

Pb Free Plating Product

SM513 thru SM2000



1.0 Amp. Surface Mount High Voltage Rectifier

SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 1300-2000V
CURRENT: 1.0 A

FEATURES

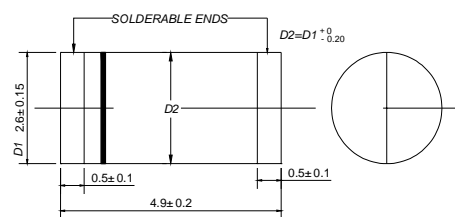
- Glass passivated device
- Ideal for surface mounted applications
- Low leakage current
- Metallurgically bonded construction

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

Dimensions in millimeters



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SM 513	SM 516	SM 518	SM 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 blocking voltage @ $T_A=125$	I_R	5.0 50				μA
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.

2. Thermal resistance junction to lead, 6.0 mm² copper pads to each terminal.

3. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

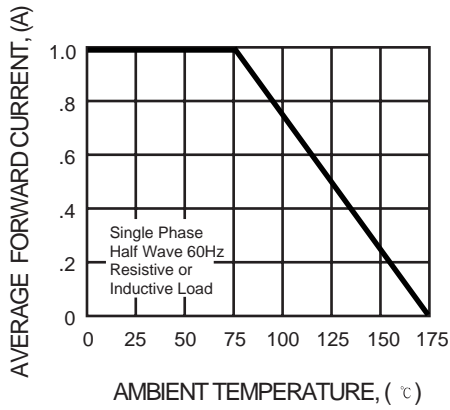


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

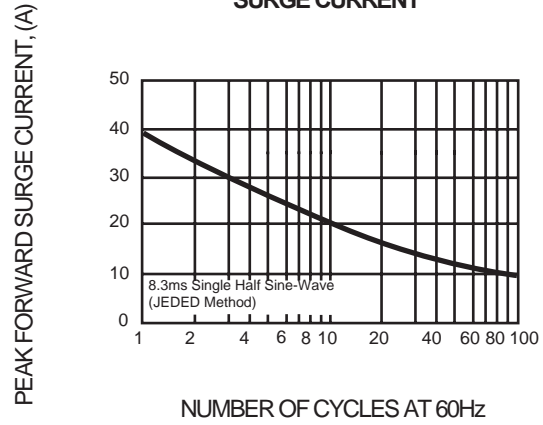


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

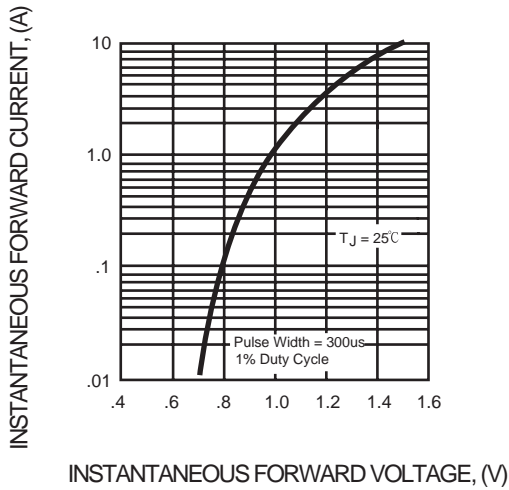


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

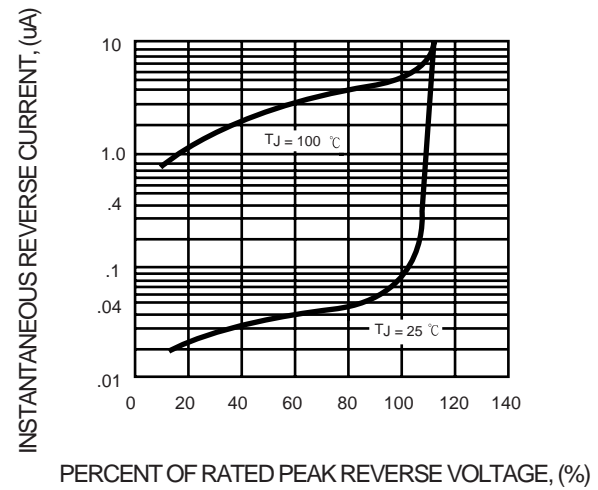


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

