

SS52A THRU SS510A

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 V

Forward Current - 5 A

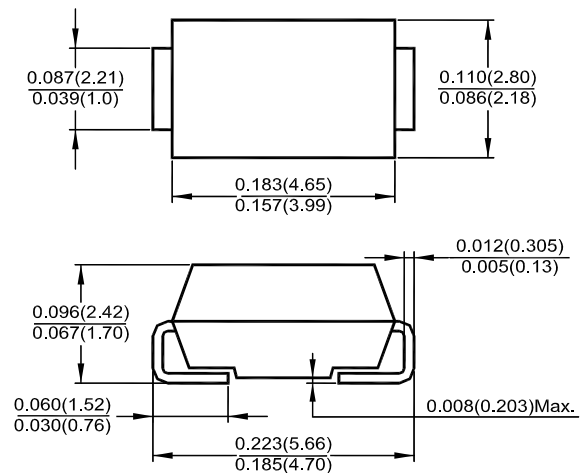
Features

- Metal-semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

- **Case:** molded plastic
- **Polarity:** Color band denotes cathode

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

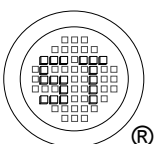
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20 %.

Parameter	Symbol	SS52A	SS5205A	SS54A	SS55A	SS56A	SS58A	SS510A	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	25	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	20	28	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Lead Lengths at $T_L = 95\text{ }^\circ\text{C}$	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Maximum Forward Voltage at 3 A DC	V_F	0.38	0.39	0.51	0.6		0.72		V
Maximum DC Reverse Current $T_j = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_j = 100\text{ }^\circ\text{C}$	I_R	0.5 50							mA
Typical Junction Capacitance ¹⁾	C_j	500			350				pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	15			10				$^\circ\text{C/W}$
Operating Temperature Range	T_j	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V DC.

²⁾ Thermal resistance junction to ambient.



SEMTECH ELECTRONICS LTD.



SS52A THRU SS510A

FIG. 1 – FORWARD CURRENT DERATING CURVE

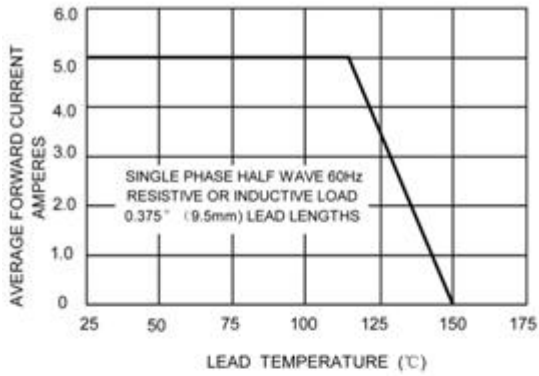


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

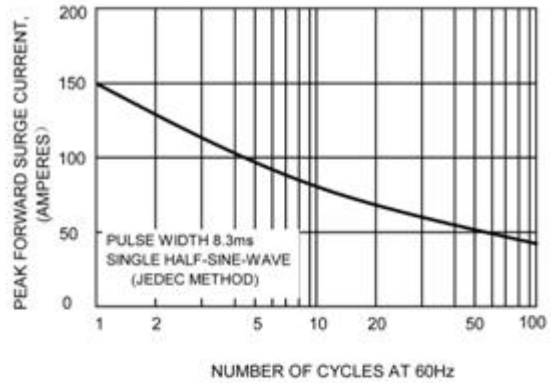


FIG.3 – TYPICAL JUNCTION CAPACITANCE

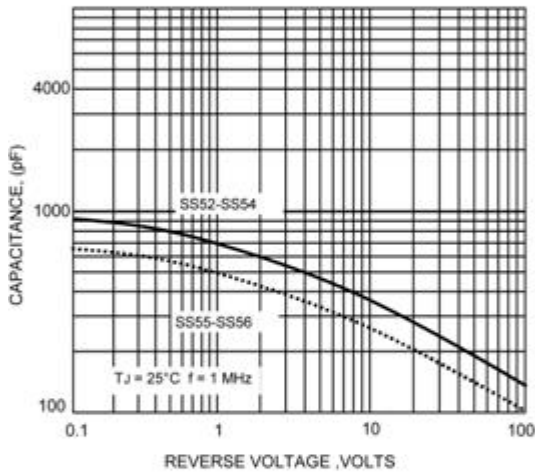


FIG.4-TYPICAL FORWARD CHARACTERISTICS

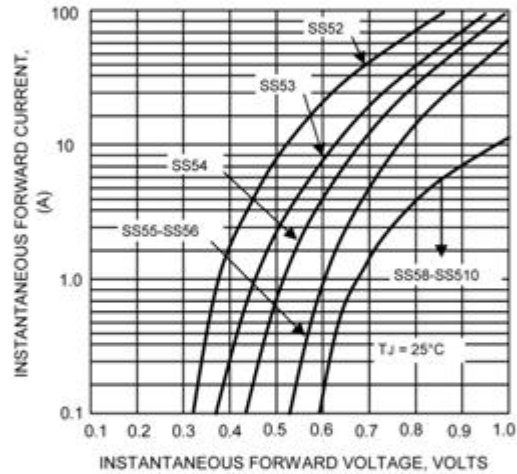
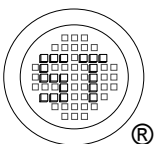
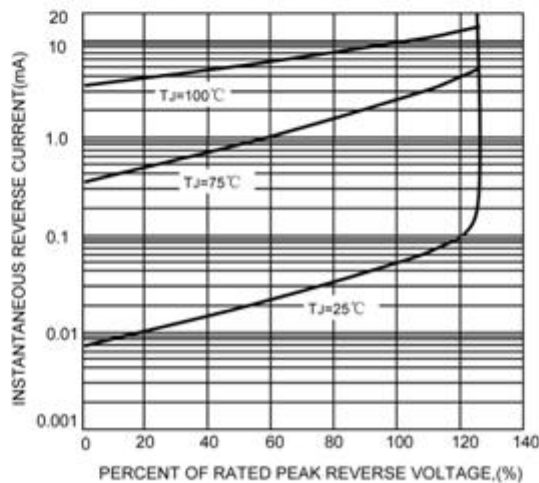


FIG.2-TYPICAL REVER CHARACTERISTICS



SEMTECH ELECTRONICS LTD.



ISO/TS 16949 : 2009
Certificate No. 16073000



ISO14001 : 2004
Certificate No. 7116



ISO 9001 : 2008
Certificate No. 5070410



BS-OHSAS 18001 : 2007
Certificate No. 7116



IECQ QC 080000
Certificate No. PRC-HSP4-148-1