

US1M

SURFACE MOUNT SWITCHING RECTIFIER

VOLTAGE: 1000V

CURRENT: 1.0A



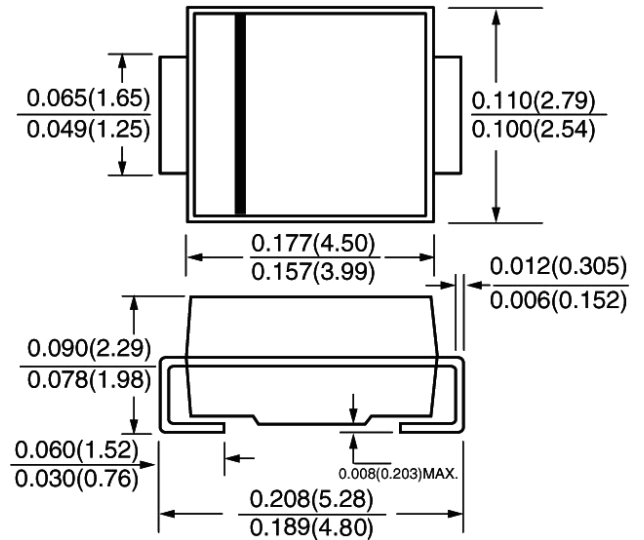
FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed
260°C/10sec/at terminals
Glass passivated chip
Fast recovery time for high efficiency

MECHANICAL DATA

Terminal: Solder plated, solderable per MIL-STD 750, method 2026
Case: Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
Polarity: color band denotes cathode

SMA / DO-214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	US1M	units
Maximum Recurrent Peak Reverse Voltage	V _{rrm}	1000	V
Maximum RMS Voltage	V _{rms}	700	V
Maximum DC blocking Voltage	V _{dc}	1000	V
Maximum Average Forward Rectified Current 3/8" lead length	I _{f(av)}	1.0	A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load	I _{fsm}	30.0	A
Maximum Forward Voltage at rated forward current	V _f	1.7	V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I _r	10.0 500.0	μ A μ A
Maximum Reverse Recovery Time (Note1)	T _{rr}	75	nS
Typical Junction Capacitance (Note 2)	C _j	15.0	pF
Typical Thermal Resistance (Note 3)	R _{th(jl)}	30.0	°C/W
Storage and Operating Junction Temperature	T _{stg} , T _j	-50 to +150	°C

Note:

- Reverse Recovery Condition I_f =0.5A, I_r =1.0A, I_{rr} =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area

RATINGS AND CHARACTERISTIC CURVES US1M

Fig. 1 – Forward Current Derating Curve

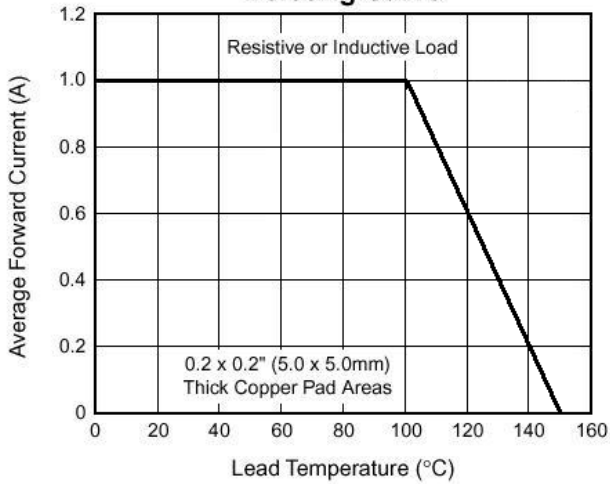


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

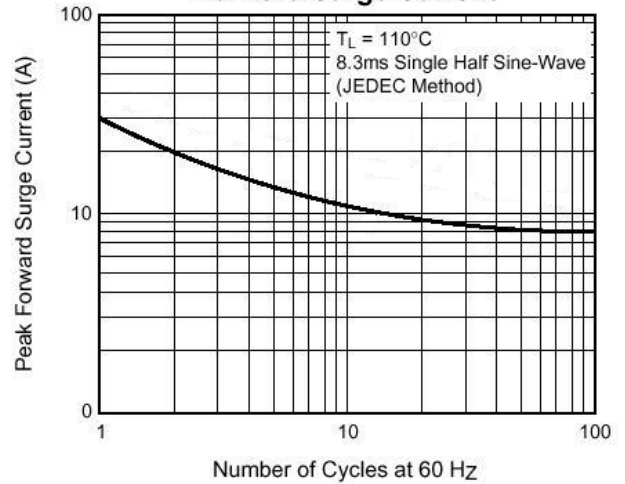


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

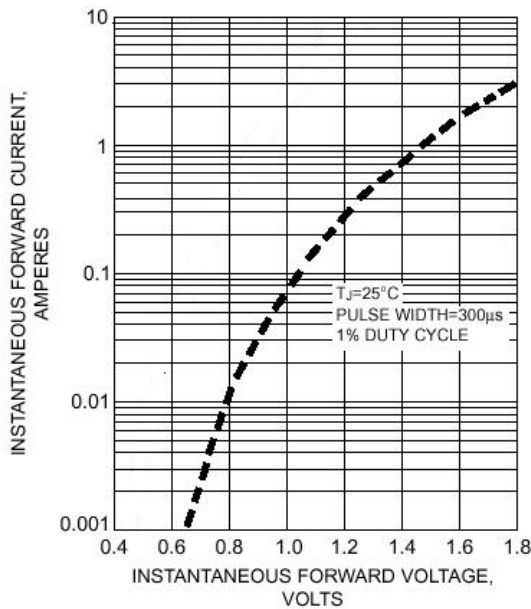


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

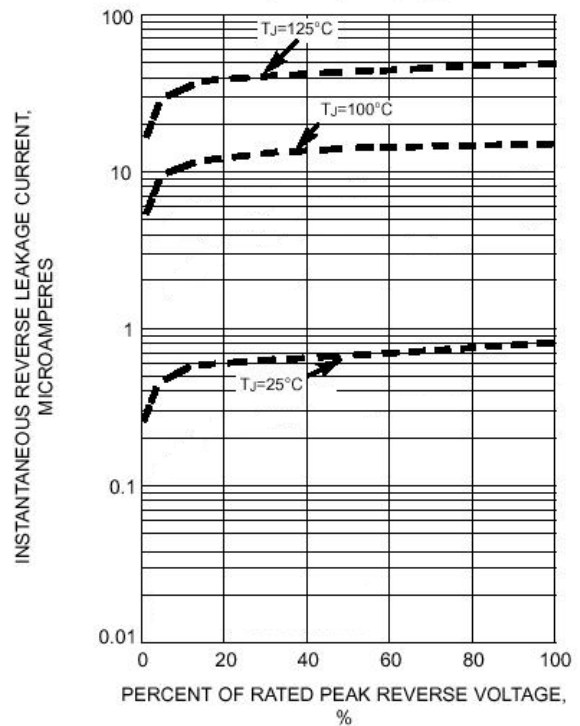


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

