MEI

Lead Free RoHS Compliant

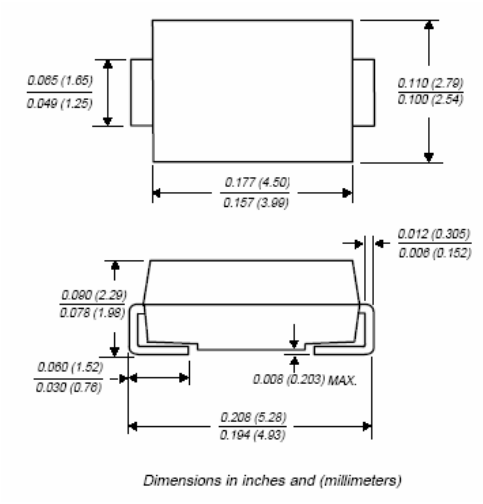
SURFACE MOUNT FAST RECOVERY RECTIFIER

RS1A THRU RS1M

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

FEATURES

- Plastic package has UL flammability classification 94V-0
- Glass passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature Soldering guaranteed: 250 ^{O}C/10 seconds at terminals



DO-214AC (SMA)

MECHANICAL DATA

- Case: JEDEC DO-214AC transfer molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT
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 = 100^{O}C	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.3							Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C	I_R	5.0							µA
DC Blocking Voltage per element T_A = 125 ^{O}C		50							
Maximum Reverse Recovery Time Test conditions I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	10					7		pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	105							^{O}C/W
	$R_{\theta JL}$	32							
Operating Junction Temperature Range	T_J	(-55 to +150)							^{O}C
Storage Temperature Range	T_{STG}	(-55 to +150)							^{O}C

Notes:

1. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas.

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RATINGS AND CHARACTERISTIC CURVES RS1A THRU RS1M

FIG. 1 - FORWARD CURRENT DERATING CURVE

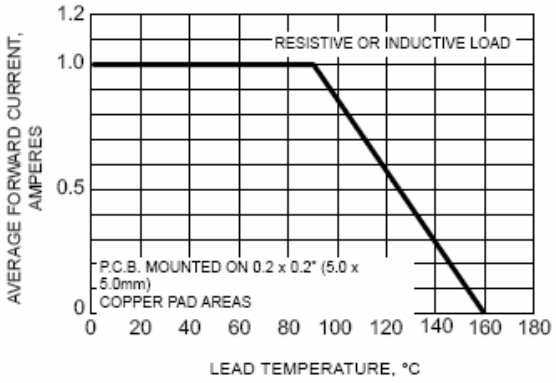

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

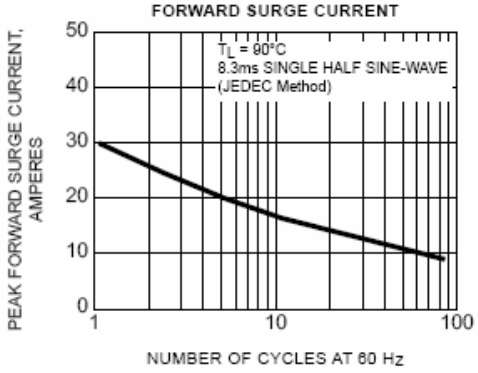

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

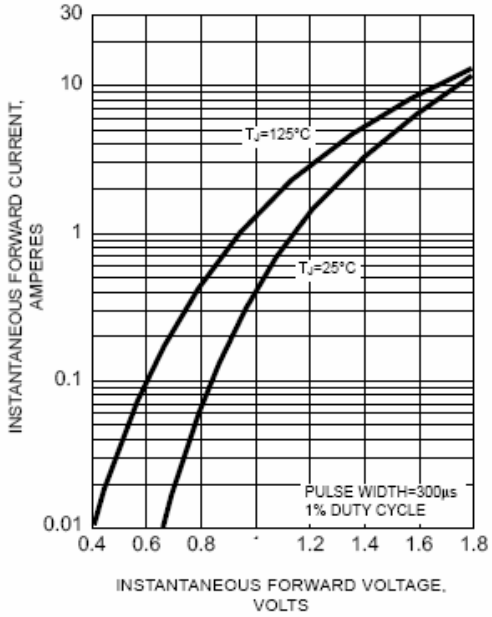

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

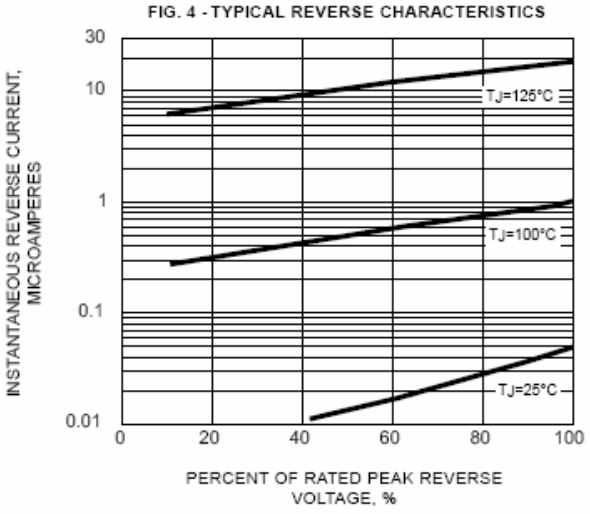

FIG. 5 - TYPICAL JUNCTION CAPACITANCE

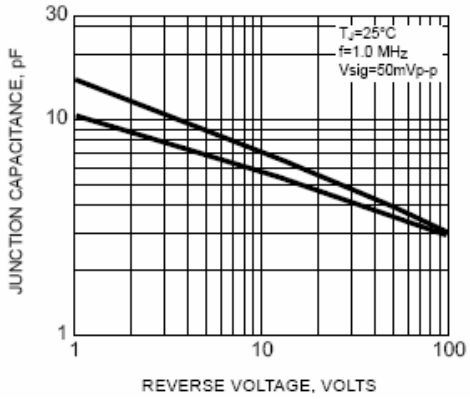

FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE