

Description

The M1-M7 Surface Mount General Rectifier is a series of surface-mounted devices designed for general rectification applications. These rectifiers offer reliable performance with reverse voltage ratings ranging from 50 to 1000 Volts and a forward current capability of 1.0 Ampere. They are engineered to handle high forward surge currents and feature low reverse leakage, making them suitable for various electronic circuits requiring efficient rectification.

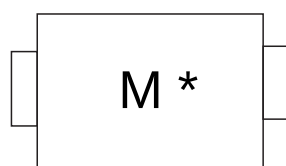
Features

- ✦ Plastic package with Underwriters Laboratory Flammability Classification 94V-0
- ✦ Ideal for surface-mounted applications
- ✦ Low reverse leakage current
- ✦ Built-in strain relief for automated placement
- ✦ High forward surge current capability
- ✦ Guaranteed high-temperature soldering: 250°C/10 seconds at terminals
- ✦ Storage Period: 2 years

Applications

- ✦ General rectification in power supplies
- ✦ Electronic circuits requiring surge protection
- ✦ Surface-mounted PCB applications
- ✦ Consumer electronics devices

Marking Diagram



M* = Part number

Circuit Diagram



Ordering Information

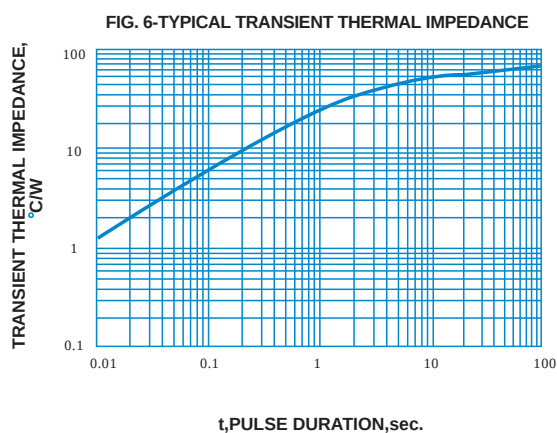
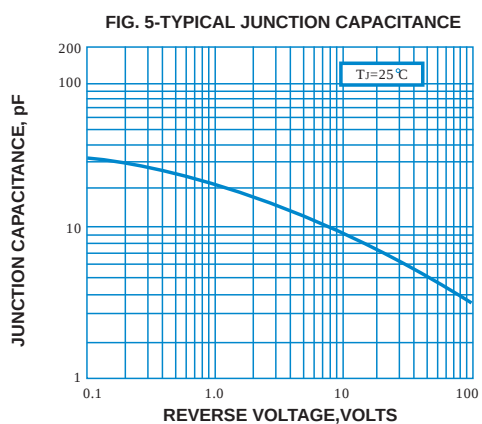
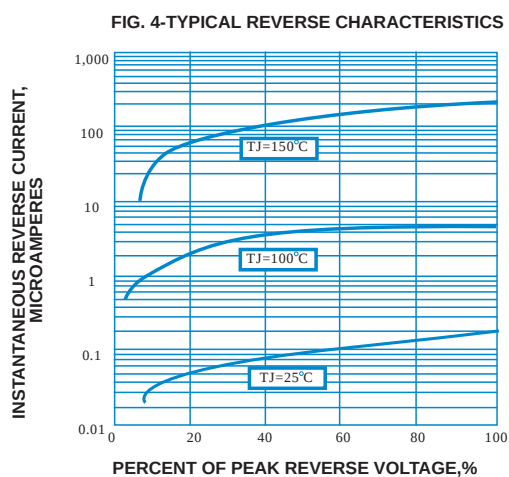
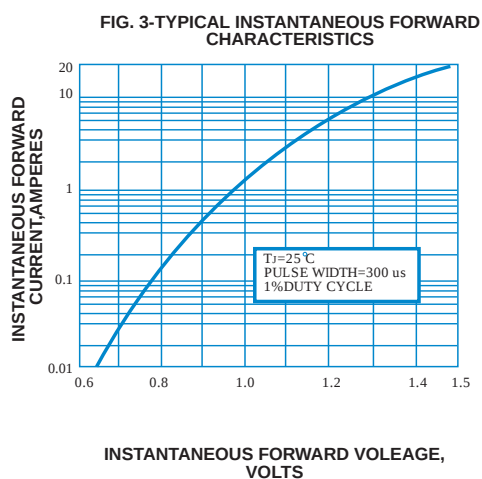
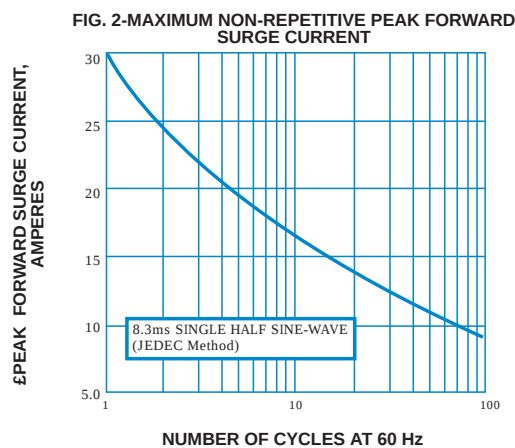
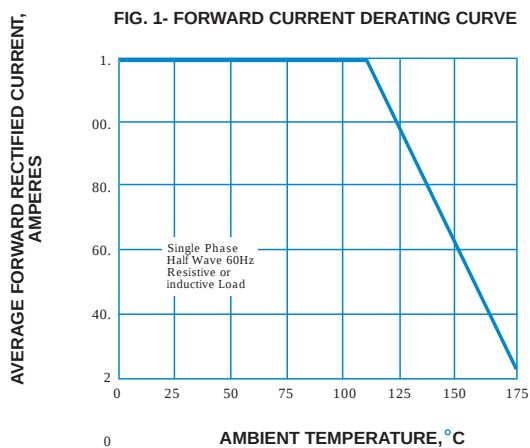
DEVICE	PACKAGE
M1-M7	2000/Tape & Reel

Maximum Ratings ($T_A = 25^{\circ}\text{C}$)

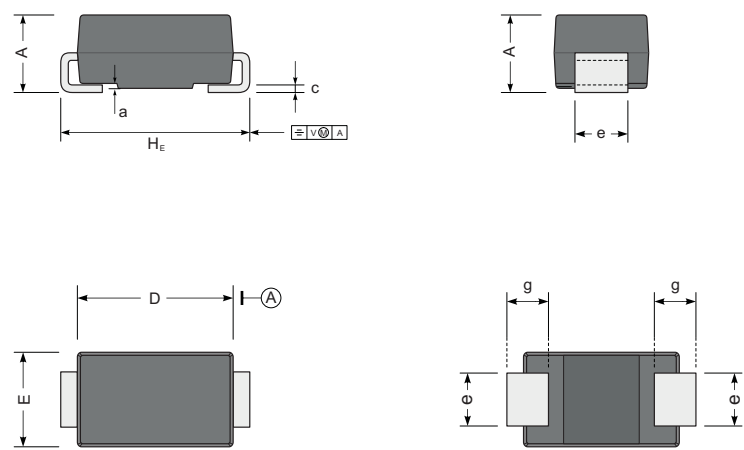
Parameter	Symbol	M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=110^{\circ}\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=100^{\circ}\text{C}$	I_R	5.0 50.0							μA
Typical junction capacitance (NOTE 1)	C_J	15.0							pF
Typical thermal resistance (NOTE 2)	R_{qJA}	75.0							$^{\circ}\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							$^{\circ}\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

Typical Performance Curves



SMA Package Outline Dimensions



Plastic surface mounted package; 2 leads

UNIT		A	D	E	H _E	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size

