DATA SHEET

SEMICONDUCTOR

SK52-A THRU SK510-A

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

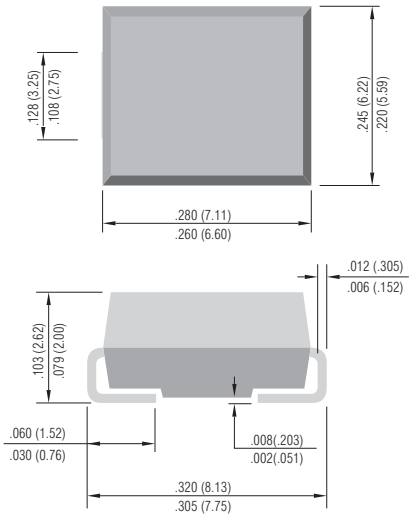
VOLTAGE- 20 to 100 Volts CURRENT- 5.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss,high efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C /10 seconds at terminals
- AEC-Q101 qualified

SMC / DO-214AB

Unit: inch (mm)



MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic
Base P/N - RoHS compliant, commercial grade
Base P/N-A - RoHS compliant, AEC-Q101 qualified
Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode)
Standard packaging: 16mm tape (EIA-481)
Weight: 0.007 ounce, 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	SK52	SK53	SK54	SK55	SK56	SK58	SK59	SK510	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20.0	30.0	40.0	50.0	60.0	80.0	90.0	100.0	V
Maximum RMS Voltage	V_{RMS}	14.0	21.0	28.0	35.0	42.0	56.0	63.0	70.0	V
Maximum DC Blocking Voltage	V_{DC}	20.0	30.0	40.0	50.0	60.0	80.0	90.0	100.0	V
Maximum Average Forward Rectified Current at T_L (See figure 1)	I(AV)	5.0								A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100.0								A
Maximum Instantaneous Forward Voltage at 5.0A (Note 1)	V_F	0.50			0.75		0.85			V
Maximum DC Reverse Current (Note 1) Ta= 25°C at Rated DC Blocking Voltage Ta=100°C	I_R	0.5 20.0								mA
Maximum Thermal Resistance(Note 2)	RθJL RθJA	17.0 55.0								°C/W
Operating Temperature Range	T_J	-55 to +150								°C
Storage Temperature Range	T_{STG}	-55 to +150								°C
Typical total capacitance (1MHz,VR = 4V)	C_T	280								pF

NOTES:
A.Pulse Test with PW =300μsec, 2% Duty Cycle.
B.Mounted on P.C. Board with 14mm^2 (.013mm thick) copper pad areas.

DEVICE CHARACTERISTICS

SK52-A THRU SK510-A

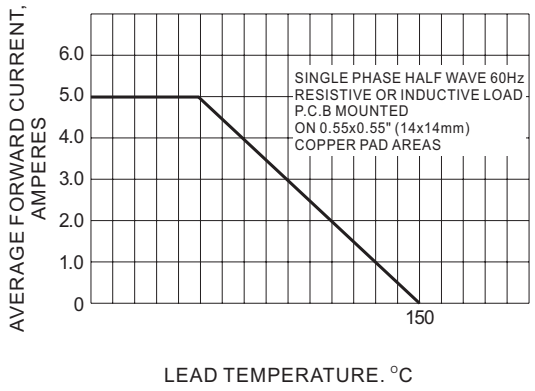


Fig.1- FORWARD CURRENT DERATING CURVE

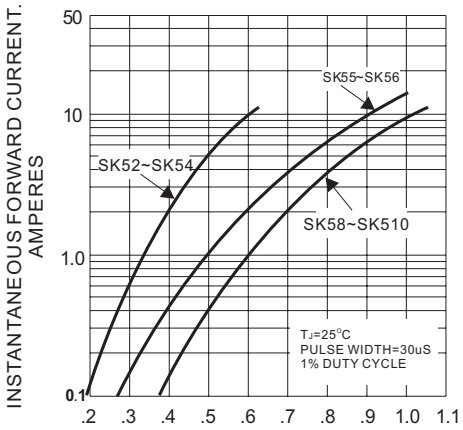


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

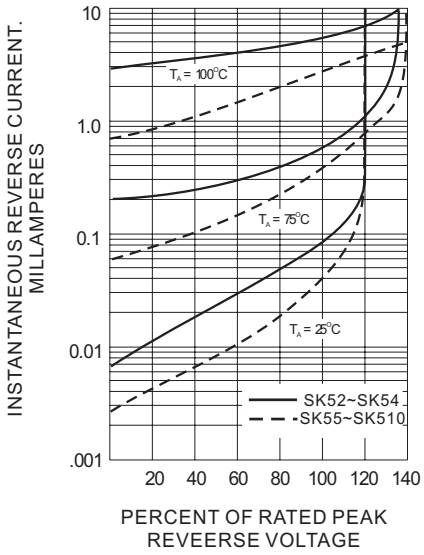


Fig.3- TYPICAL REVERSE CHARACTERISTICS

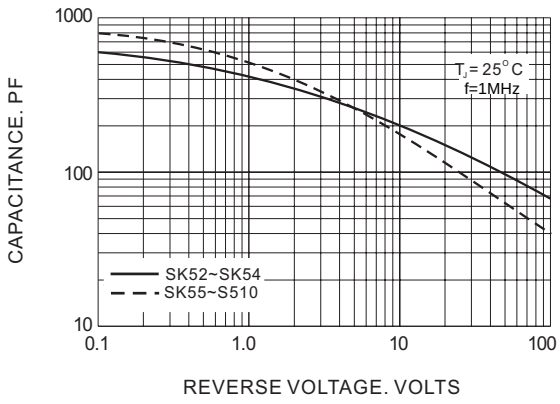


Fig.4- TYPICAL JUNCTION CAPACITANCE

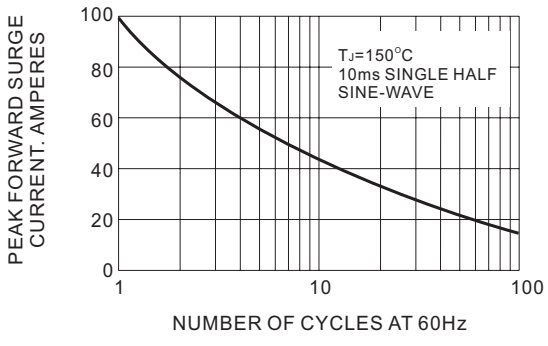


Fig.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

Mounting Pad Layout