RS1A THRU RS1M

SURFACE MOUNT FAST SWITCHING RECTIFIER

VOLTAGE RANGE **50 to 1000 Volts**

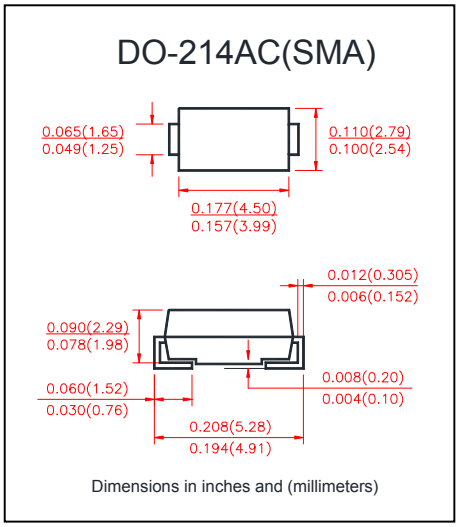
CURRENT **1.0 Ampere**

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℃/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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ 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℃	$I_{F(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) T_L=90℃	I_{FSM}	30							Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	105							℃/W
	$R_{\theta JL}$	32							
Operating junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150							℃

ELECTRICAL CHARACTERISTICS

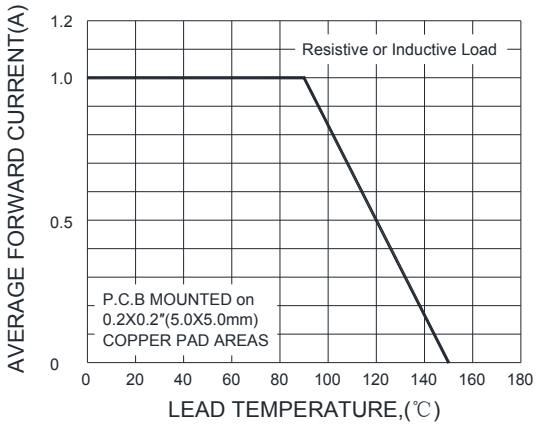
		SYMBOLS	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT
Maximum Instantaneous Forward Voltage at 1.0A		V_F	1.30							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	T_A = 25℃	I_R	5.0							μA
	T_A = 125℃		50							
Typical Reverse Recovery Time at I_F=0.5A, I_R=1.0A, I_{RR}=0.25A		t_{rr}	150				250	500		ns
Typical junction capacitance at 4.0V, 1MHz		C_J	30					7.0		pF

Notes:

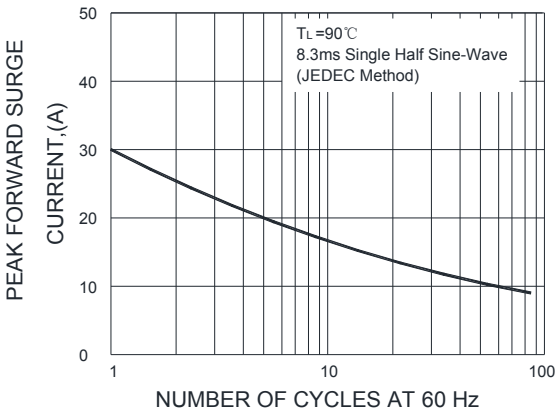
1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.2×0.2″ (5.0 × 5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES

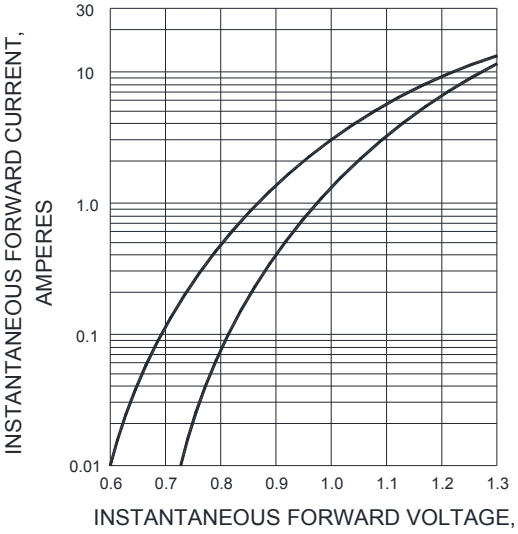
F1G.1-FORWARD CURRENT DERATING CURVE



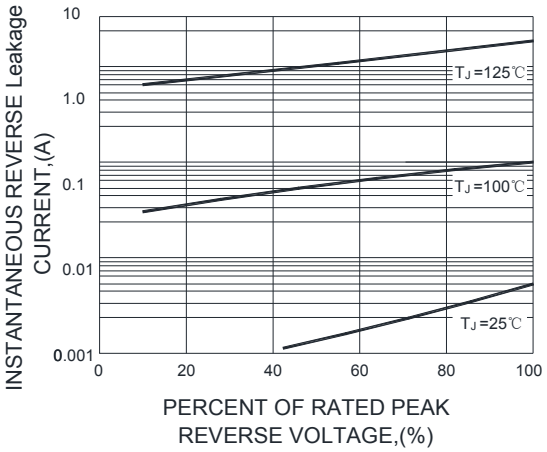
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



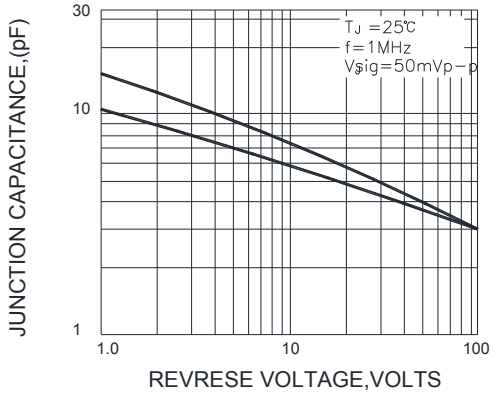
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TYPICAL TRANSIENT THERMAL IMPEDANCE