

SK52B THRU SK5AB

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SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 V

Forward Current - 5 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- Low profile package
- Built-in strain relief, ideal for automated placement
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

- Case: JEDEC SMB (DO-214AA) molded plastic body
- Terminals: solder plated, solderable per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end

Maximum Ratings and Electrical Characteristics

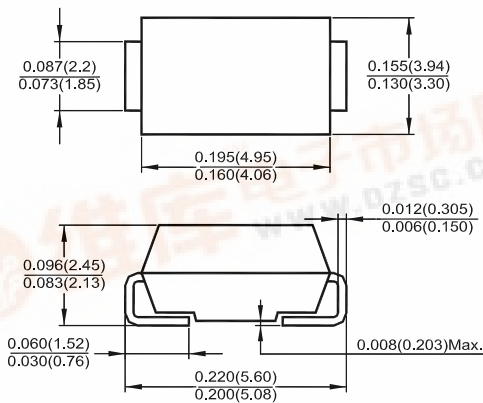
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbols	SK52B	SK53B	SK54B	SK55B	SK56B	SK58B	SK5AB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	57	71	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length	$I_{F(AV)}$	5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Forward Voltage at 5 A ¹⁾	V_F	0.55		0.75		0.85		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.5							mA
		20							
Typical Thermal Resistance ²⁾	$R_{\theta JA}$ $R_{\theta JL}$	55 17							°C/W
Operating Junction Temperature Range	T_j	- 55 to + 125							°C
Storage Temperature Range	T_{stg}	- 55 to + 150							°C

¹⁾ Pulse test: 300 μs pulse width, 1% duty cycle

²⁾ P.C.B mounted 0.55 X 0.55" (14 X 14 mm) copper pad areas

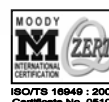
SMB (DO-214AA)



Dimensions in inches and (millimeters)

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FIG.1-FORWARD CURRENT DERATING CURVE

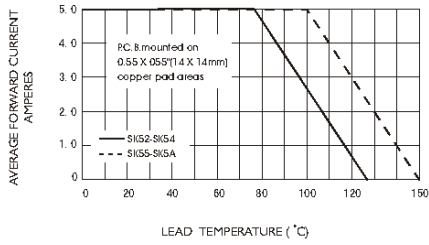


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

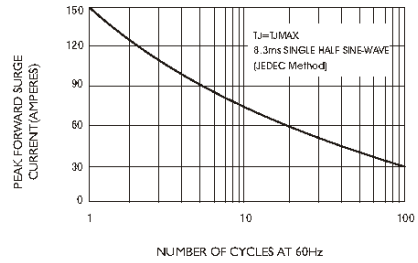


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

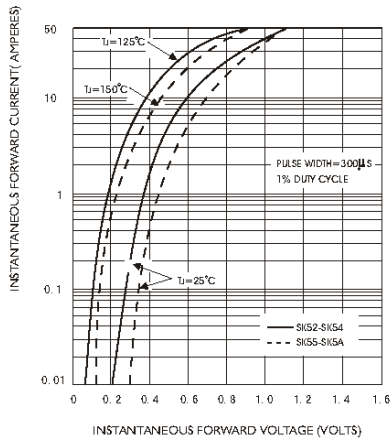


FIG.4-TYPICAL REVERSE CHARACTERISTICS

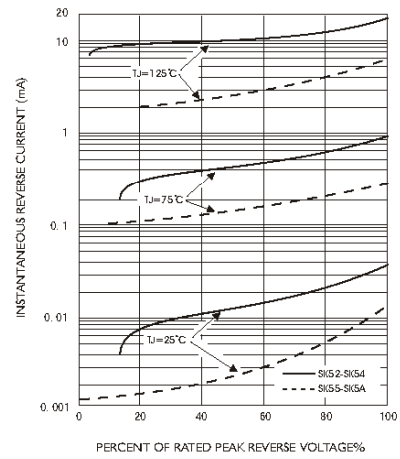


FIG.5-TYPICAL JUNCTION CAPACITANCE

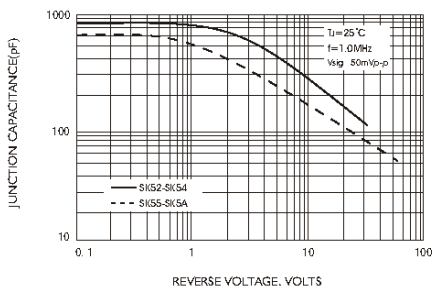
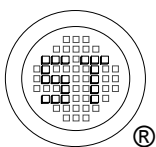
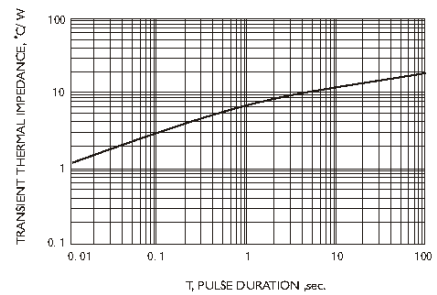


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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