

# SS12 THRU SS110

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 100 Volts

Forward Current - 1.0 Ampere

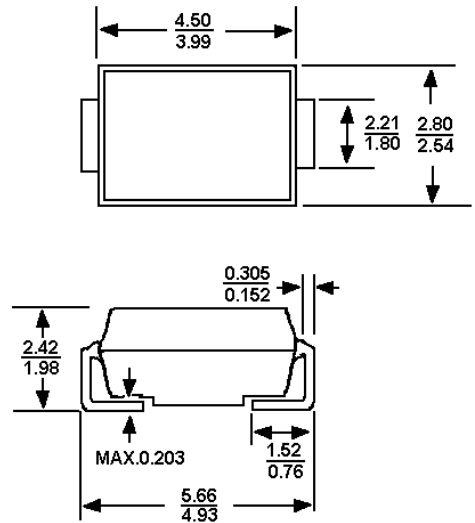
### Features

- \* 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
- \* High temperature soldering guaranteed: 250/10sec at terminals

### Mechanical Data

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

SMA DO-214AC



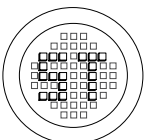
Dimensions in mm

### 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%

	Symbols	SS12	SS13	SS14	SS15	SS16	SS18	SS110	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current at $T_L$ (Fig.1)	$I_{(AV)}$	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40							Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.45	0.55	0.70			0.85	Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	0.5							mA
		6.0			5.0				mA
Typical junction capacitance(Note 1)	$C_J$	110			90				pF
Typical thermal resistance (Note 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

- Notes: (1). Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 (2). P.C.B. mounted with 0.230.2" (5.0 35.0mm) copper pad areas.



®

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FIG.1-FORWARD CURRENT DERATING CURVE

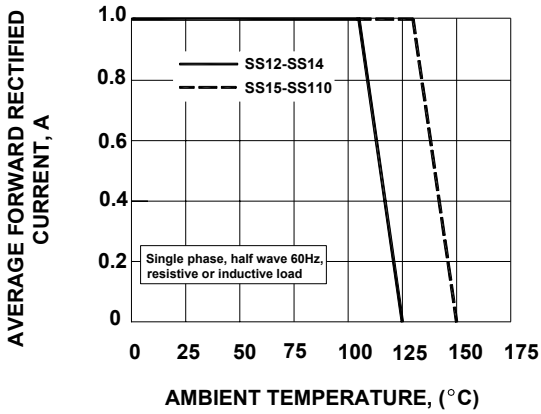


Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

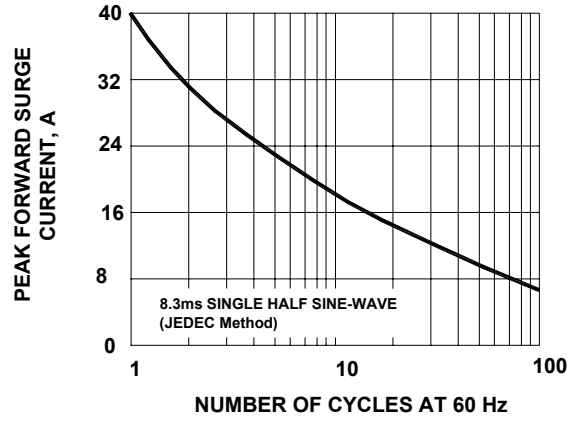


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

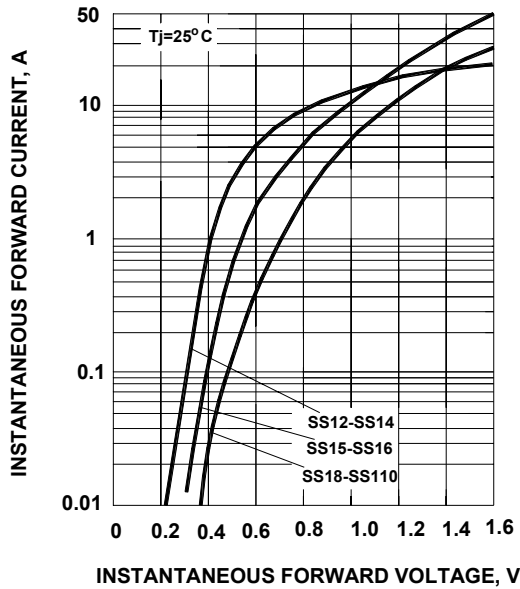


Fig.4- TYPICAL REVERSE CHARACTERISTICS

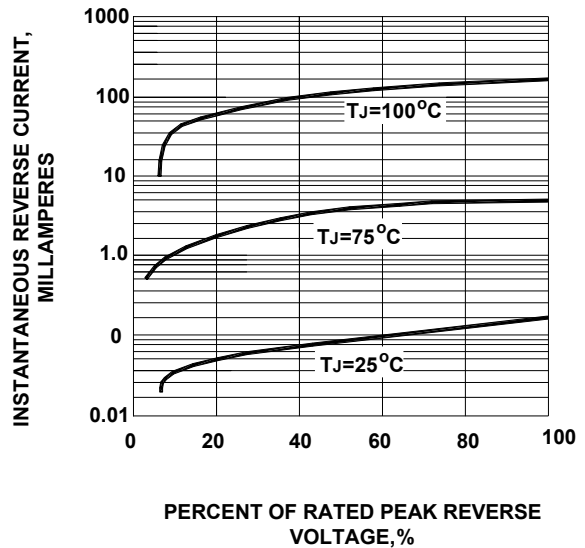


Fig.5- TYPICAL JUNCTION CAPACITANCE

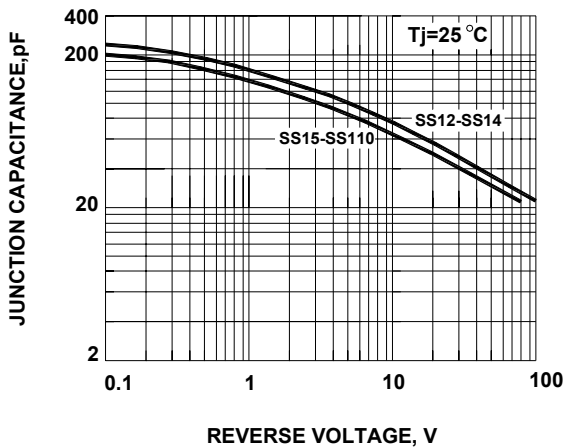
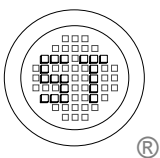
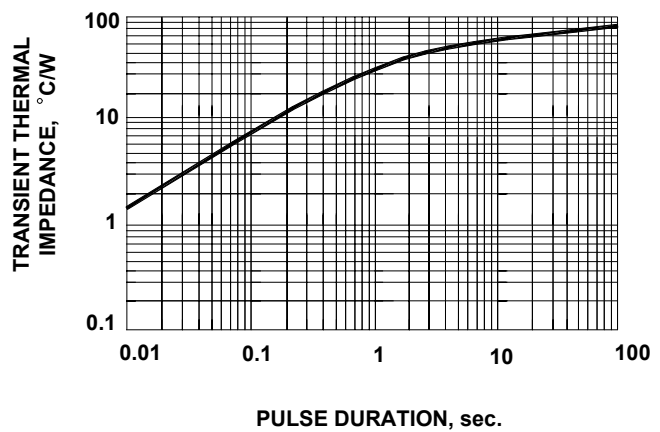
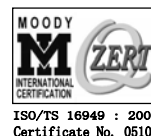


Fig.6- TYPICAL TRANSIENT THERMAL IMPEDANCE



**SEMTECH ELECTRONICS LTD.**

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ISO/TS 16949 : 2002  
Certificate No. 05103

ISO 14001  
Certificate No. 7116

ISO 9001 : 2000  
Certificate No. 050108-AE-02-04

Dated : 05/04/2005