



# SS12~SS16

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**Voltage**

**20~60 V**

**Current**

**1 A**

### Features

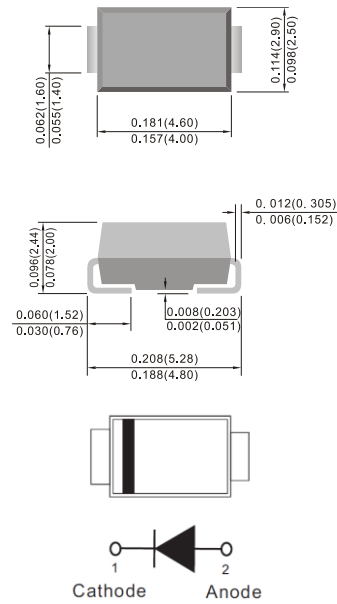
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- For surface mounted applications in order to optimize board space
- Low power loss, High efficiency
- High surge capacity
- High current capacity, low  $V_F$
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive).
- Green molding compound as per IEC61249 Std..(Halogen Free)

### Mechanical Data

- Case: SMA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging : 12mm tape (EIA-481)
- Approx. Weight: 0.0023 ounces, 0.0679 grams

**SMA**

**Unit: inch(mm)**



### Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	SS12	SS13	SS14	SS15	SS16	UNIT
Maximum repetitive peak reverse voltage		$V_{RRM}$	20	30	40	50	60	V
Maximum rms voltage		$V_{RMS}$	14	21	28	35	42	V
Maximum dc blocking voltage		$V_R$	20	30	40	50	60	V
Maximum average forward current		$I_{F(AV)}$	1					A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load		$I_{FSM}$	30					A
Maximum forward voltage at 1A		$V_F$	0.5		0.7			V
Maximum dc reverse current at rated dc blocking voltage (Note 1)	$T_J=25^{\circ}\text{C}$	$I_R$	0.2		0.1			mA
	$T_J=100^{\circ}\text{C}$		6		5			
Typical Junction Capacitance ( $V_R=4\text{V}$ $f=1\text{MHZ}$ )		$C_J$	70		50			pF
Typical thermal resistance	(Note 2)	$R_{\theta JL}$	28					$^{\circ}\text{C/W}$
	(Note 2)	$R_{\theta JA}$	88					
	(Note 3)	$R_{\theta JA}$	150					
Operating junction temperature range		$T_J$	-55 to +125		-55 to +150			$^{\circ}\text{C}$
Storage temperature range		$T_{STG}$	-55 to +150					$^{\circ}\text{C}$

Note : 1. Short duration pulse test used to minimize self-heating effect.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

3. Mounted on a FR4 PCB, single-sided copper, mini pad.



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## TYPICAL CHARACTERISTIC CURVES

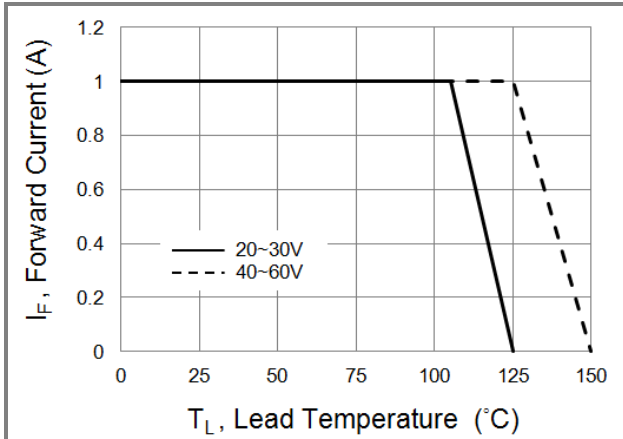


Fig.1 Forward Current Derating Curve

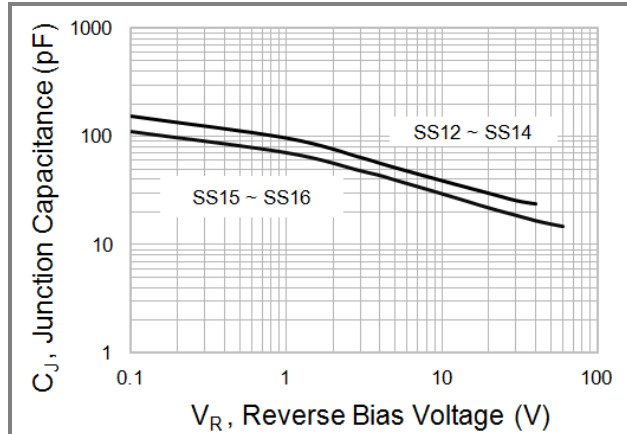


Fig.2 Typical Junction Capacitance

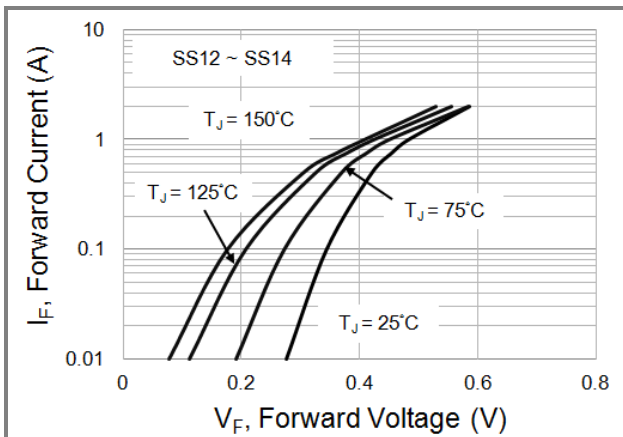


Fig.3 Typical Forward Characteristics

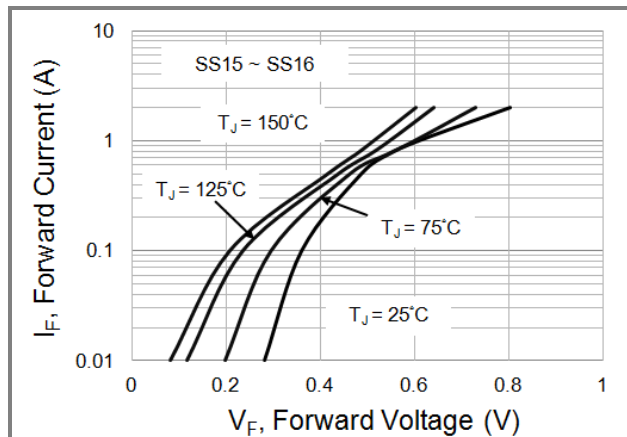


Fig.4 Typical Forward Characteristics

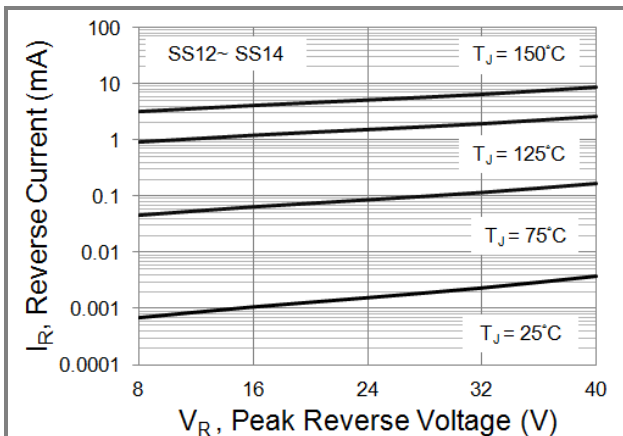


Fig.5 Typical Reverse Characteristics

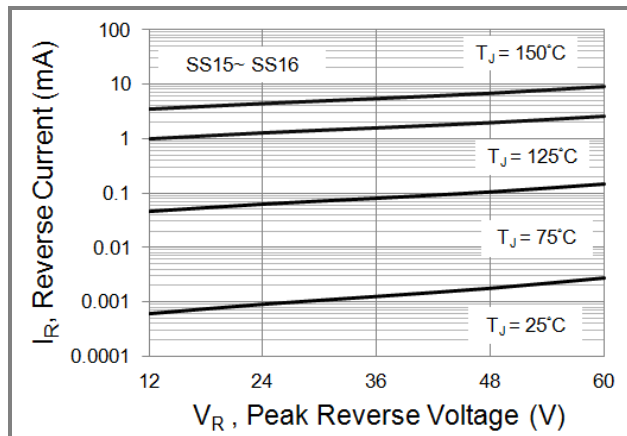


Fig.6 Typical Reverse Characteristics



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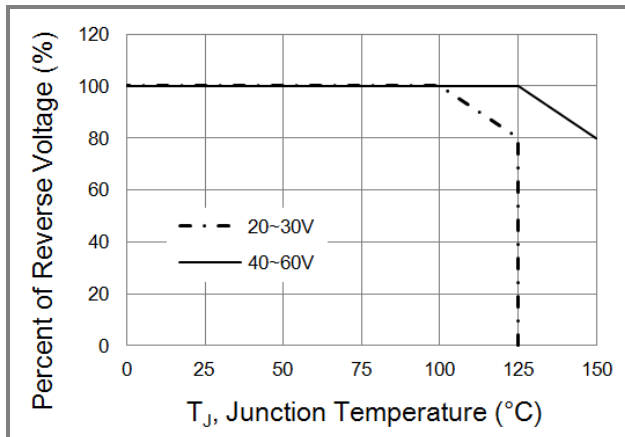


Fig.7 Operating Temperature Derating Curve



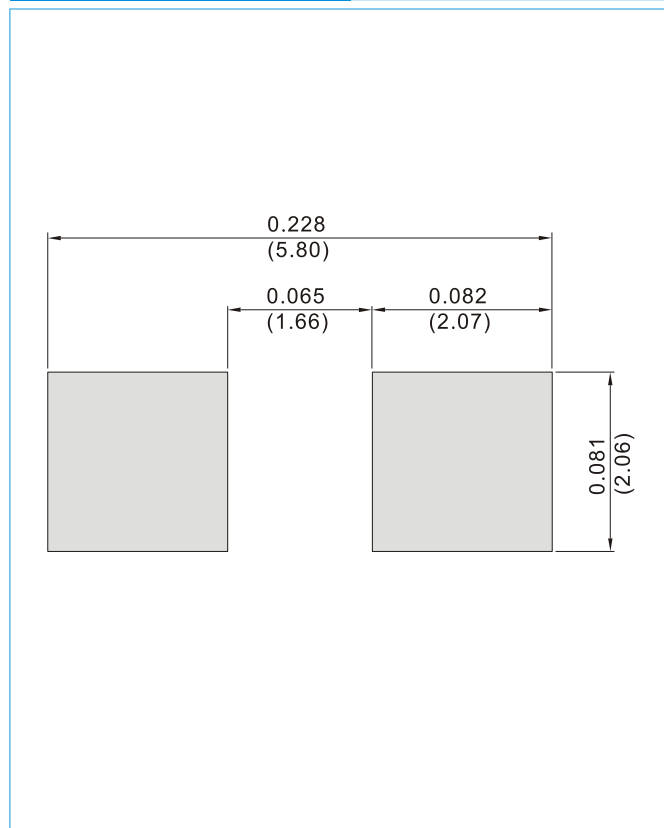
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## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SS12_R1_00001	SMA	1,800pcs / 7" reel	SS12	Halogen free
SS12_R2_00001	SMA	7,500pcs / 13" reel	SS12	Halogen free

## Mounting Pad Layout

**SMA / DO-214AC** Unit : inch(mm)





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