

S3A THRU S3M

SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER



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HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 3.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Low forward voltage drop
- High temperature soldering : 250°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, DO-214AB(SMC)

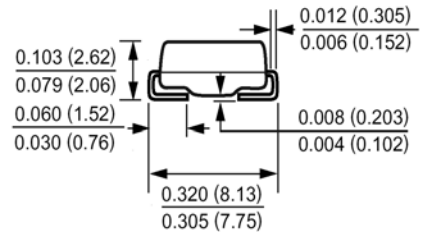
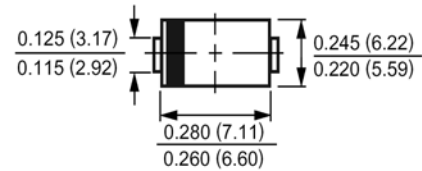
Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 16mm tape per EIA STD RS-481

Weight: 0.007 ounce, 0.21 gram

DO-214AB(SMC)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Units
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 at T _L =75℃	I _(AV)	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	100							Amp
Maximum Forward Voltage at 3.0A	V _F	1.1							Volts
Maximum Reverse Current at T _A =25℃ at Rated DC Blocking Voltage T _A =125℃	I _R	5.0 250							μAmp
Typical Junction Capacitance (Note 1)	C _J	53							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	47							℃/W
	R _{θJL}	13							
Maximum Reverse Recovery Time (Note 3)	T _{RR}	2.5							μS
Operating Junction Temperature Range	T _J	-55 to +150							℃
Storage Temperature Range	T _{stg}	-55 to +150							℃

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- 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

3- Reverse Recovery Test Conditions: $I_F=5\text{A}$, $I_R=1\text{A}$, $I_{RR}=25\text{A}$.

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RATINGS AND CHARACTERISTIC CURVES

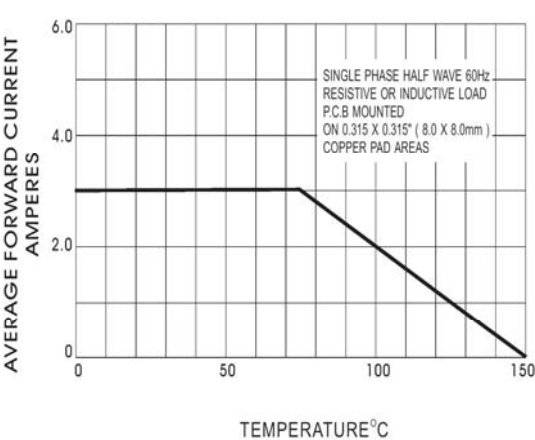


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

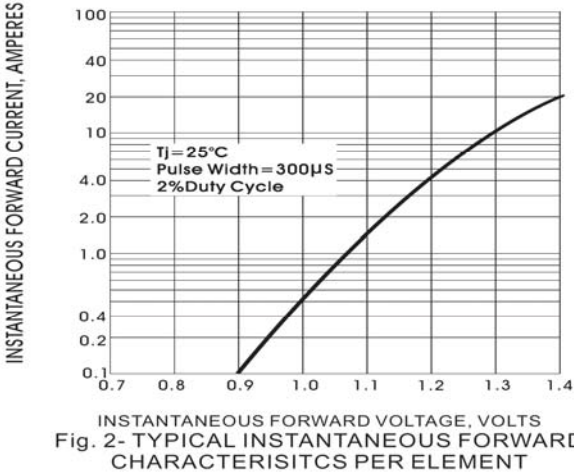


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

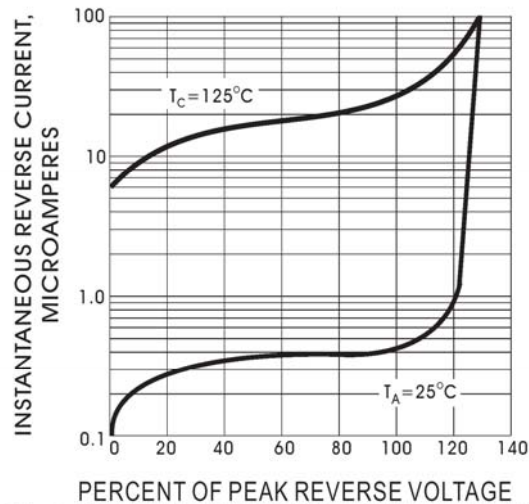


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

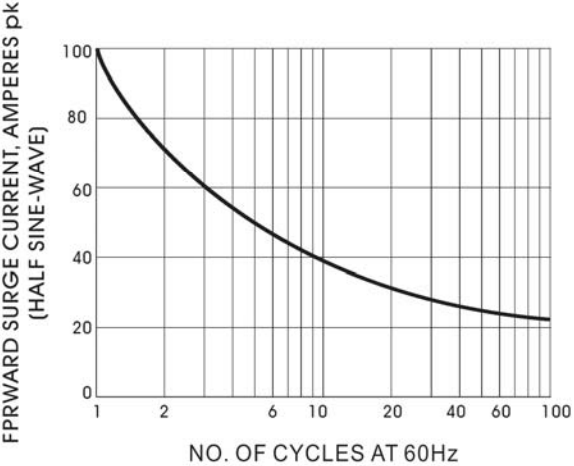


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

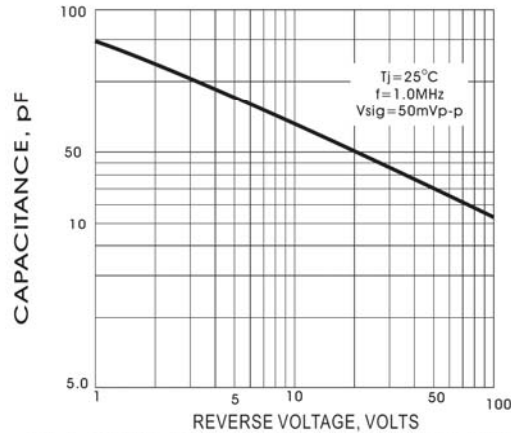


Fig. 5- TYPICL JUNCTION CAPACITANCE PER ELEMENT