

# Schottky Diode

## **SS13**

30V / 1A

# DATASHEET

from

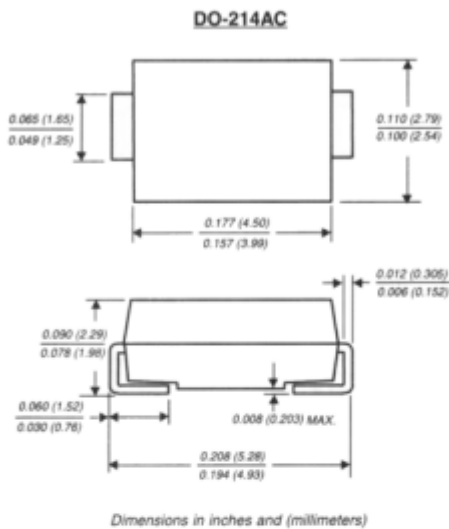
[www.web-bcs.com](http://www.web-bcs.com)

OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# SS12 THRU SS16

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**  
**Reverse Voltage - 20 to 60 Volts      Forward Current - 1.0 Ampere**



## FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability classification 94V-0
- ◆ For surface mount applications
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds on terminals



## MECHANICAL DATA

**Case:** JEDEC DO-214AC molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Weight:** 0.002 ounce 0.064 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

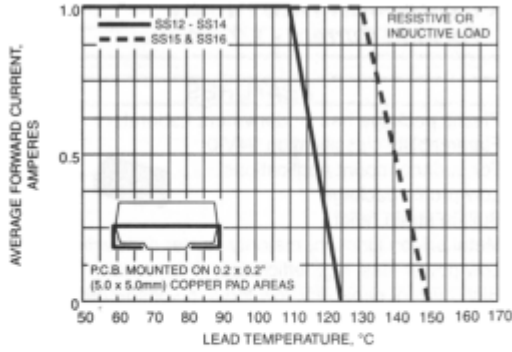
	SYMBOLS	SS12	SS13	SS14	SS15	SS16	UNITS
Device marking code		S2	S3	S4	S5	S6	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	Volts
Maximum average forward rectified current at T <sub>L</sub> (SEE FIG. 1)	I <sub>(AV)</sub>	1.0					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	40.0					Amps
Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V <sub>F</sub>	0.50			0.75		Volts
Maximum DC reverse current (NOTE 1) at rated DC blocking voltage	I <sub>R</sub>	0.2					mA
		6.0			5.0		
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub>	88.0					°C/W
	R <sub>θJL</sub>	28.0					
Operating junction temperature range	T <sub>J</sub>	-65 to +125			-65 to +150		°C
Storage temperature range	T <sub>STG</sub>	-65 to +150					°C

**NOTES:**

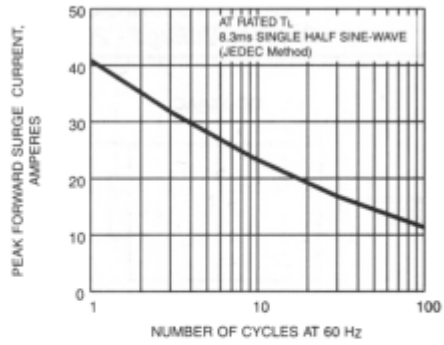
- (1) Pulse test: 300µs pulse width, 1% duty cycle
- (2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

**RATINGS AND CHARACTERISTIC CURVES SS12 THRU SS16**

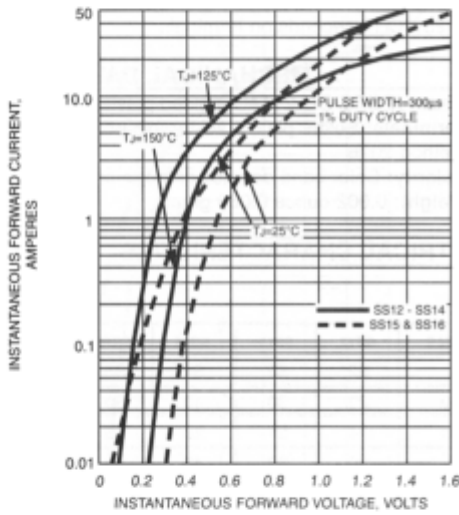
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



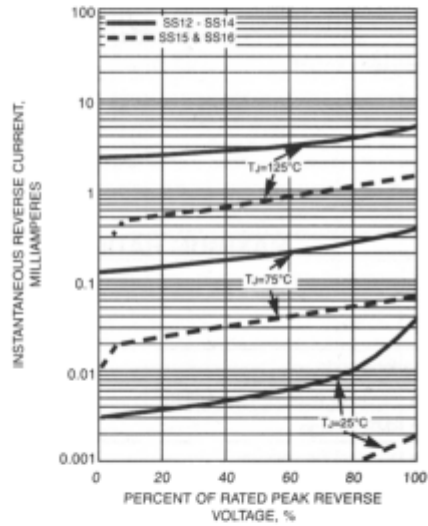
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

