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

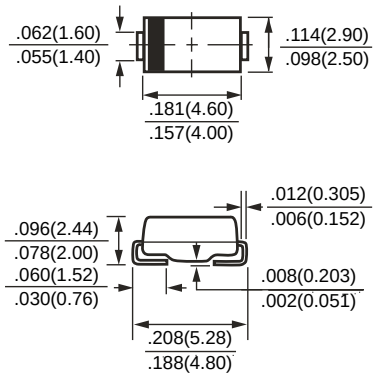
MECHANICAL DATA

* 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	I_R	5.0			uAmps
	@T_A = 125°C		50			
Maximum Reverse Recovery Time (Note 3)		trr	2.5			uSec
Typical Thermal Resistance (Note 2)		RθJL	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: IF=0.5A, IR=1.0A, IRR=0.25A.

RATING AND CHARACTERISTIC CURVES (M13 thru M20)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

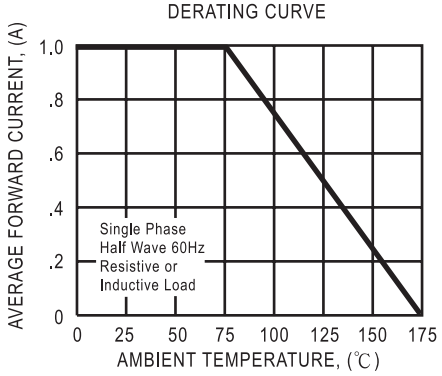


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

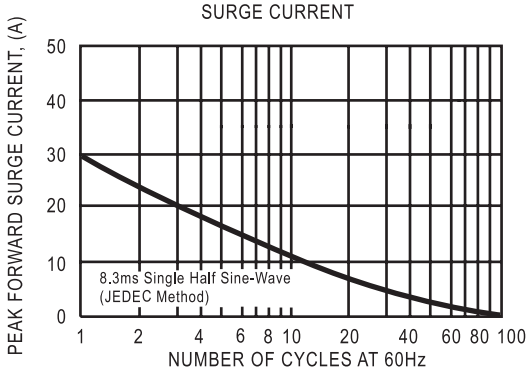


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

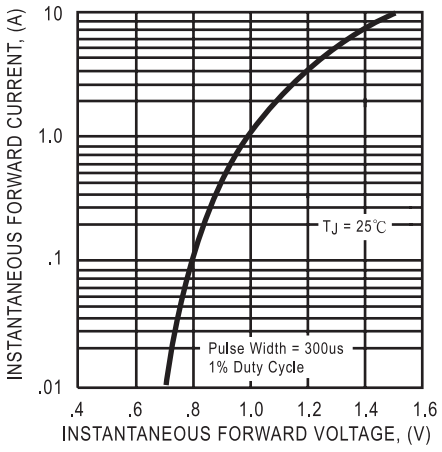


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

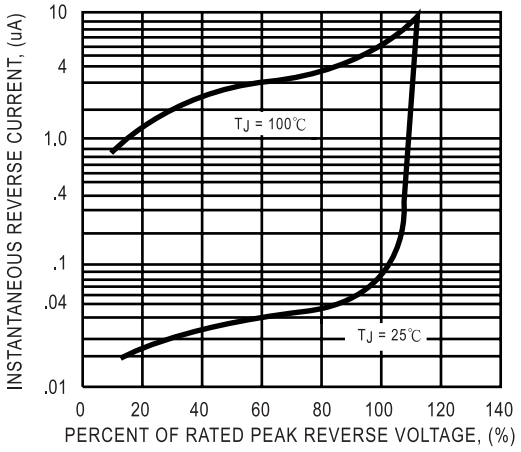


FIG. 5 - TYPICAL JUNCTION CAPACITANCE