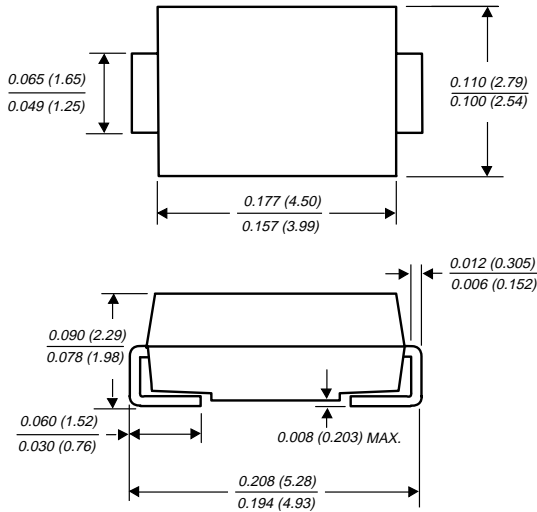


RS1A THRU RS1K

SURFACE MOUNT FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 800 Volts Forward Current - 1.0 Ampere

DO-214AC MODIFIED J-BEND



Dimensions are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Fast switching for high efficiency
- ◆ Glass passivated chip junction
- ◆ High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic over passivated chip

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°C ambient temperature unless otherwise specified.

	SYMBOLS	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	UNITS	
Device marking code		RA	RB	RD	RG	RJ	RK		
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	Volts	
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	500	Volts	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	Volts	
Maximum average forward rectified current at T _L =90°C	I _(AV)	1.0						Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L =90°C	I _{FSM}	30.0						Amps	
Maximum instantaneous forward voltage at 1.0A	V _F	1.30						Volts	
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0 50.0						μA	
Maximum reverse recovery time	t _{rr}	(NOTE 1)				150	250	ns	
Typical junction capacitance	C _J	(NOTE 2)					10.0	7.0	pF
Maximum thermal resistance	R _{θJA} R _{θJL}	(NOTE 3)						105.0 32.0	°C/W
Operating junction and storage temperature range	T _J , 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 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES RS1A THRU RS1J

FIG. 1 - FORWARD CURRENT DERATING CURVE

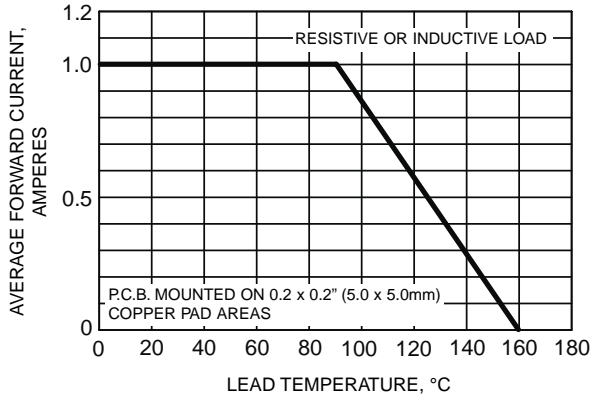


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

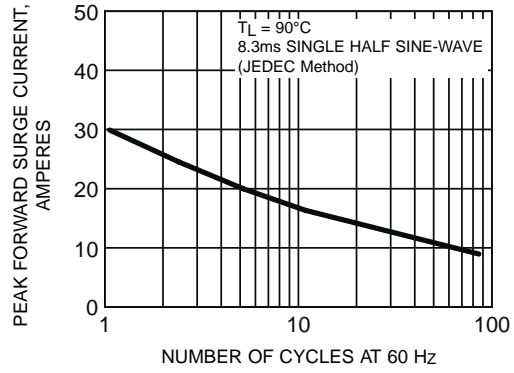


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

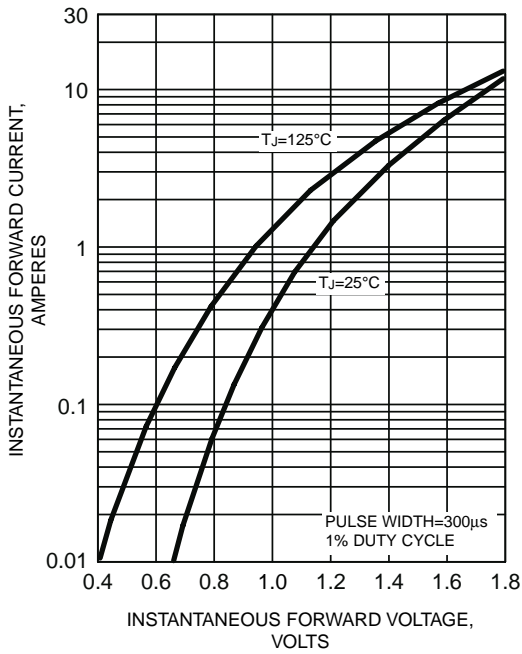


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

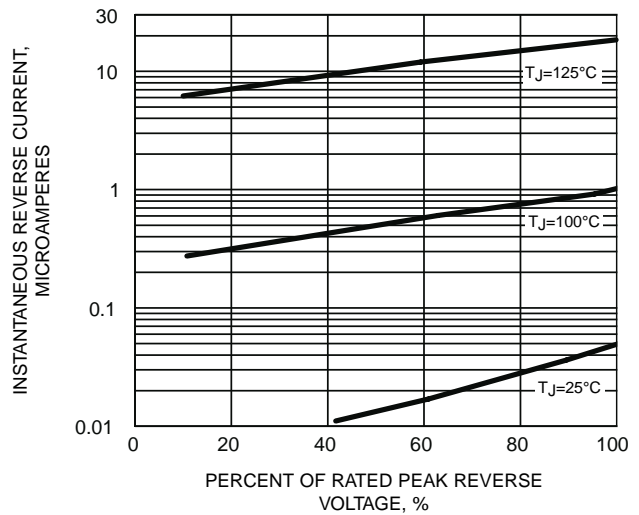


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

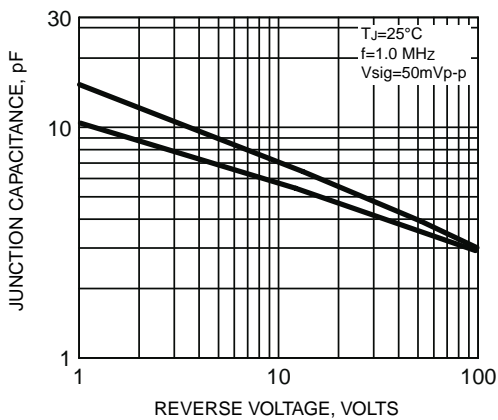


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

