

### 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

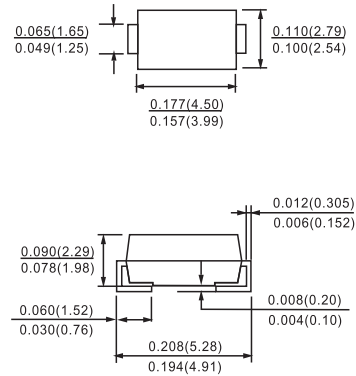
**Case:** JEDEC DO-214AC molded plastic over passivated chip

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.002 ounce, 0.064 gram

DO-214AC(SMA)



### 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	VDC	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) $T_L=110^\circ\text{C}$	$I_{FSM}$	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	$I_R$	$T_A=25^\circ\text{C}$ 1.0					5.0		$\mu\text{A}$
		$T_A=125^\circ\text{C}$ 50.0							
Typical reverse recovery time (NOTE 1)	$t_{rr}$	1.8							$\mu\text{s}$
Typical junction capacitance (NOTE 2)	$C_J$	12.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	75.0					85.0		$^\circ\text{C/W}$
	$R_{\theta JL}$	27.0					30.0		
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

**NOTES:**

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

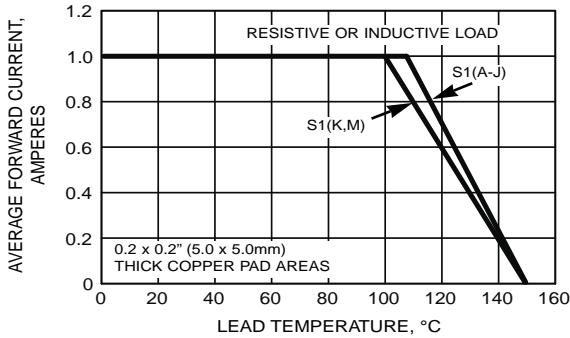


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

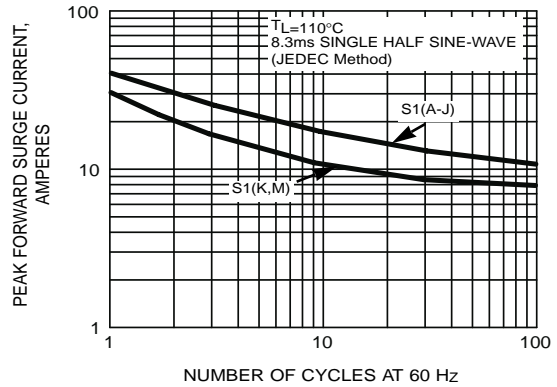


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

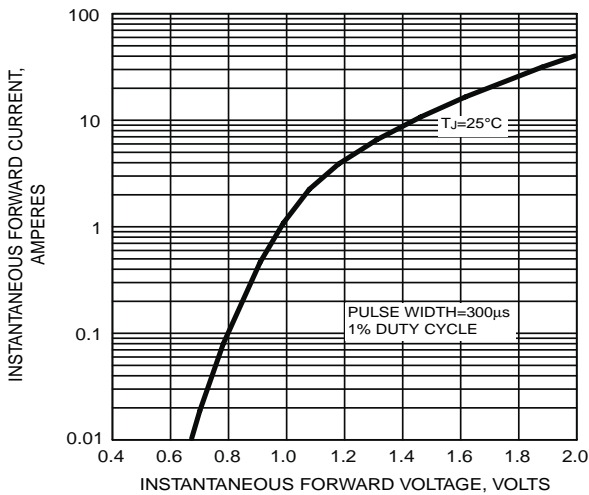


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

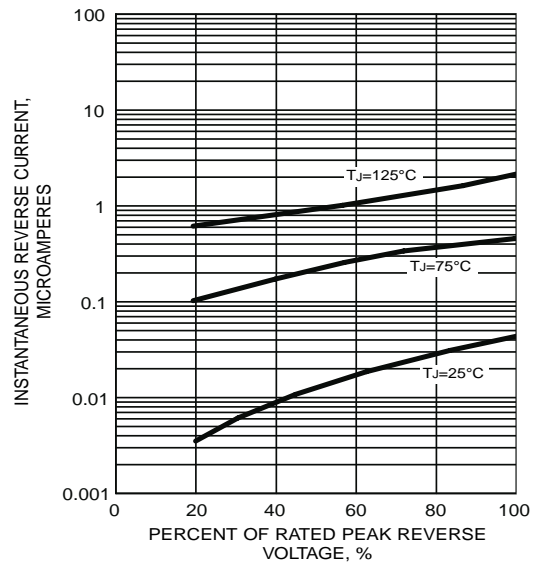


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

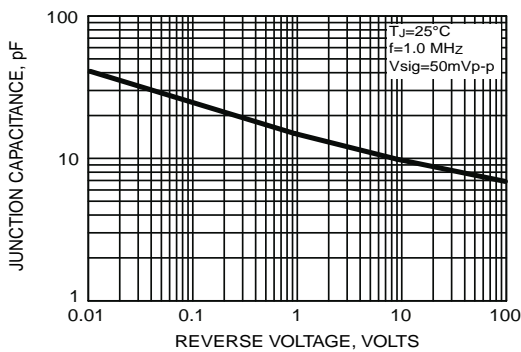


FIG. 6 - TRANSIENT THERMAL IMPEDANCE

