SK52B - SK510B

SURFACE MOUNT SCHOTTKY BARRIER DIODES

VOLTAGE RANGE: 20 - 100V
CURRENT: 5.0 A

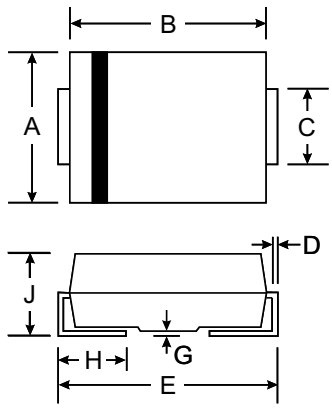
Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)

RoHS COMPLIANT



SMB(DO-214AA)		
Dim	**Min**	**Max**
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SK52B	SK53B	SK54B	SK55B	SK56B	SK58B	SK510B	Unit
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	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current at T_L(see fig.1)	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							A
Maximum instantaneous forward voltage at 5.0A	V_F	0.55			0.70		0.85		V
Maximum DC reverse current T_A=25℃	I_R	0.5							mA
at rated DC blocking voltage T_A=100℃		20					10		
Typical junction capacitance (NOTE 1)	C_J	200							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0							°C/W
Operating junction temperature range	T_J,	-65 to +125					-65 to +150		°C
Storage temperature range	T_{STG}	-65 to +150							°C

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.P.C.B. mounted with 0.2x0.2″(5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES SK52B THRU SK510B

FIG. 1- FORWARD CURRENT DERATING CURVE

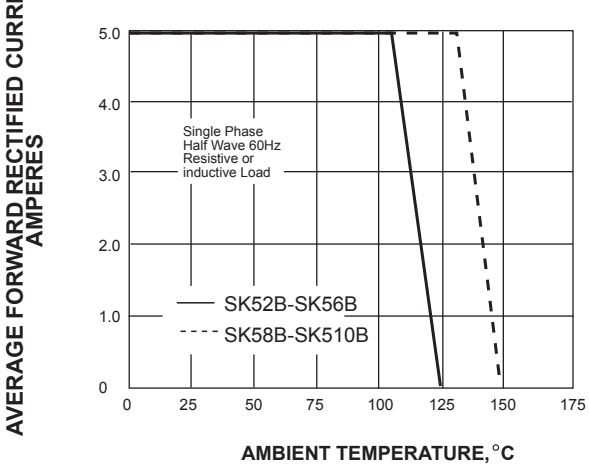


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

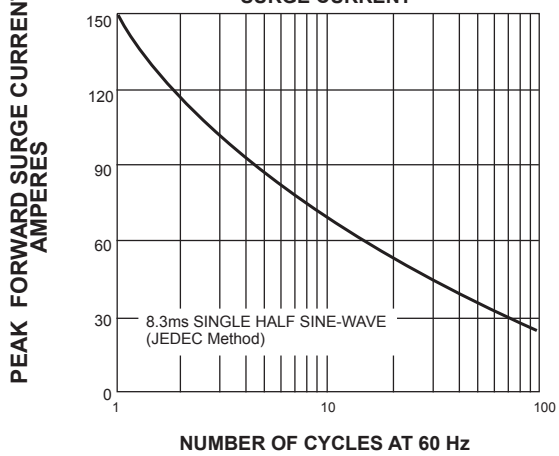


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

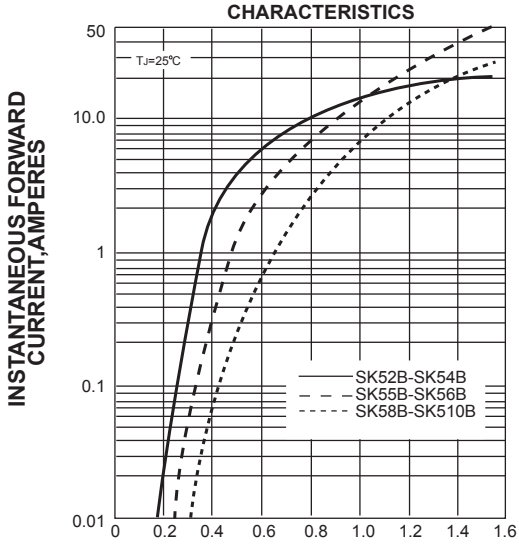


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

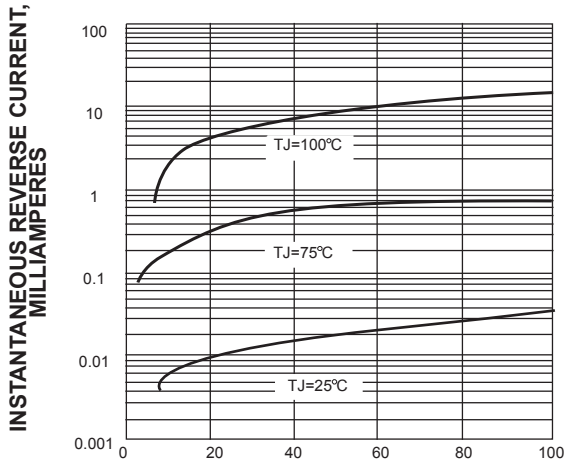


FIG. 5-TYPICAL JUNCTION CAPACITANCE

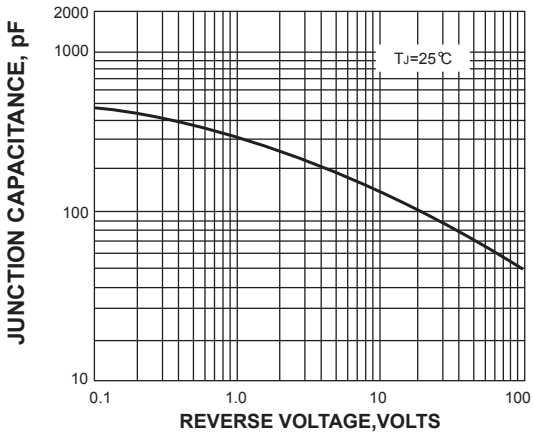


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE