



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**M13
THRU
M20**

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 1300 to 2000 Volts

CURRENT 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current

MECHANICAL DATA

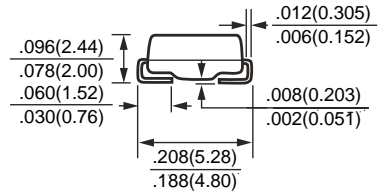
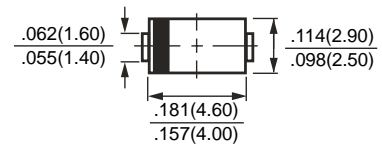
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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%.



SMA(DO-214AC)



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 = 75°C	I _O		1.0		Amps
Peak Forward Surge Current I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}		30		Amps
Maximum Forward Voltage at 1.0A DC	V _F		1.1		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A = 25°C		5.0		uAmps
	@ T _A = 125°C		50		
Maximum Reverse Recovery Time (Note 3)	t _{rr}		2.5		uSec
Typical Thermal Resistance (Note 2)	R _{θJL}		30		°C/W
Typical Junction Capacitance (Note 1)	C _J		15		pF
Operating and Storage Temperature Range	T _J , T _{STG}		-65 to + 175		°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
 2. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.
 3. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

RATING AND CHARACTERISTIC CURVES (M13 thru M20)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

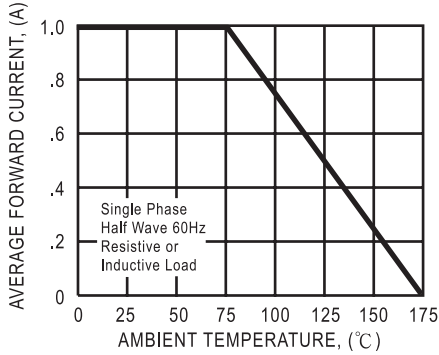


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

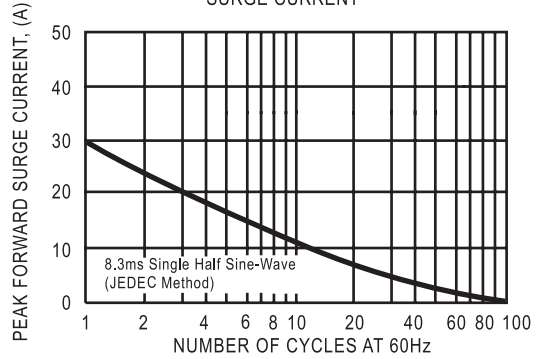


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

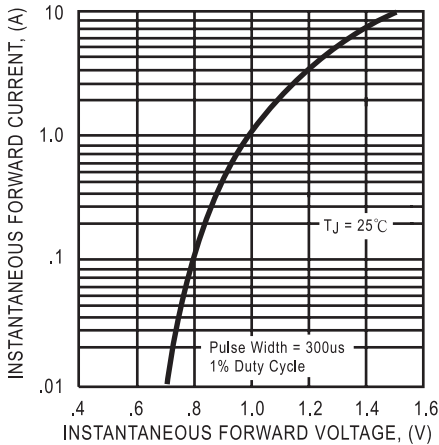


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

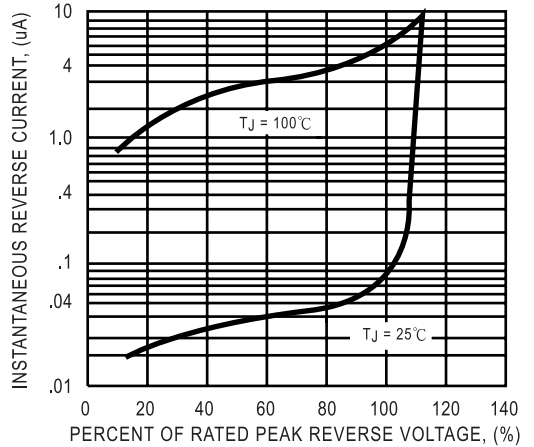


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

