

### SURFACE MOUNT RECTIFIER

**REVERSE VOLTAGE: 13000-2000V**  
**CURRENT: 1.0 A**

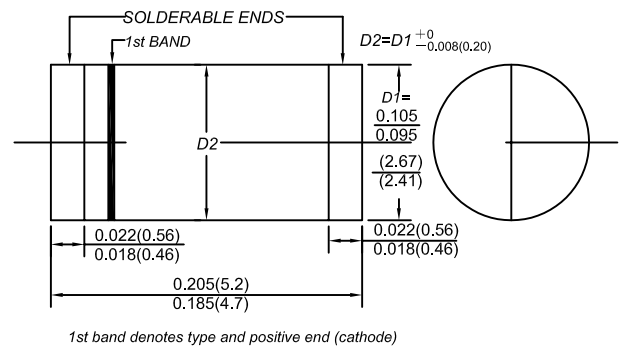
#### FEATURES

- Glass passivated device
- Ideal for surface mouted applications
- Low leakage current
- Metallurgically bonded construction

#### MECHANICAL DATA

- Case: JEDEC DO-213AB, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0046 ounces, 0.116 gram
- Mounting position: Any

DO - 213AB



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

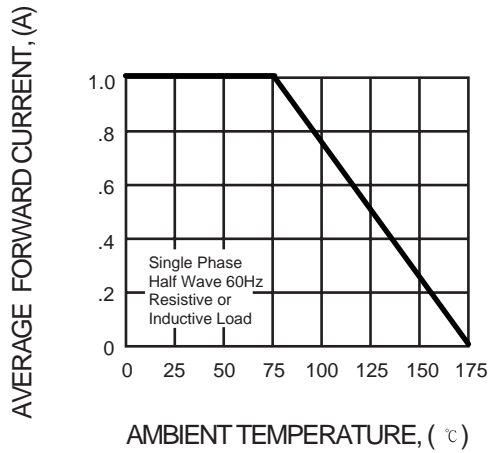
|  |                 | SM<br>513      | SM<br>516 | SM<br>518 | SM<br>2000 | UNITS   |
|--|-----------------|----------------|-----------|-----------|------------|---------|
| Maximum recurrent peak reverse voltage   | $V_{RRM}$       | 1300           | 1600      | 1800      | 2000       | V       |
| Maximum RMS voltage  | $V_{RMS}$       | 910            | 1120      | 1260      | 1400       | V       |
| Maximum DC blocking voltage  | $V_{DC}$        | 1300           | 1600      | 1800      | 2000       | V       |
| Maximum average forward rectified current $T_A=75$   | $I_{(AV)}$      | 1.0            |           |           |            | A       |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 40             |           |           |            | A       |
| Maximum forward voltage at 1.0A  | $V_F$           | 1.1            |           |           |            | V       |
| Maximum DC reverse current @ $T_A=25$ at rated DC blockjng voltage @ $T_A=125$                   | $I_R$           | 5.0<br>50      |           |           |            | $\mu A$ |
| Typical junction capacitance (NOTE 1)  | $C_j$           | 15             |           |           |            | pF      |
| Typical thermal resistance (NOTE 2)  | $R_{j\theta L}$ | 20             |           |           |            | /W      |
| Typical thermal resistance (NOTE 3)  | $R_{j\theta A}$ | 50             |           |           |            | /W      |
| Operating temperature range  | $T_j$           | - 55 --- + 175 |           |           |            |         |
| Storage temperature range  | $T_{STG}$       | - 55 --- + 175 |           |           |            |         |

NOTES: 1. Measured at 1.0MHz and applied average voltage of 4.0V DC.

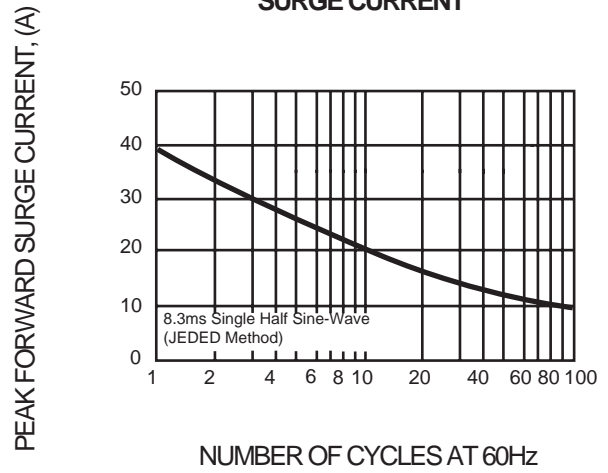
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- Thermal resistance junction to lead, 6.0 mm<sup>2</sup> copper pads to each terminal.
- Thermal resistance junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal.

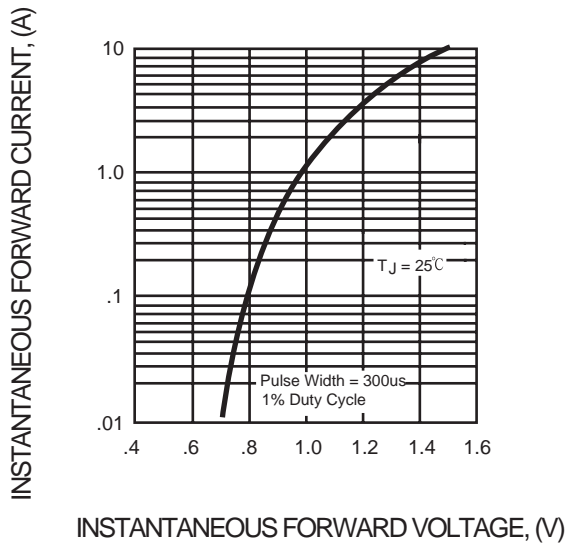
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



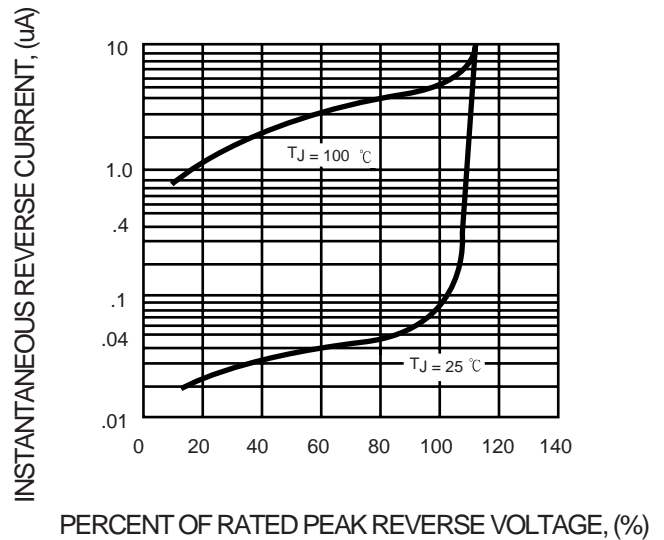
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

