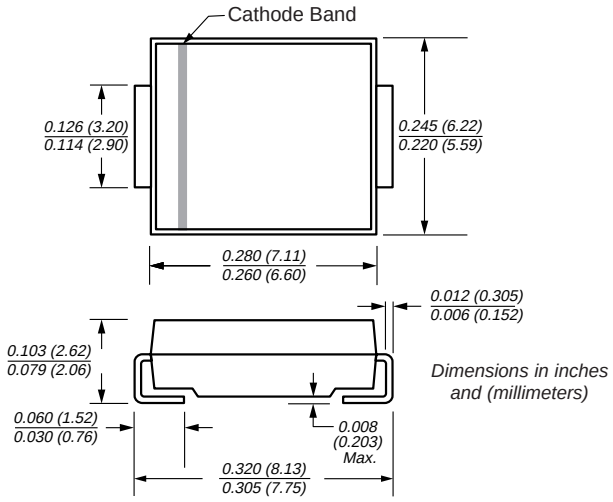
Vishay Semiconductors
formerly General Semiconductor

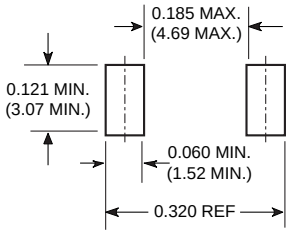
Surface Mount Glass Passivated Rectifier

DO-214AB (SMC)

Reverse Voltage 50 to 1000V
Forward Current 3.0A



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 oz., 0.25 g

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_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L=103°C (1)	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T_L=75°C	I_{FSM}	100							A
Typical thermal resistance (1)	$R_{\Theta JA}$ $R_{\Theta JL}$	47 13							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 2.5A		V_F	1.15	V
Maximum DC reverse current at rated DC blocking voltage	T_A=25°C T_A=125°C	I_R	10 250	µA
Typical reverse recovery time at I_F=0.5A, I_R=1.0A, I_{rr}=0.25A		t_{rr}	2.5	µs
Typical junction capacitance at 4.0V, 1MHz		C_J	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

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

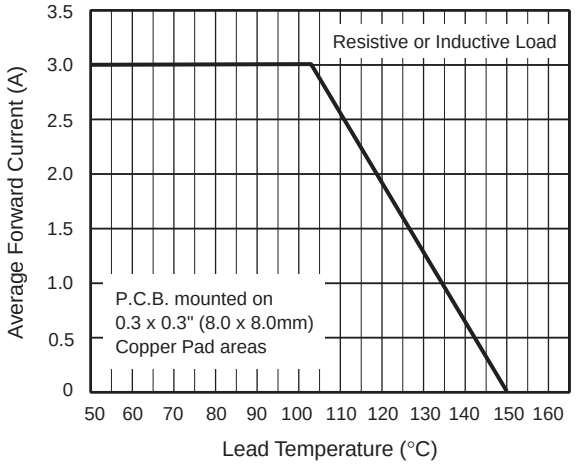


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

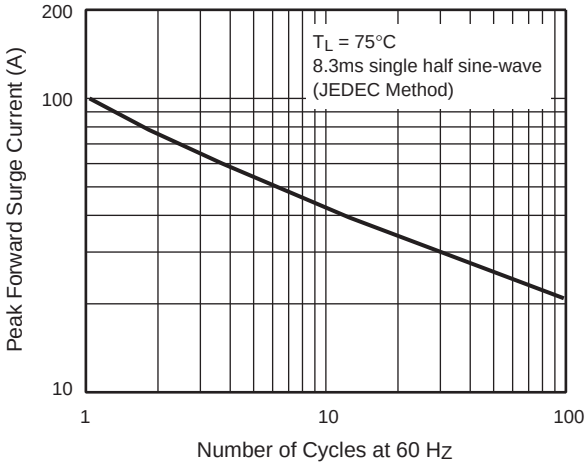


Fig. 3 - Typical Instantaneous Forward Characteristics

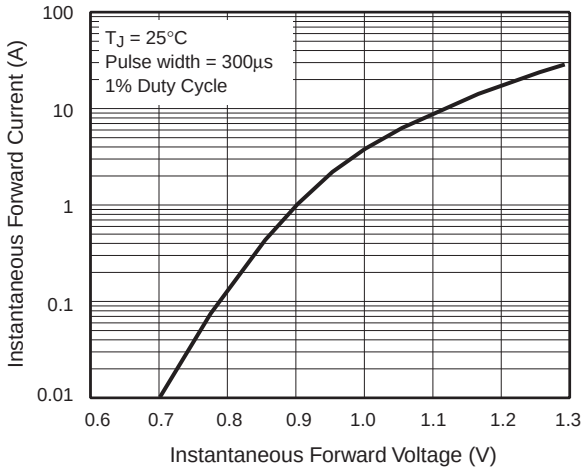


Fig. 4 - Typical Reverse Characteristics

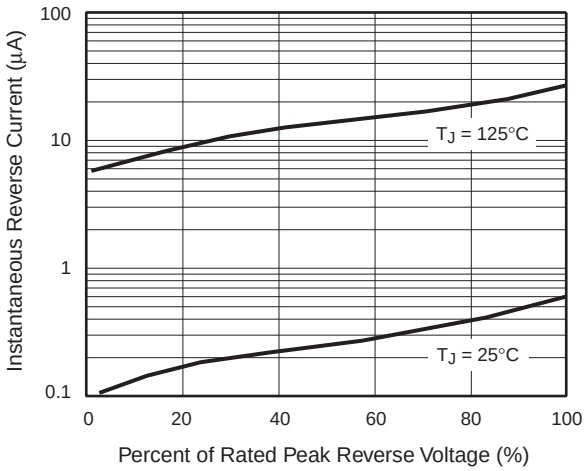


Fig. 5 - Typical Junction Capacitance

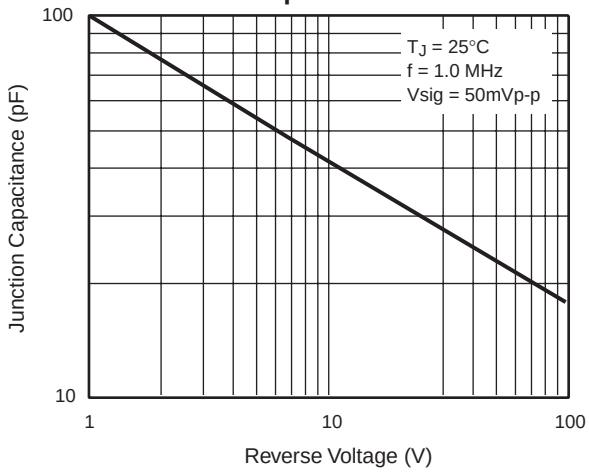


Fig. 6 - Typical Transient Thermal Impedance