SS12 THRU SS110

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

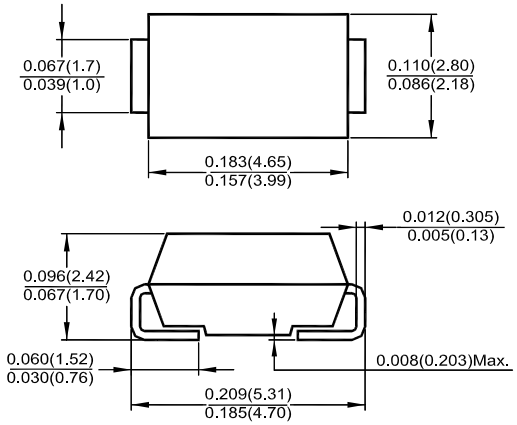
Reverse Voltage - 20 to 100 V

Forward Current - 1 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Built-in strain relief, ideal for automated placement
- Low power loss, high efficiency.
- High forward surge current capability

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic body
- **Terminals:** leads solderable per MIL-STD-750, Method 2026
- **Polarity:** color band denotes cathode end

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbols	SS12	SS13	SS14	SS15	SS16	SS18	SS110	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	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	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	40							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	0.55			0.75		0.85		V
Maximum DC Reverse Current T_A = 25 °C	I_R	0.5							mA
at Rated DC Blocking Voltage T_A = 100 °C		6			5				
Typical Junction Capacitance [1]	C_J	110			90				pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	88							°C/W
Operating Junction Temperature Range	T_J	- 65 to + 125			- 65 to + 150				°C
Storage Temperature Range	T_S	- 65 to + 150							°C

[1] Measured at 1MHz and applied reverse voltage of 4 V D.C.

[2] P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

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FIG.1-FORWARD CURRENT DERATING CURVE

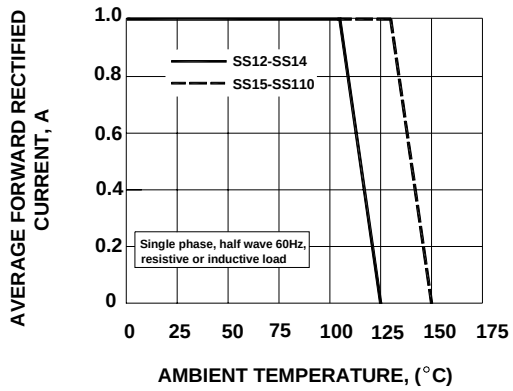

Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

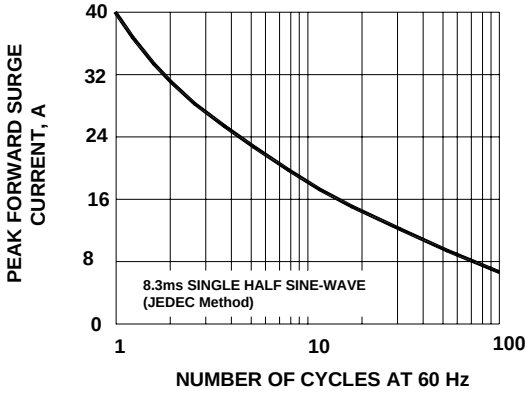

Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

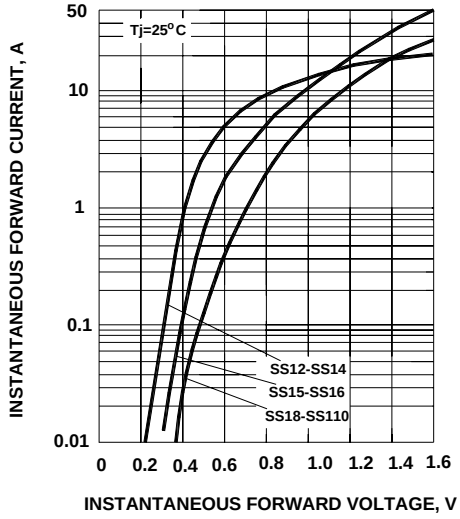

Fig.4- TYPICAL REVERSE CHARACTERISTICS

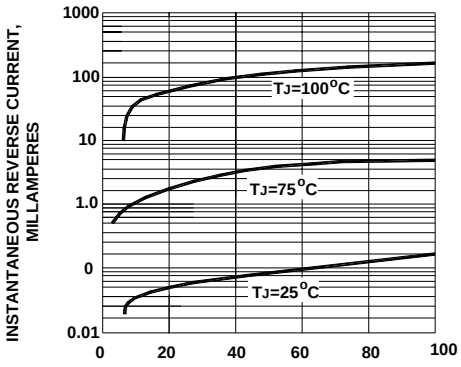

Fig.5- TYPICAL JUNCTION CAPACITANCE

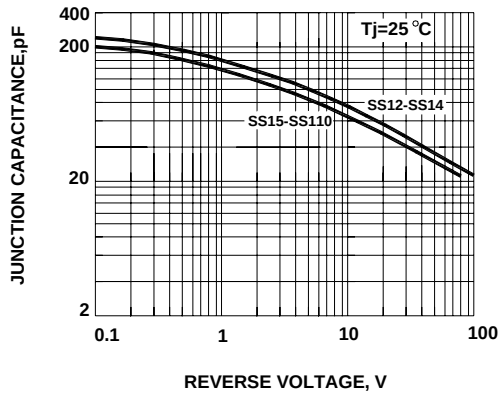

Fig.6- TYPICAL TRANSIENT THERMAL IMPEDANCE