



SURFACE MOUNT FAST SWITCHING RECTIFIER

RS1A THRU RS1M

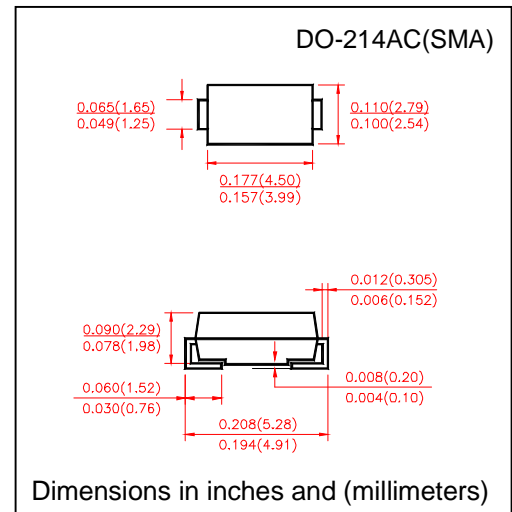
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

FEATURES

- Plastic package has underwrites laboratory flammability Classification 94V-0
- Low profile surface mount package
- Built-in strain relief
- Fast switching for high efficiency
- Glass passivated chip junction
- High temperature soldering
250°C/10 second at terminals

MECHANICAL DATA

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

MAXIMUM RATINGS & THERMAL CHARACTERISTICS

	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 $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) $T_L=90^\circ\text{C}$	I_{FSM}	30							Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	105							°C/W
	$R_{\theta JL}$	32							
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

ELECTRICAL CHARACTERISTICS

	SYMBOLS	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT	
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.30							Volts	
Maximum DC Reverse Current at rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	I_R							5.0	μA
	$T_A = 125^\circ\text{C}$									
Typical Reverse Recovery Time at $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	t_{rr}	150				250	500		ns	
Typical junction capacitance at 4.0V, 1MHz	C_j	30					7.0		pF	

Notes:

1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.2×0.2" (5.0 × 5.0mm) copper pad areas.



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RATINGS AND CHARACTERISTIC CURVES RS1A THRU RS1M

FIG.1-FORWARD CURRENT DERATING CURVE

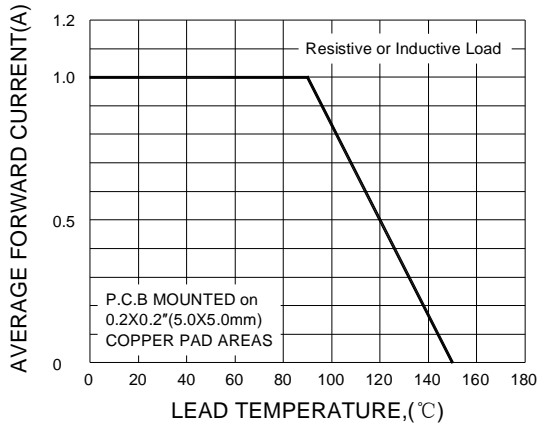


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

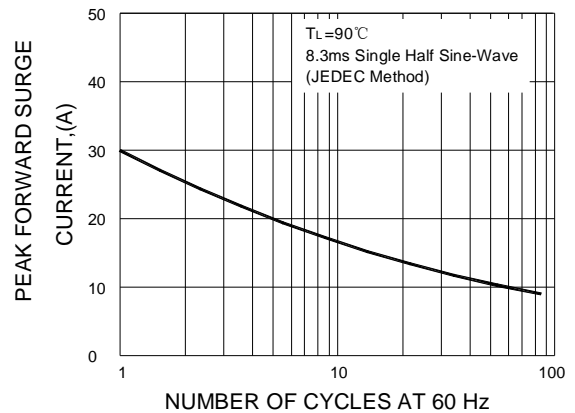


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

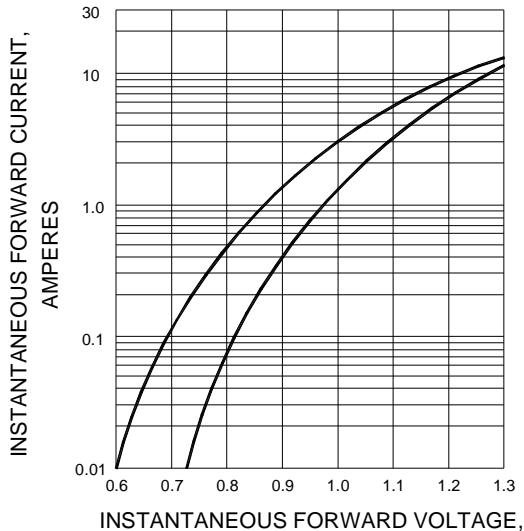


FIG.4-TYPICAL REVERSE CHARACTERISTICS

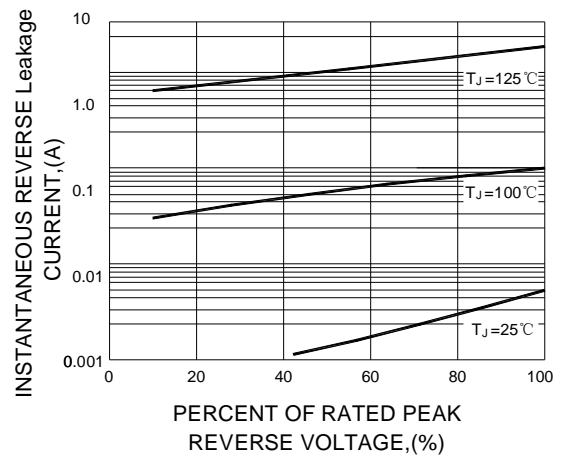


FIG.5-TYPICAL JUNCTION CAPACITANCE

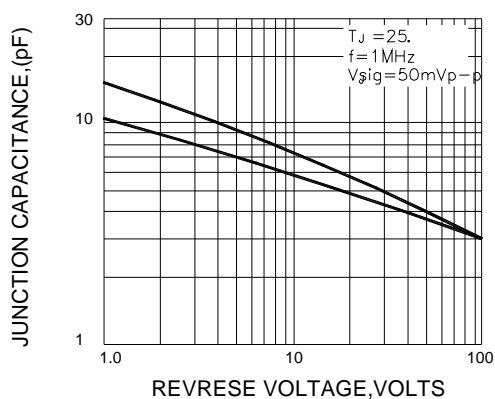


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

