

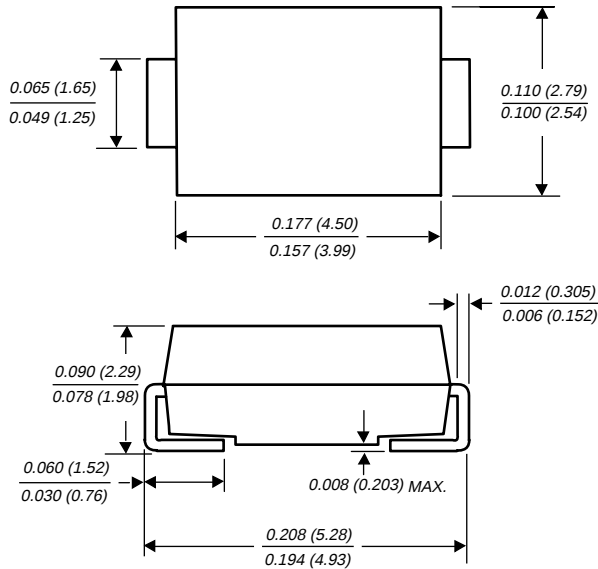
S1A THRU S1M

SURFACE MOUNT RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.0 Ampere

DO-214AC



Dimensions are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ 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	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNITS
Device marking code		SA	SB	SD	SG	SJ	SK	SM	
Maximum recurrent peak reverse voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current See Figure 1	l(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L =110°C	lFSM	40.0					30.0		Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.10							Volts
Maximum DC reverse current at Rated DC blocking voltage T _A =25°C T _A =125°C	I _R	1.0					5.0		μA
		50.0							
Typical reverse recovery time (NOTE 1)	t _{rr}	1.8							μs
Typical junction capacitance (NOTE 2)	C _J	12.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA}	75.0					85.0		°C/W
	R _{θJL}	27.0					30.0		
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $t_{rr}=0.25\text{A}$

(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 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

RATING AND CHARACTERISTIC CURVES S1A THRU S1M

FIG. 1 - FORWARD CURRENT DERATING CURVE

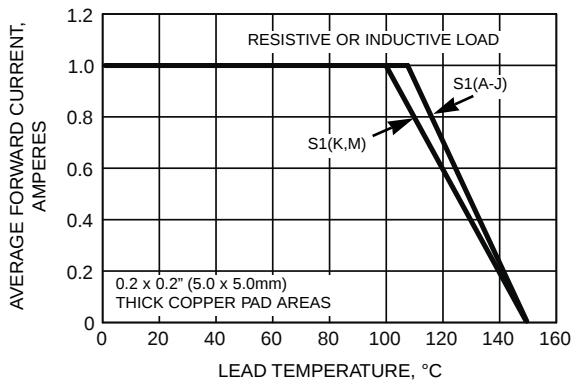


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

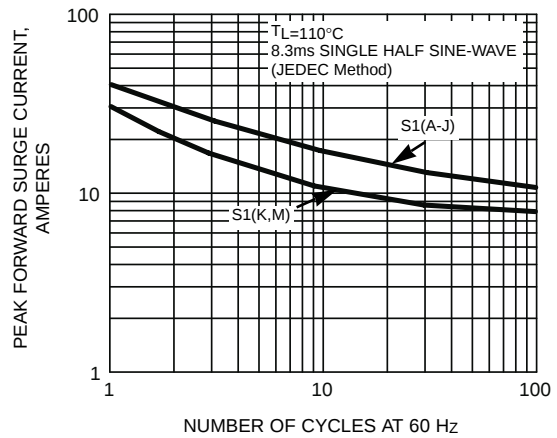


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

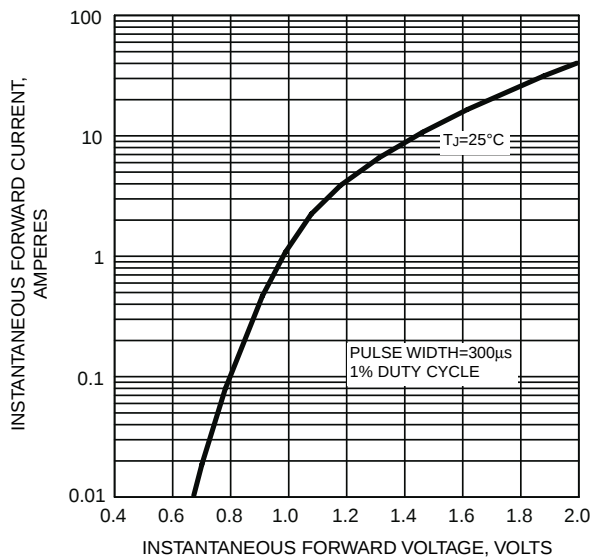


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

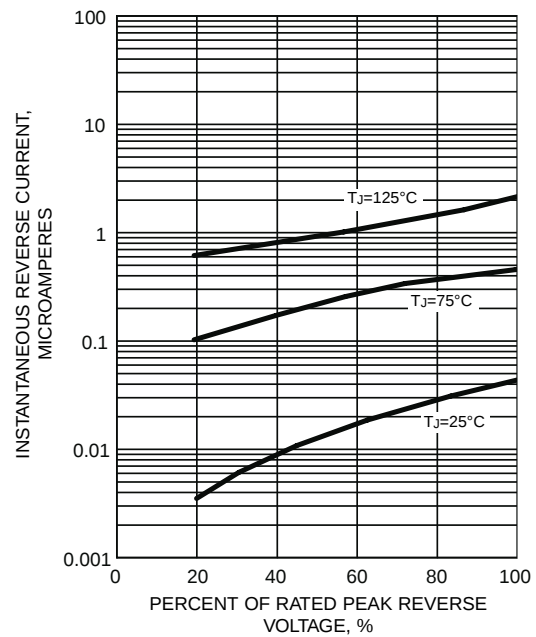


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

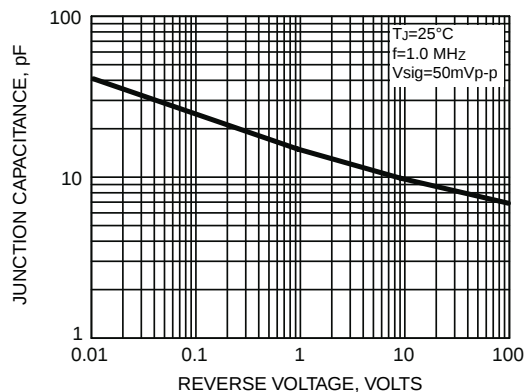


FIG. 6 - TRANSIENT THERMAL IMPEDANCE

