# SK12 - SK16

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- For Surface Mounted Applications
- High Temperature Metallurgically Bonded Contacts
- Capable of Meeting Environmental Standards of MIL-STD-19500
- Plastic Material - UL Flammability Classification 94V-0
- High Reliability
- Submersible Temperature of 265°C for 10 Seconds in Solder Bath

Mechanical Data

- Case: SMB, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Notch
- Approx. Weight: 0.093 grams
- Mounting Position: Any
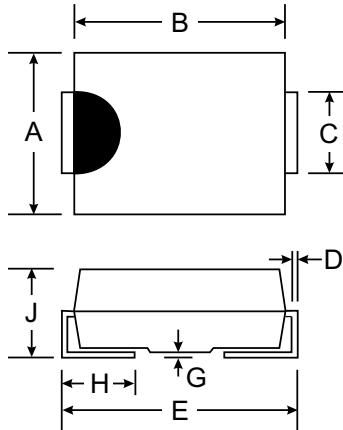
SMB		
Dim	Min	Max
A	3.30	3.94
B	4.00	4.65
C	1.95	2.21
D	0.15	0.40
E	5.00	6.00
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, halfwave, 60Hz resistive or inductive load.

Characteristic	Symbol	SK12	SK13	SK14	SK15	SK16	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	V
Maximum Average Forward Rectified Current @ T_A = 75°C	$I_{(AV)}$	1.0					A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25					A
Maximum Instantaneous Forward Voltage at 1.0A	V_F	0.55			0.70		V
Maximum DC Reverse Current at Rated @ T_A = 25°C DC Blocking Voltage @ T_A = 100°C	I_R	0.5 10					mA
Maximum Full Load Reverse Current Full Cycle Average @ T_A = 75°C	I_R	5					mA
MaximumThermal Resistance (See Note 1)	$R_{\Theta JL}$	25					°C/W
Typical Junction Capacitance (See Note 2)	C_J	110					pF
Operating Temperature Range	T_J	-65 to +125					°C
Storage Temperature Range	T_{STG}	-65 to +150					°C

Notes: 1. Thermal resistance from junction to lead.
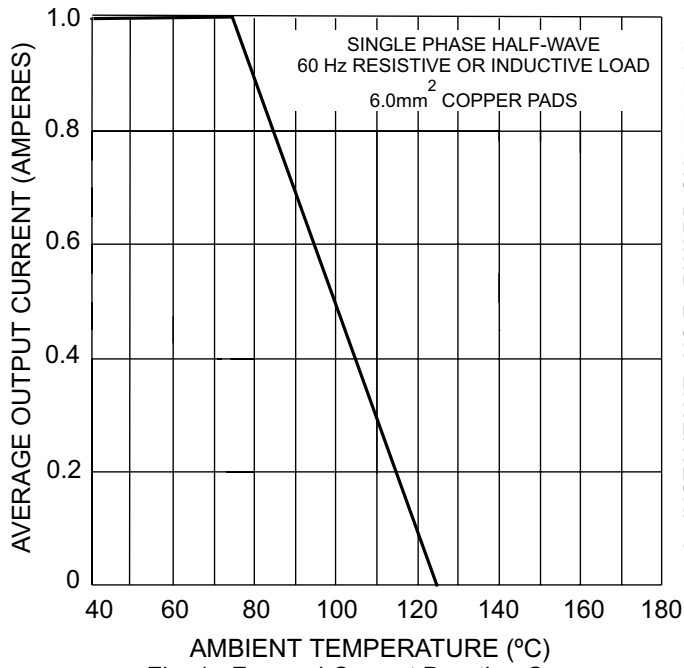2. Measured at 1.0MHz and applies reverse voltage of 4.0V.

AVERAGE OUTPUT CURRENT (AMPERES)

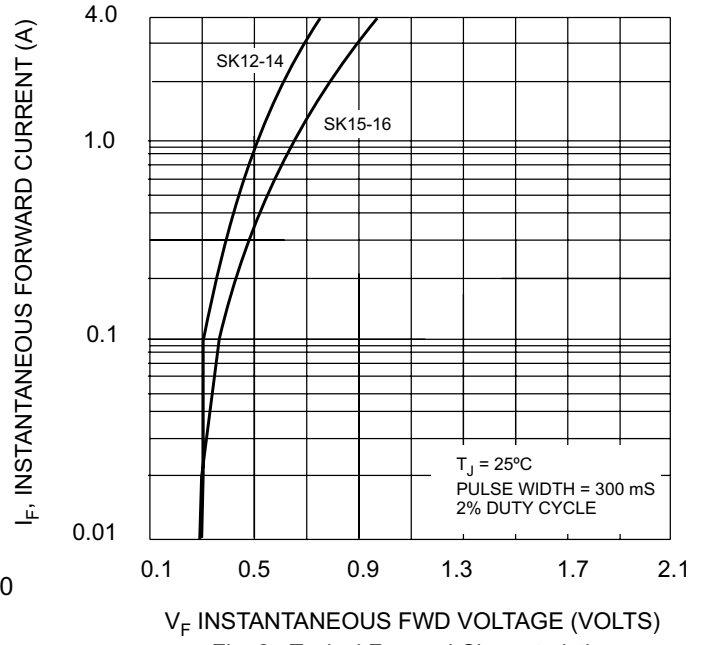AMBIENT TEMPERATURE (ºC)

SINGLE PHASE HALF-WAVE
60 Hz RESISTIVE OR INDUCTIVE LOAD
6.0mm^2 COPPER PADS

Fig. 1, Forward Current Derating Curve

I_F, INSTANTANEOUS FORWARD CURRENT (A)

V_F INSTANTANEOUS FWD VOLTAGE (VOLTS)

SK12-14

SK15-16

T_J = 25ºC
PULSE WIDTH = 300 mS
2% DUTY CYCLE

Fig. 2, Typical Forward Characteristics

CAPACITANCE (pF)

REVERSE VOLTAGE (VOLTS)

T_J = 25ºC

Fig. 3, Typical Junction Capacitance

PEAK FWD SURGE CURRENT (A)
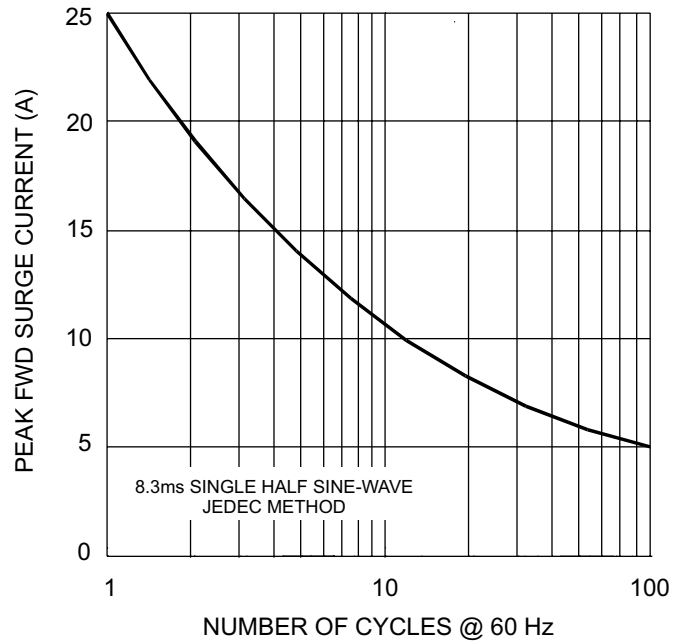
NUMBER OF CYCLES @ 60 Hz

8.3ms SINGLE HALF SINE-WAVE
JEDEC METHOD
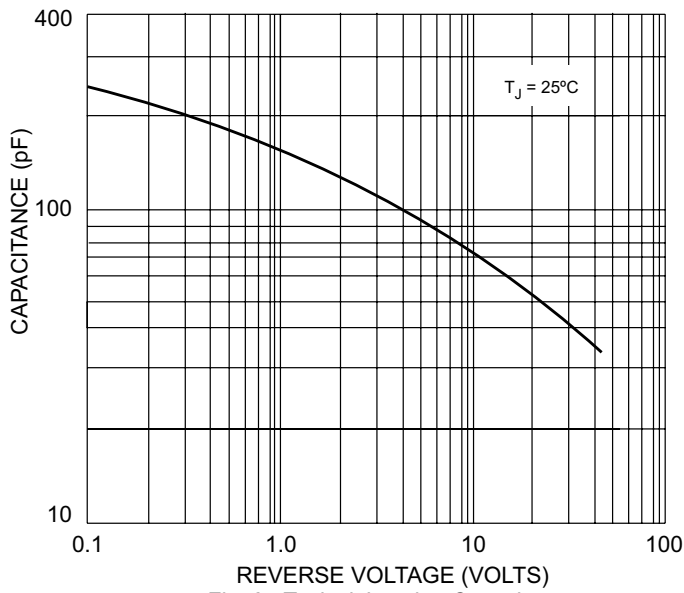
Fig. 4, Max Non-Repetitive Peak Fwd Surge Current