

# BY127M,BY133,EM513

## PLASTIC SILICON RECTIFIER

VOLTAGE - 1250 to 1600 Volts CURRENT - 1.0 Ampere

### FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic , DO-41

Epoxy: UL 94V-O rate flame retardant

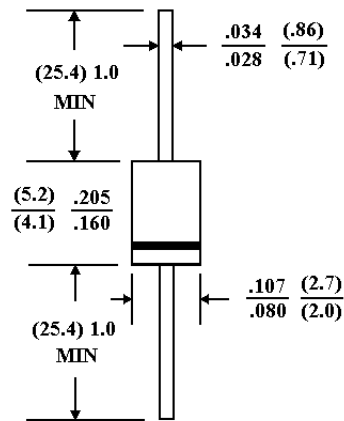
Lead: Axial leads, solderable per MIL-STD-202,  
method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.3 gram

### DO-41



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	BY127M	BY133	EM513	UNITS
Maximum Recurrent Peak Reverse Voltage*	1250	1300	1600	V
Maximum RMS Voltage*	875	910	1120	V
Maximum DC Blocking Voltage*	1250	1300	1600	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T <sub>A</sub> =75 °C	1.0			A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	30			A
Maximum Forward Voltage at 1.0A DC and 25 °C	1.1			V
Maximum Reverse Current at T <sub>A</sub> =25 °C	5.0			µg A
At Rated DC Blocking Voltage T <sub>A</sub> =100 °C	500			µg A
Typical Junction capacitance (Note 1)	15			pF
Typical Thermal Resistance (Note 2) R <sub>θJKJA</sub>	50			°C/W
Typical Thermal resistance (NOTE 2) R <sub>θKJL</sub>	25			°C/W
Operating and Storage Temperature Range T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150			°C

### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B mounted.

RATING AND CHARACTERISTIC CURVES

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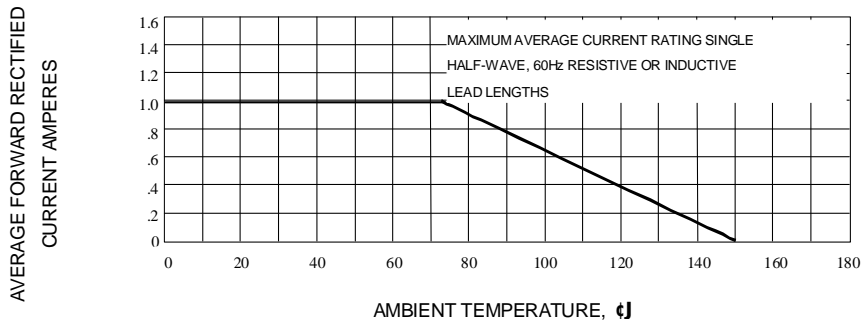


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

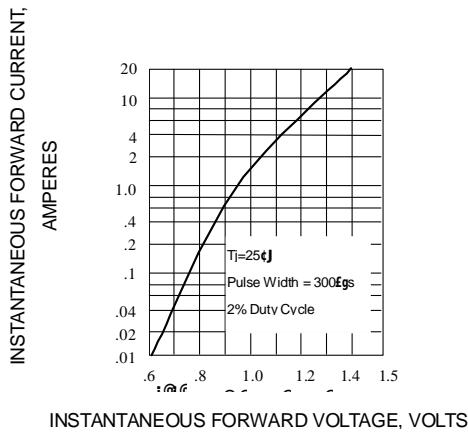


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

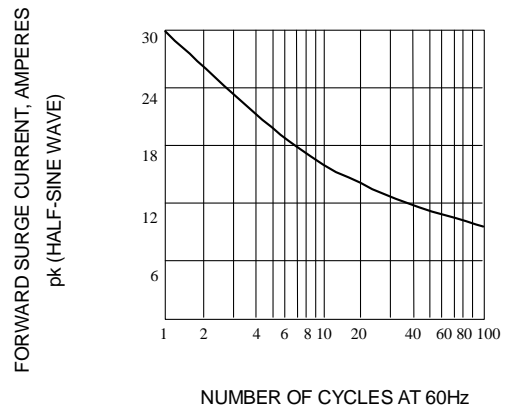


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

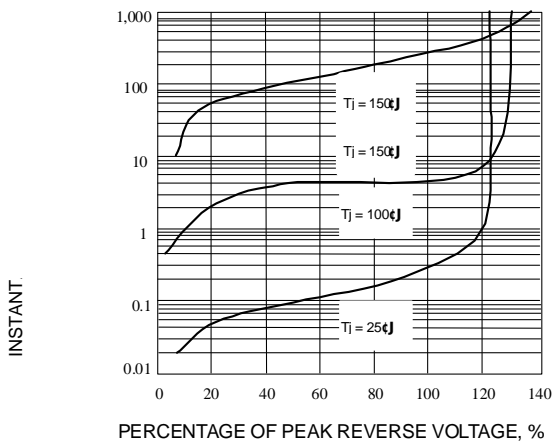


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

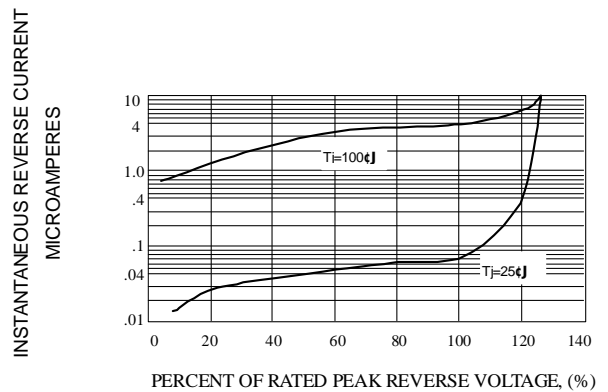


Fig. 5-TYPICAL REVERSE CHARACTERISTICS