



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**M13
THRU
M20**

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 1300 to 2000 Volts

CURRENT - 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Glass passivated junction
- * Low leakage current

MECHANICAL DATA

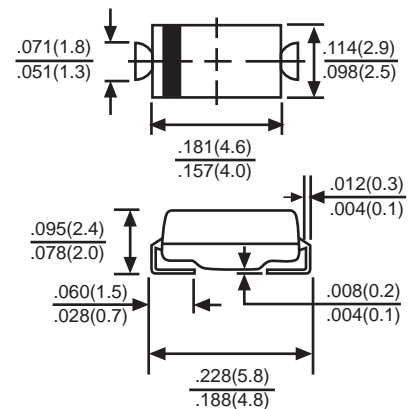
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.064 gram approx.

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%.



SMA-L



Dimensions in inches and (millimeters)

		SYMBOL	M13	M16	M20	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	1300	1600	2000	Volts
Maximum RMS Voltage		V _{RMS}	910	1120	1400	Volts
Maximum DC Blocking Voltage		V _{DC}	1300	1600	2000	Volts
Maximum Average Forward Rectified Current at T _A = 55°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		20	Amps
Maximum Instantaneous Forward Voltage at 1.0A DC		V _F	1.1		2.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A =25°C	I _R	5.0			μAmps
	@ T _A =100°C		200			
Typical Junction Capacitance (Note 1)		C _J	15			pF
Typical Thermal Resistance (Note 2)		R _{θJA}	30			°C/W
Operating Temperature Range		T _J	-55 to +125			°C
Storage Temperature Range		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 ambient.

RATING AND CHARACTERISTIC CURVES (M13 THRU M20)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

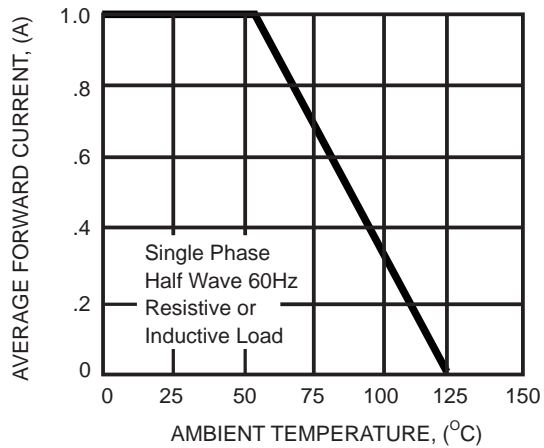


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

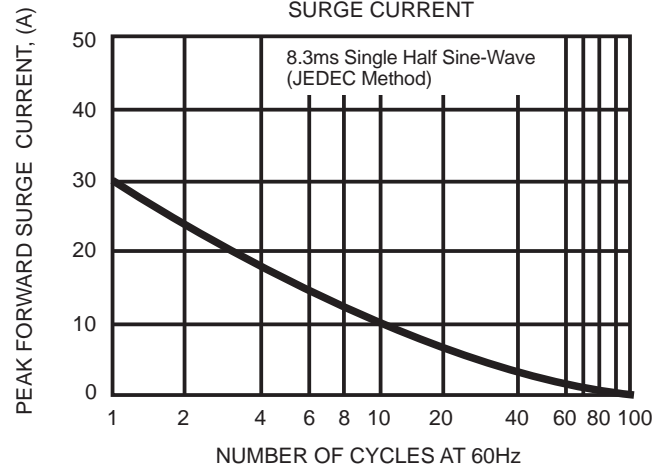


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

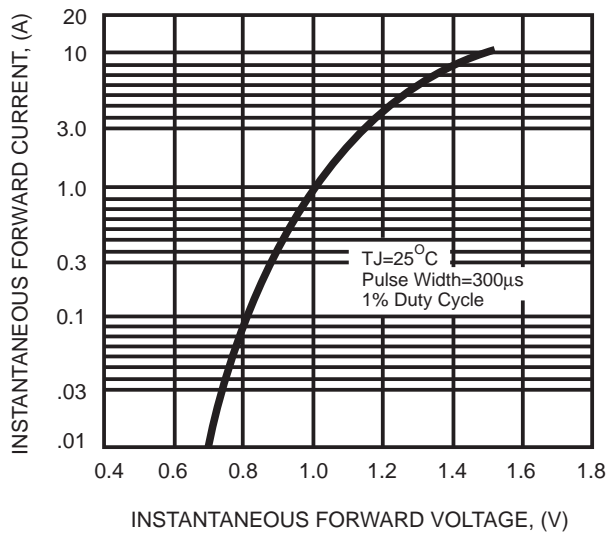


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

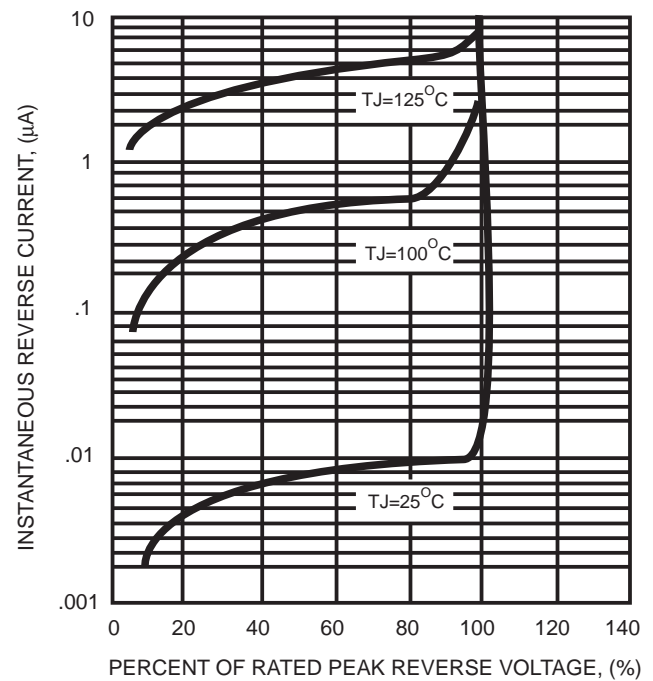
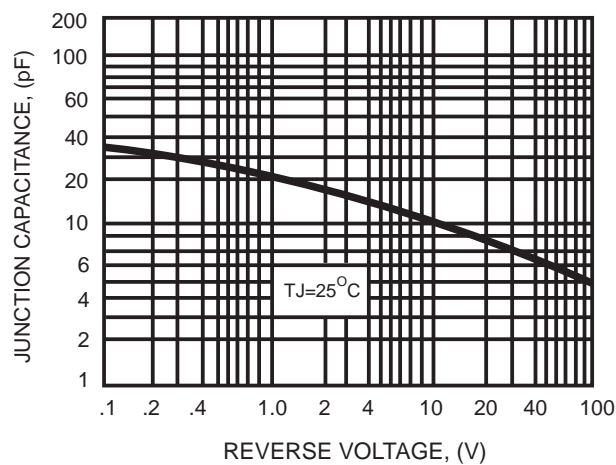


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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