I <sub>F(AV)</sub> |      | 1500    |      | A                | Sinewave 180°, T <sub>c</sub> = 70°C   |
| RMS forward current                           | I <sub>FRMS</sub>  |      | 2355    |      | A                |  |
| Peak one cycle surge (non repetitive) current | I <sub>FSM</sub>   |      | 22500   |      | A                | 10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 125°C |
| I square t                                    | I <sup>2</sup> t   |      | 2531000 |      | A <sup>2</sup> s | 8.3 msec and 10.0 msec   |
| Peak forward voltage                          | V <sub>FM</sub>    |      | 2.60    |      | V                | I <sub>FM</sub> = 3000A002 Tc[002 Tc[002 Tc[4 re                               |

| Parameter                             | Symbol      | Min. | Max.            | Typ. | Units | Conditions   |
|---------------------------------------|-------------|------|-----------------|------|-------|--|
| Operating temperature                 | $T_j$       | -40  | +125            |      | °C    |  |
| Storage temperature                   | $T_{stg}$   | -40  | +140            |      | °C    |  |
| Thermal resistance - junction to case | $R_{(j-c)}$ |      | 0.015           |      | °C/W  | Double sided cooled<br>(1) @ 2000 lb.; (2) @ 800 lb. |
| Thermal resistance - junction to case | $R_{(j-c)}$ |      | 0.030           |      | °C/W  | Single sided cooled<br>(1) @ 2000 lb.; (2) @ 800 lb. |
| Thermal resistance - case to heatsink | $R_{(c-s)}$ |      | 0.0045<br>0.009 |      | °C/W  | Double sided cooled *<br>Single sided cooled *       |
| Mounting force                        | P           |      |                 | 30   | kN    |  |
| Weight                                | W           |      |                 | 720  | g     |  |

\* Mounting surfaces smooth, flat and greaseless

**CASE OUTLINE AND DIMENSIONS**

