



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

M1
THRU
M7

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts

CURRENT 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Low profile package
- * Low power loss, high efficiency
- * High surge capability

MECHANICAL DATA

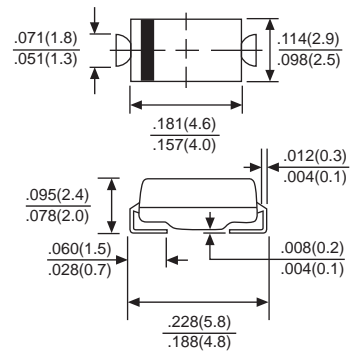
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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-L



Dimensions in inches and (millimeters)

	SYMBOL	M1	M2	M3	M4	M5	M6	M7	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 TA = 55°C	I _O	1.0							Amps	
Peak Forward Surge Current IFM(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	I _R	@TA = 25°C	5.0							uAmps
		@TA = 125°C	50							
Maximum Reverse Recovery Time (Note 3)	t _{rr}	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 (M1 THRU M7)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

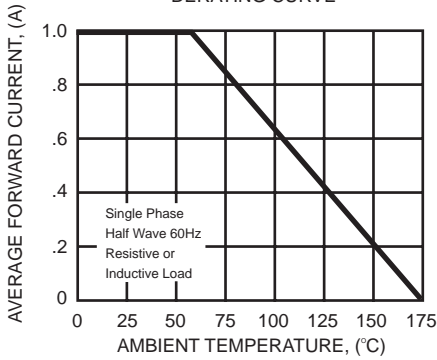


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

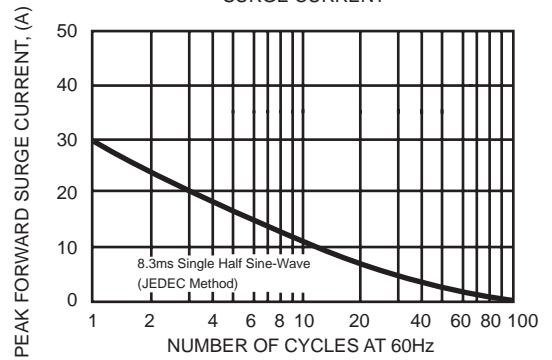


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

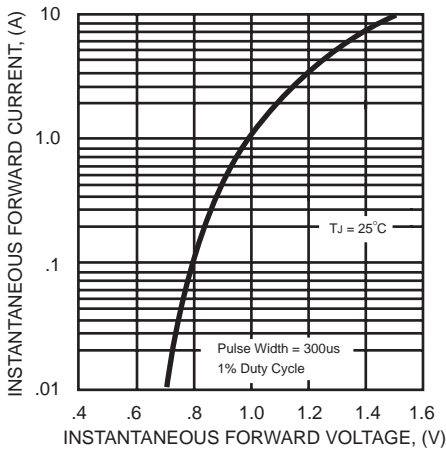


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

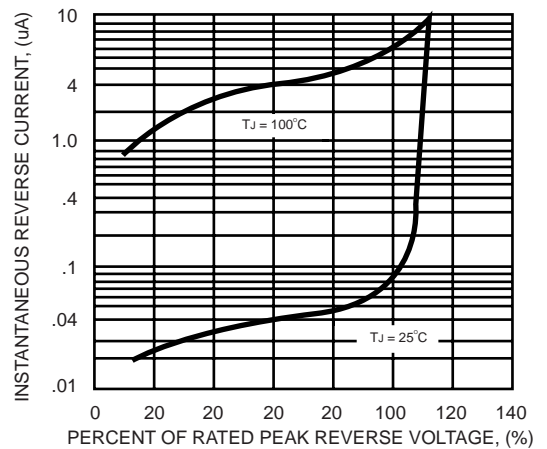
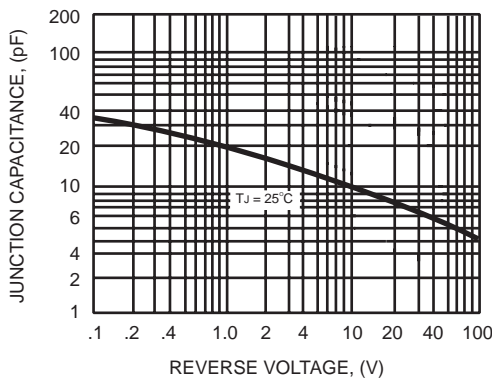


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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