M1 THRU M7

1.0 AMP. SURFACE MOUNT RECTIFIERS

Voltage Range
50 to 1000 Volts
Current
1.0 Amperes

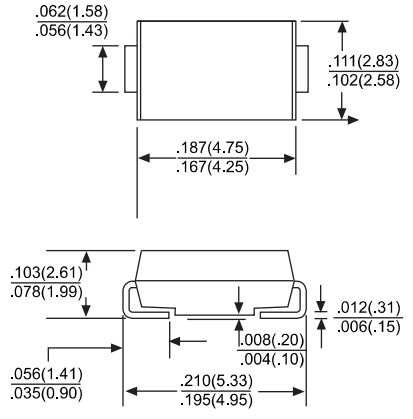
Features

- For surface mounted application
- Class passivated junction chip.
- Low forward voltage drop
- High current capability
- Easy pick and place
- High surge current capability
- Plastic materal used carriers Underwriters Laboratory Classification 94V-O
- High temperature soldering: 250^{0}C/ 10 seconds at terminals

Mechanical Data

- Case:Molded plastic
- Terminals:Solder plated
- Polarity:Indicated by cathode band
- Packaging:12mm tape per EIA STD RS-481
- Weight:0.064 gram

SMA/DO-214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number		M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_L=110°C	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.1							V
Maximun DC Reverse Current @ T_A = 25°C at Rated DC Blocking Voltage @ T_A = 125°C	I_R	5 50							uA uA
Maxium Reverse Recovery Time (Note 1)	T_{RR}	1.8							uS
Typical Junction Capacitance (Note 2)	C_J	12							pF
Operating Junction Temperature Range	T_J	-55 to+150							°C
Storage Temperature Range	T_{STG}	-55 to+150							°C

NOTES: 1. Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A.I_{RR}=0.25A
2.Measured at 1MHz and Applied V_R=4.0 Volts

RATING AND CHARACTERISTIC CURVES
M1 THRU M7

FIG.1- MAXIMUN FORWARD CURRENT DERATING CURVE

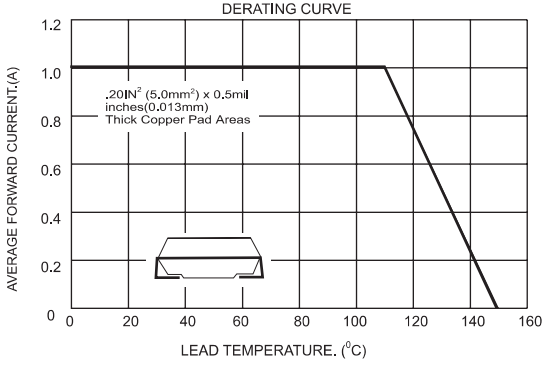


FIG.2-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

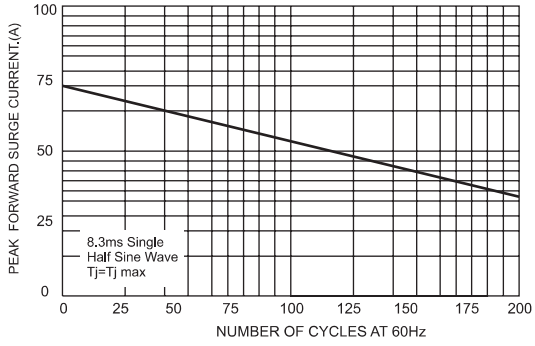


FIG.3-TYPICAL FORWARD CHARACTERISTICS

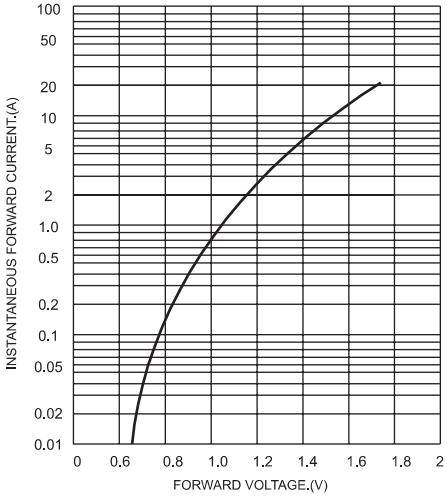


FIG.4-TYPICAL REVERSE CHARACTERISTICS

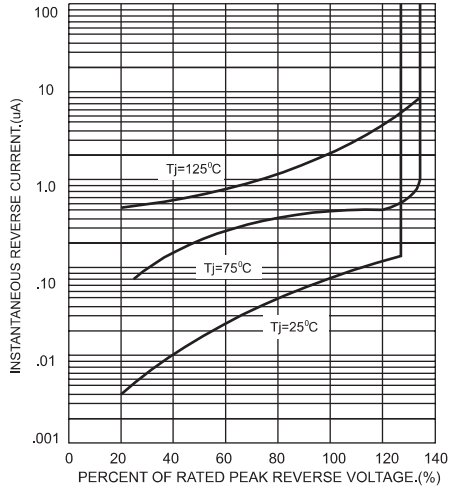


FIG.5-TYPICAL JUNCTION CAPACITANCE

