SS52A THRU SS510A

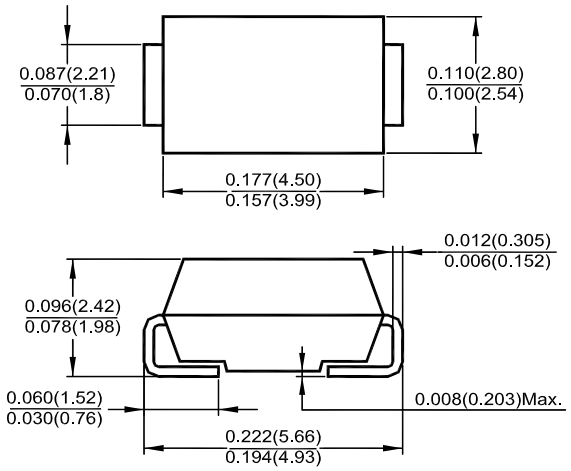
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 V
Forward Current - 5 A

Features

- Metal-semiconductor junction with gard 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

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Mechanical Data

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

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 °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 °C at Rated DC Blocking Voltage T_j = 100 °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				°C/W
Operating Temperature Range	T_j	- 55 to + 150							°C
Storage Temperature Range	T_{stg}	- 55 to + 150							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 V DC.
[2] Thermal resistance junction to ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

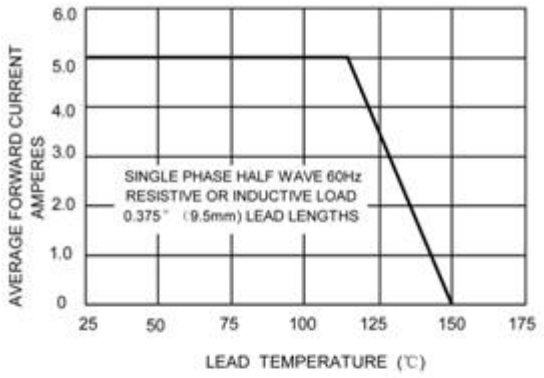


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

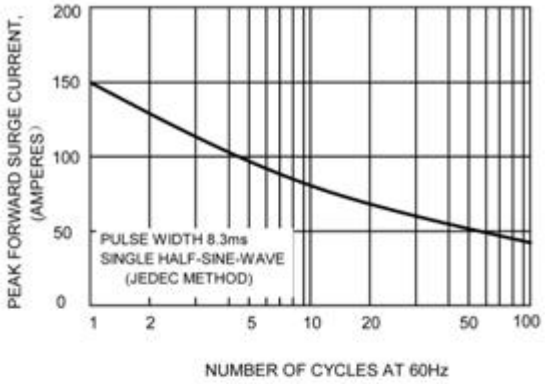


FIG.3 – TYPICAL JUNCTION CAPACITANCE

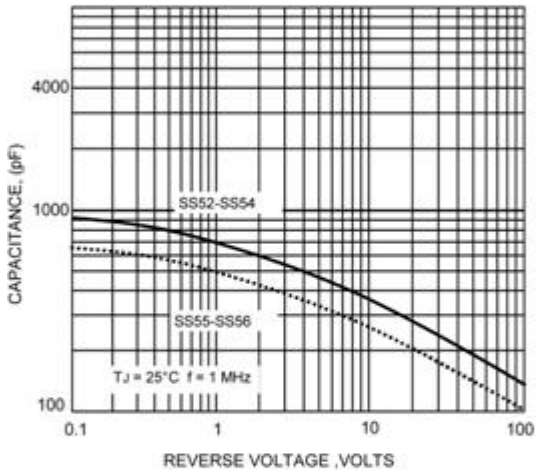


FIG.4-TYPICAL FORWARD CHARACTERISTICS

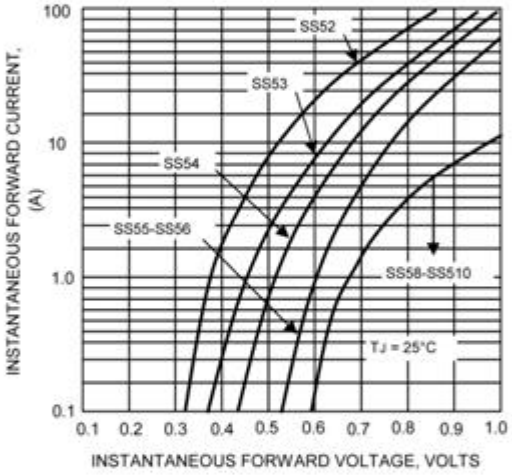


FIG.2-TYPICAL REVER CHARACTERISTICS