

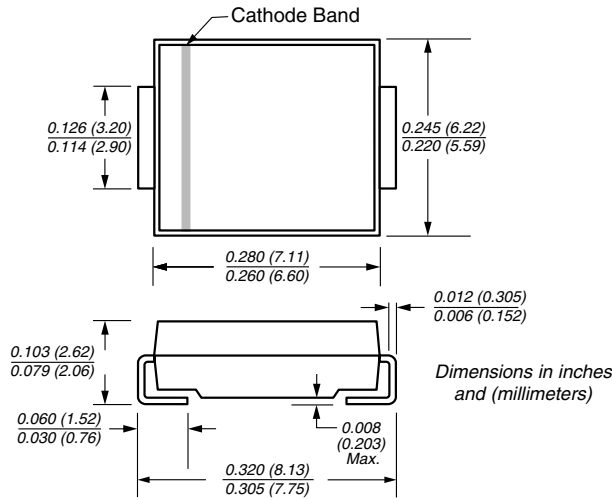
## Surface Mount Glass Passivated Rectifier

Reverse Voltage 50 to 1000 V

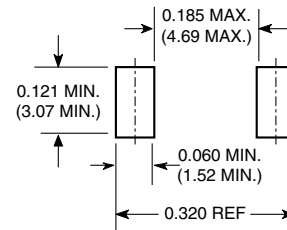
Forward Current 3.0 A



**DO-214AB (SMC)**



**Mounting Pad Layout**



### Mechanical Data

**Case:** JEDEC DO-214AB molded plastic body over glass passivated chip

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

High temperature soldering:  
260°C/10 seconds at terminals

**Polarity:** Color band denotes cathode end

**Weight:** 0.007 ounce, 0.25 gram

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mount applications
- Low profile package
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Unit
Device marking code		SA	SB	SD	SG	SJ	SK	SM	
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T <sub>L</sub> =103°C <sup>(1)</sup>	I <sub>F(AV)</sub>	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T <sub>L</sub> =75°C	I <sub>FSM</sub>	100							A
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	47 13							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

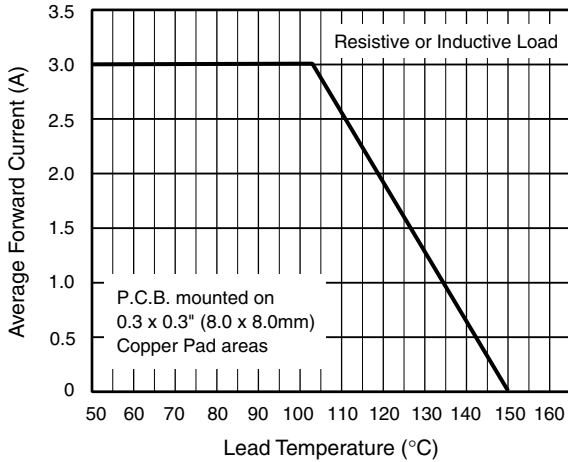
Maximum instantaneous forward voltage at 2.5A	V <sub>F</sub>	1.15	V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25°C T <sub>A</sub> =125°C	I <sub>R</sub>	10 250	μA
Typical reverse recovery time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	2.5	μs
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	60	pF

**Note:** (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

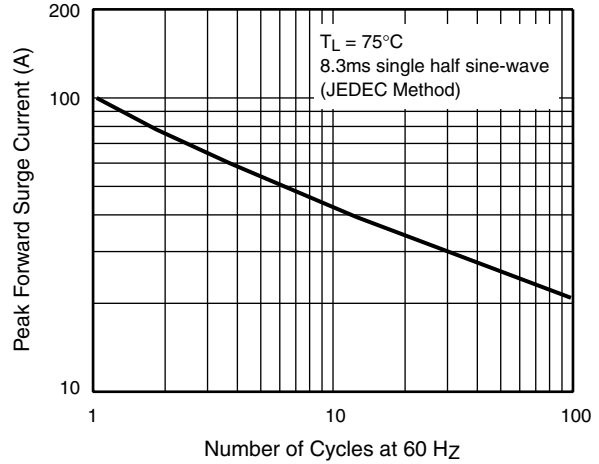
**Surface Mount Glass Passivated Rectifier**

**Ratings and Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

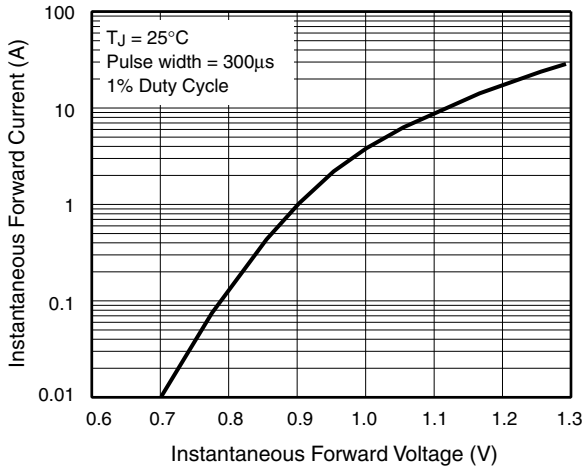
**Fig. 1 - Forward Current Derating Curve**



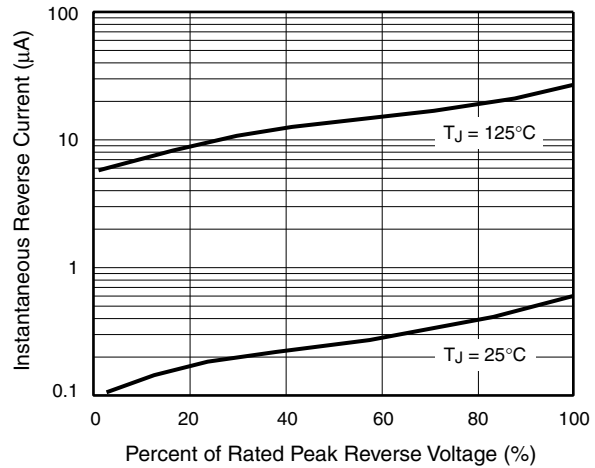
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



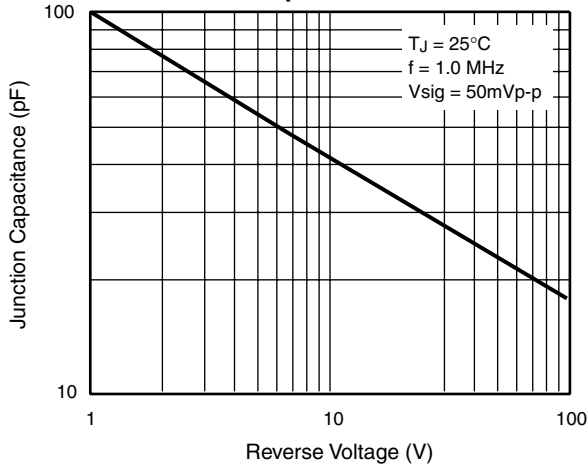
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**

