

BY133

GENERAL PURPOSE PLASTIC SILICON RECTIFIER

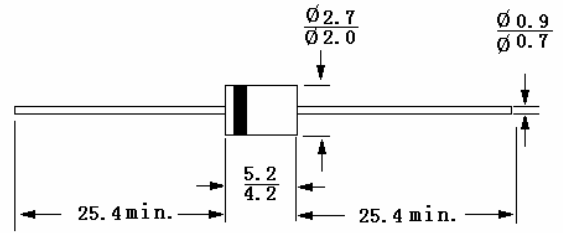
Reverse Voltage – 1300 Volts

Forward Current – 1.0 Ampere

DO-41

Features

- Low forward voltage drop
- High current capability
- High reliability
- High forward surge current capability



Dimensions in mm

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

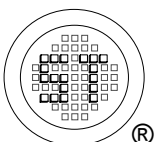
Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	Value	Units
Maximum repetitive peak reverse voltage	V_{RRM}	1300	Volts
Maximum RMS voltage	V_{RMS}	910	Volts
Maximum DC blocking voltage	V_{DC}	1300	Volts
Maximum average forward rectified current at .375" (9.5mm) Lead Length $T_A = 75^\circ\text{C}$	$I_{(AV)}$	1.0	Amp
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30	Amps
Maximum forward voltage at 1A DC and 25°C	V_F	1.1	Volts
Maximum reverse current $T_J = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	I_R	5.0 200	μAmps
Typical junction capacitance (Note 1)	C_J	15	pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	50	$^\circ\text{C}/\text{W}$
Operating and storage temperature range	T_J, T_S	-55 to +150	$^\circ\text{C}$

Notes:

1. Measured at 1MHz and applied reverse voltage of 4 volts DC.
2. Thermal resistance junction to ambient 0.375"(9.5mm) lead length P.C.B. mounted.



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

Dated : 21/03/2005 H

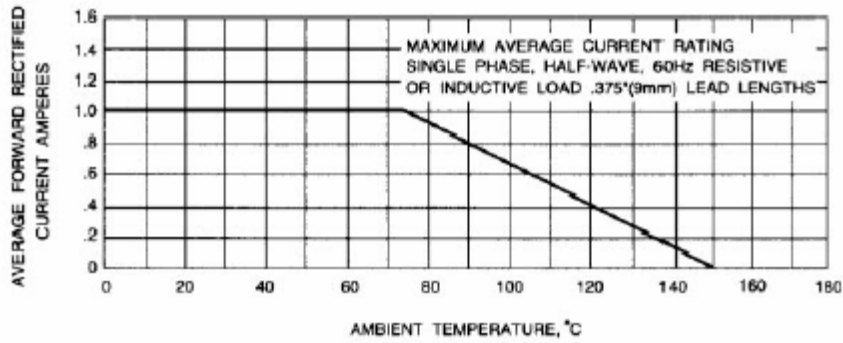


Fig. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

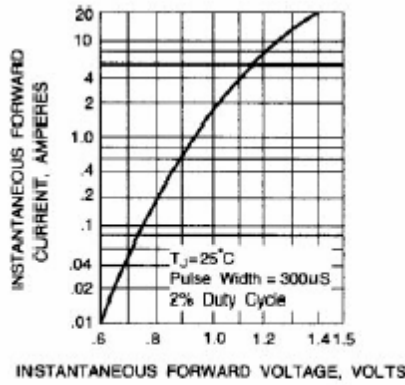


Fig. 2 - TYPICAL FORWARD CHARACTERISTICS

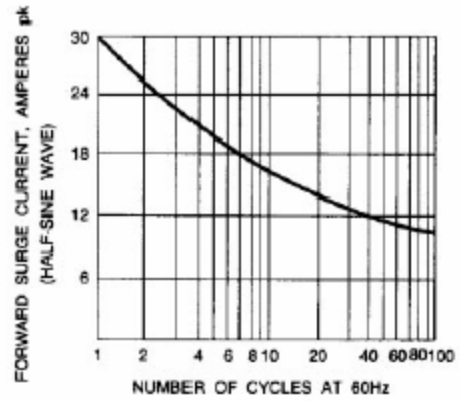


Fig. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

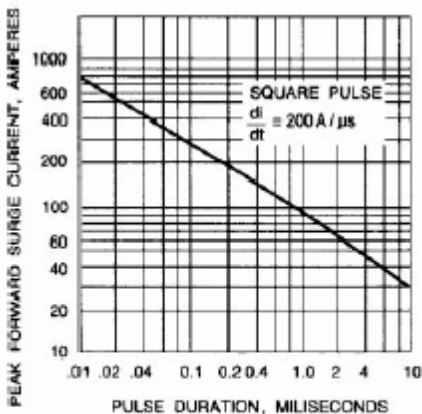


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

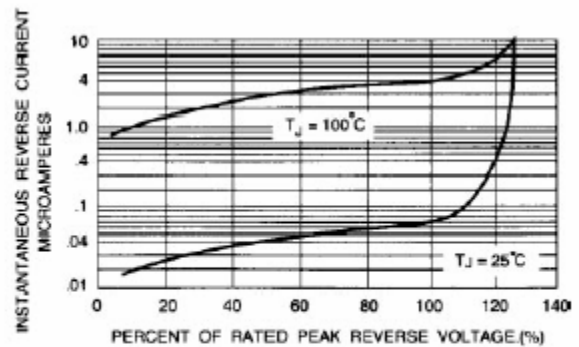
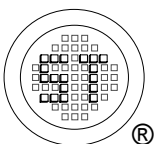


Fig. 5 - TYPICAL REVERSE CHARACTERISTICS



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