

# SK12 THRU S110

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE:** 20 to 100 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE



### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- High current capacity
- Built-in strain relief
- Low profile package
- Metal to silicon rectifier, majority carrier conduction
- High surge capacity
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

Case: Molded plastic, DO-214AA(SMB)

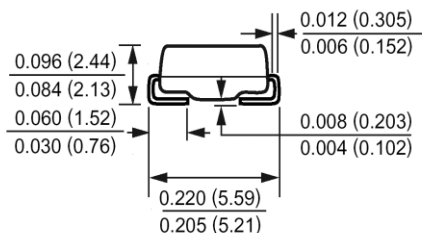
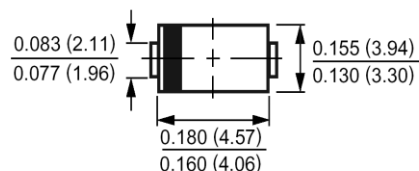
Terminals: Axial leads, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 12mm tape per EIA STD RS-481

Weight: 0.003 ounce, 0.093 gram

DO-214AA(SMB)



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	SK12	SK13	SK14	SK15	SK16	SK18	SK19	S110	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	64	71	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	90	100	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)	$I_{FSM}$	30								Amp
Maximum Forward Voltage at 1.0A (Note 1)	$V_F$	0.50			0.70		0.85			Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	$I_R$	0.5								mAmp
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	90								°W
	$R_{\theta JL}$	35								
Operating Junction Temperature Range	$T_J$	-55 to +125								
Storage Temperature Range	$T_{stg}$	-55 to +150								

### 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

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### RATINGS AND CHARACTERISTIC CURVES

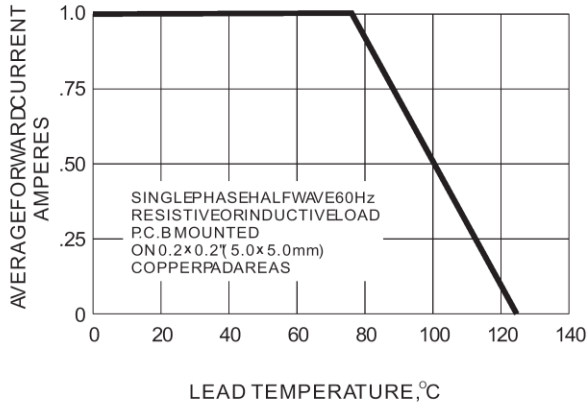


Fig.1-FORWARD CURRENT DERATING CURVE

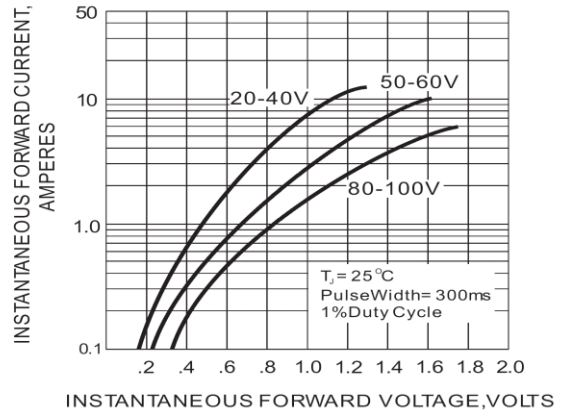


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

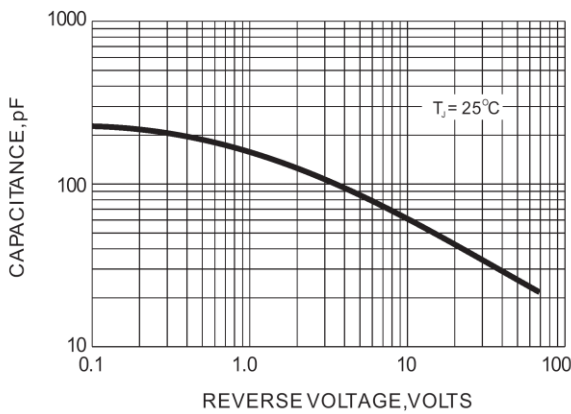


Fig.3-TYPICAL JUNCTION CAPACITANCE

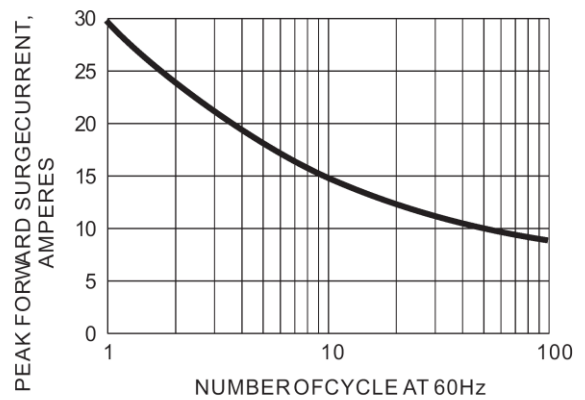


Fig.4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT