

SK52C thru SK510C

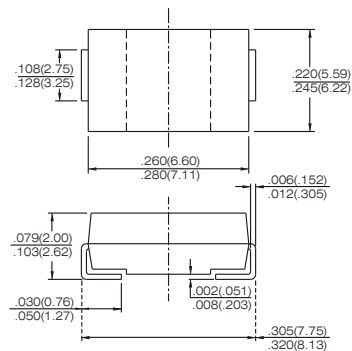
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SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE - 20 TO 1000 VOLTS CURRENT - 5.0 AMPERES



SMC/DO-214AB



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mount applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High surge capability
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed 260°C/10 seconds at terminals
- High temperature soldering : 260°C/10 seconds at terminals
- Pb free product at available : 99% Sn above meet Rohs environment substance directive request

MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes positive end (cathode)
Standard Package : 16mm tape (EIA STD EIA-481)
Weight : 0.007 ounce, 0.21gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified
Resistive or inductive load

	SYMBOL	SK52C	SK53C	SK54C	SK55C	SK56C	SK58C	SK59C	SK510C	UNITS
Maximum Repetitive 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	63	70	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 Figure 1)	I _(AV)	5.0								Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	100								Amps
Maximum Instantaneous Forward Voltage at 5.0A (Note 1)	V _F	0.5			0.75		0.85			Volts
Maximum DC Reverse Current (NOTE 1) T _A =25°C at Rated DC Blocking Voltage T _A =100°C	I _R	0.5 20								mA
Maximum Thermal Resistance (NOTE 2)	R _θ JL R _θ JA	17 55								°C / W
Operating at Storag Temprature Range T _J	T _J	-50 to +150								°C
Storage Temperature Range	T _{STG}	-55 to +150								°C

NOTES :

1. Pulse test with $p_w=300 \mu s$, 2% duty cycle
2. Mounted on P.C.B with $14mm^2$ (0.13mm thick) copper pad areas

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RATINGS AND CHARACTERISTIC CURVES S52C THRU SK510C

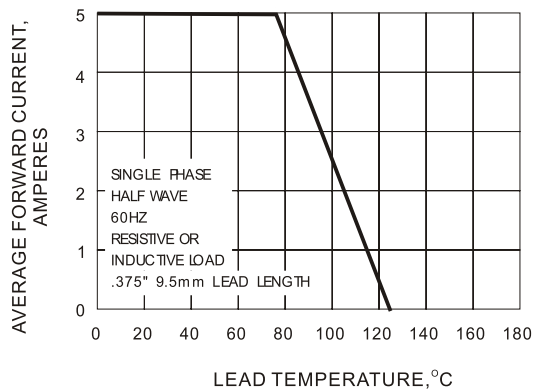


Fig. 1 - FORWARD CURRENT DERATING CURVE

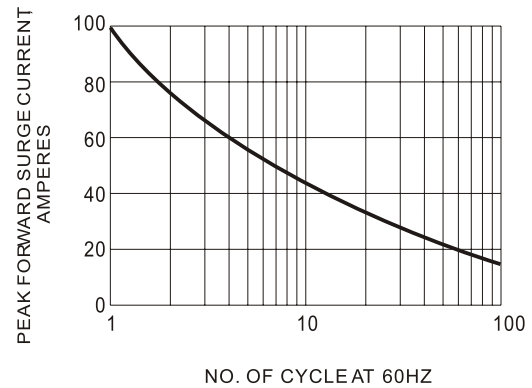


Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

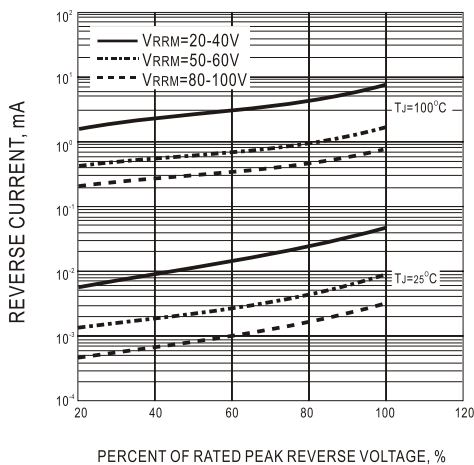


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

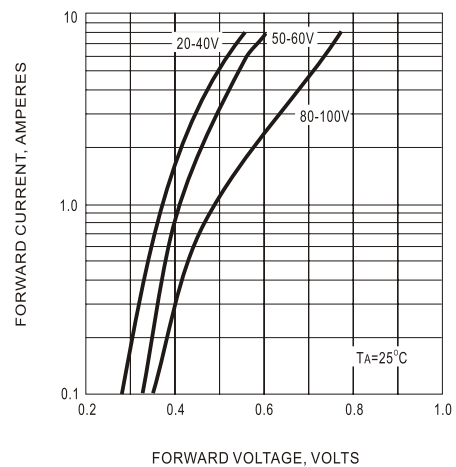


Fig. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS