

Schottky Diode

SS12

20V / 1A

DATASHEET

from

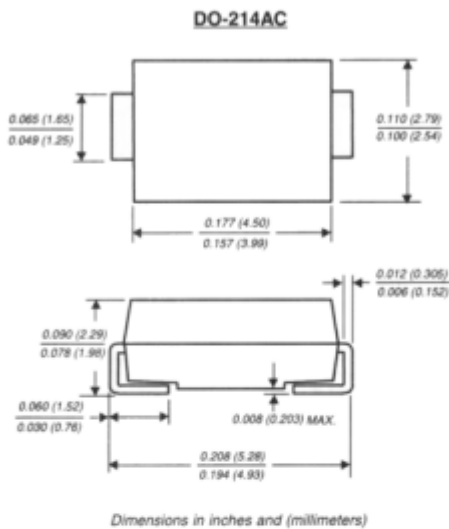
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OEM – General Semiconductor

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 _{RRM}	20	30	40	50	60	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	Volts
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	Volts
Maximum average forward rectified current at T _L (SEE FIG. 1)	I _(AV)	1.0					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40.0					Amps
Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V _F	0.50			0.75		Volts
Maximum DC reverse current (NOTE 1) at rated DC blocking voltage	I _R	0.2					mA
		6.0			5.0		
Typical thermal resistance (NOTE 2)	R _{θJA}	88.0					°C/W
	R _{θJL}	28.0					
Operating junction temperature range	T _J	-65 to +125			-65 to +150		°C
Storage temperature range	T _{STG}	-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

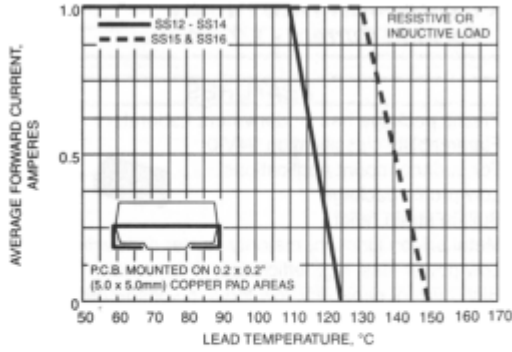


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

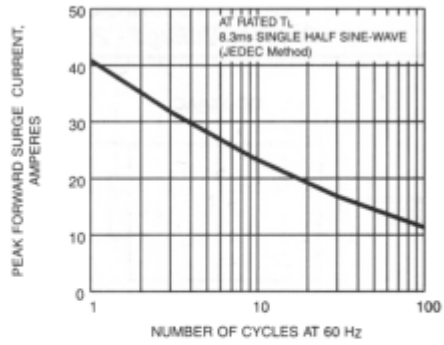


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

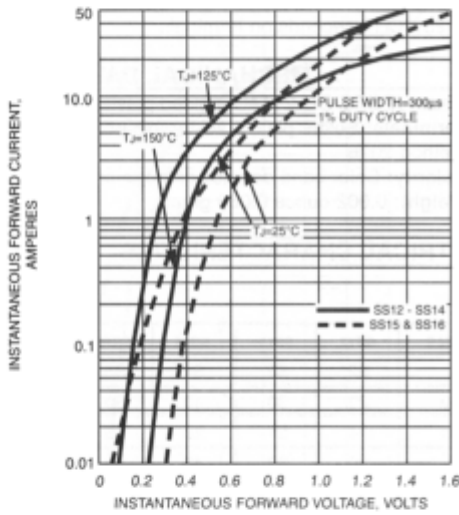


FIG. 4 - TYPICAL CHARACTERISTICS

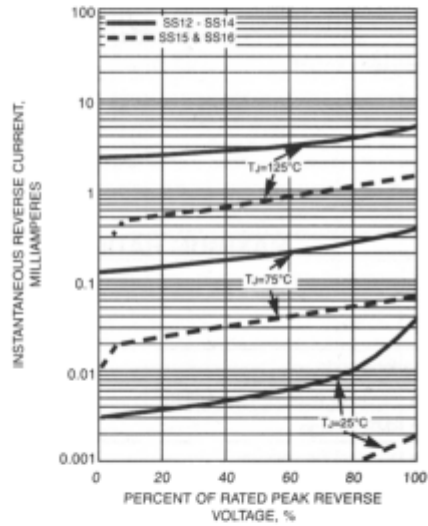


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

