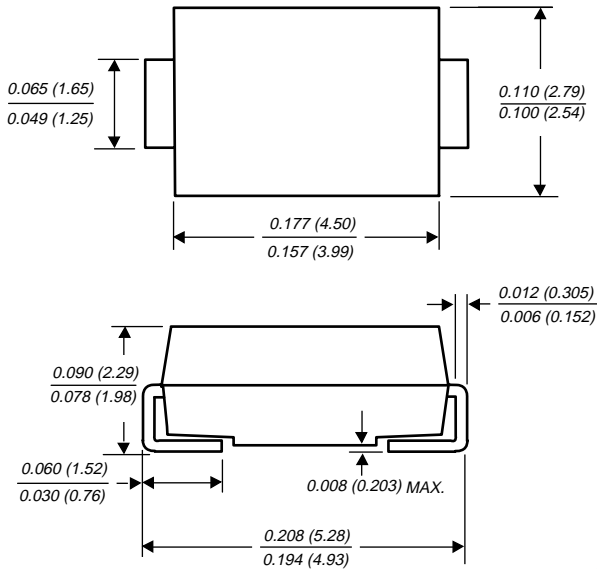


S1A THRU S1M

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	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 See Figure 1	I _(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L =110°C	I _{FSM}	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	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=0.5A, 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 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

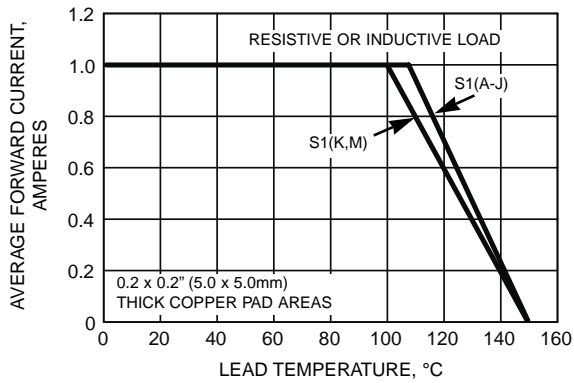


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

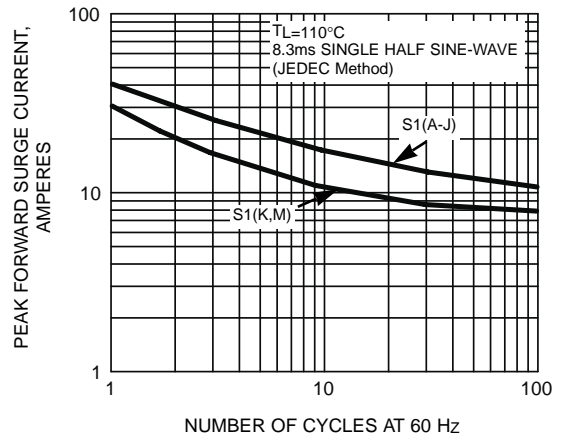


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

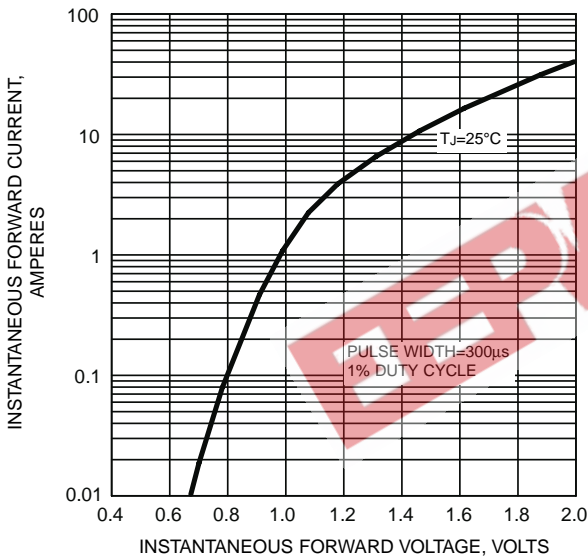


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

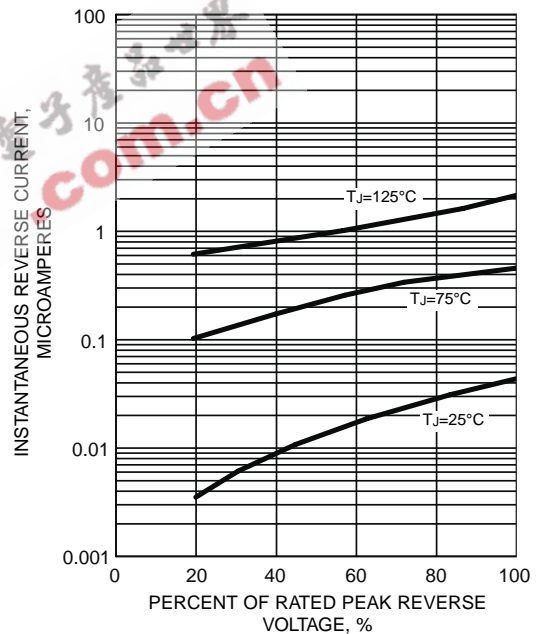


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

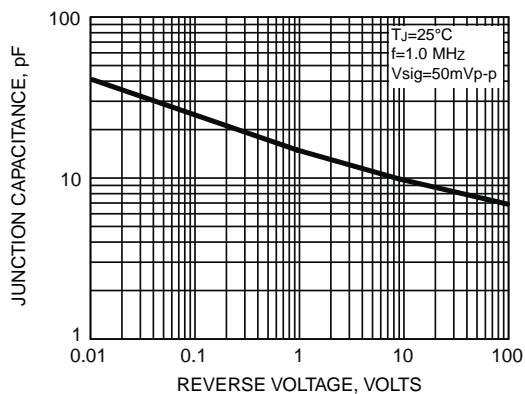


FIG. 6 - TRANSIENT THERMAL IMPEDANCE

