DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

S1A THRU S1M

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 1.0 Ampere*

FEATURES

* Ideal for surface mounted applications
* Glass passivated junction
* Low leakage current
* Low forward voltage drop
* High surge capability

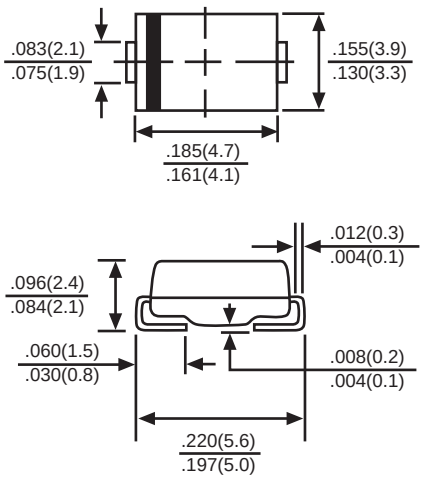
MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rated flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.093 gram approx.

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%.

SMB(DO-214AA)



Dimensions in inches and (millimeters)

		SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 75°C		I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T_A=25°C	I_R	5.0							μAmps
	@ T_A=100°C		50							
Typical Junction Capacitance (Note 1)		C_J	15							pF
Typical Thermal Resistance (Note 2)		$R_{\theta JL}$	25							°C/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150							°C

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.
Note 2: Typical thermal resistance from junction to lead, with 0.28 x 0.28 in^2 (7 x 7 mm^2) copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (S1A THRU S1M)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

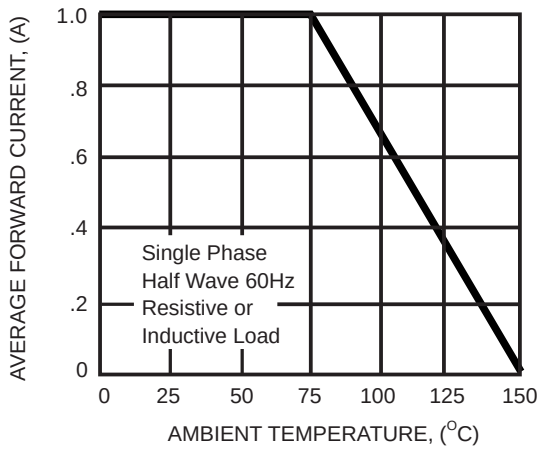


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

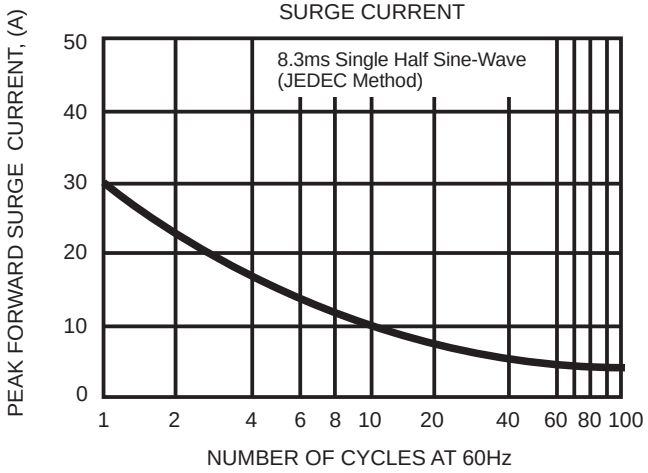


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

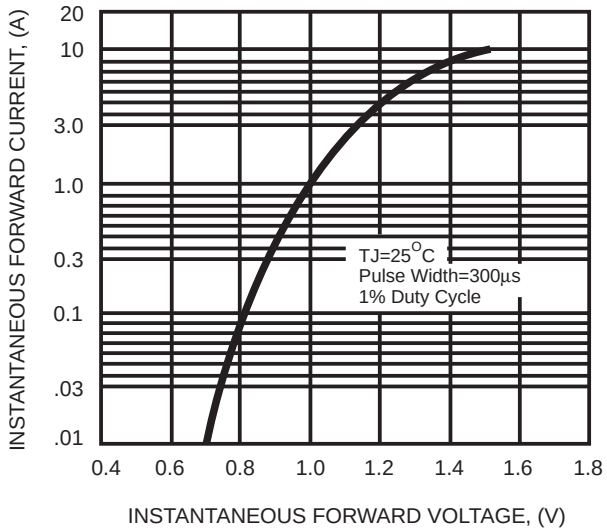
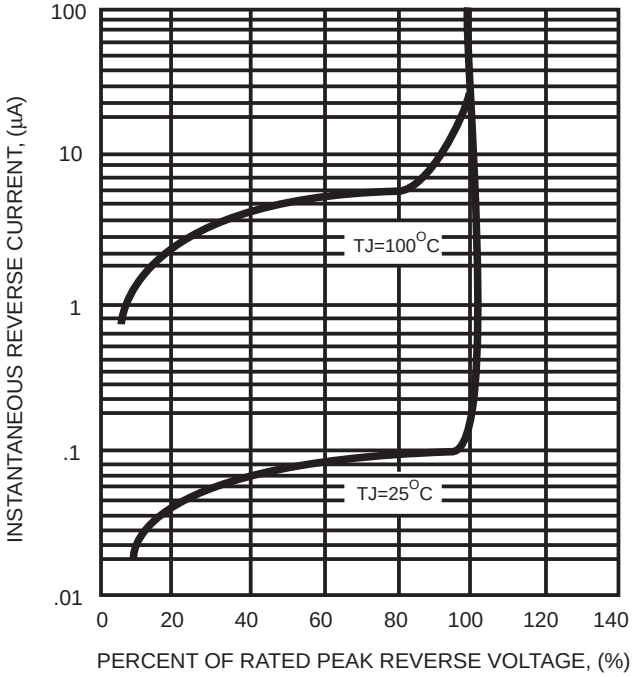


FIG. 4
TYPICAL REVERSE CHARACTERISTICS



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