



# SK53C THRU SK56C

## 5.0 AMPS. Surface Mount Schottky Barrier Rectifiers



Voltage Range  
30 to 60 Volts  
Current  
5.0 Amperes

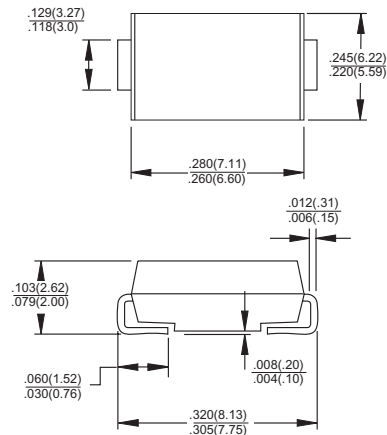
### Features

- ✦ For surface mounted application
- ✦ Metal to silicon rectifier, majority carrier conduction
- ✦ Low forward voltage drop
- ✦ Easy pick and place
- ✦ High surge current capability
- ✦ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✦ Epitaxial construction
- ✦ High temperature soldering:  
260°C / 10 seconds at terminals

### Mechanical Data

- ✦ Case: Molded plastic
- ✦ Terminals: Solder plated
- ✦ Polarity: Indicated by cathode band
- ✦ Packaging: 16mm tape per EIA STD RS-481
- ✦ Weight: 0.21 gram

### SMC/DO-214AB



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

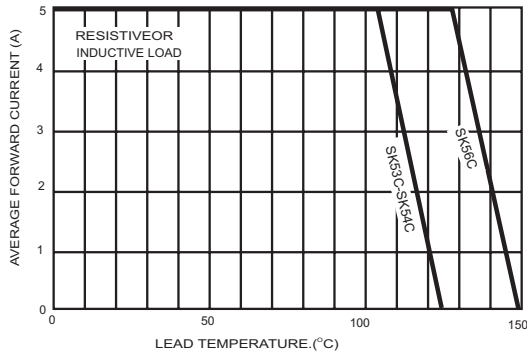
Type Number	Symbol	SK53C	SK54C	SK56C	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	30	40	60	V
Maximum RMS Voltage	$V_{RMS}$	21	28	42	V
Maximum DC Blocking Voltage	$V_{DC}$	30	40	60	V
Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)	$I_{(AV)}$	5.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100			A
Maximum Instantaneous Forward Voltage (Note 1) @ 5.0A	$V_F$	0.55		0.75	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.5			mA
		20		10	
Typical Thermal Resistance ( Note 2 )	$R\theta_{JC}$	17			$^\circ\text{C}/\text{W}$
	$R\theta_{JA}$	55			
Operating Temperature Range	$T_J$	-55 to +125		-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150			$^\circ\text{C}$

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle

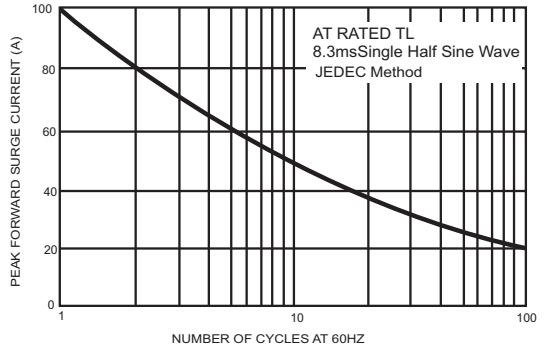
2. Measured on P.C.Board with 0.6 x 0.6" (16 x 16mm) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES ( SK53C THRU SK56C )

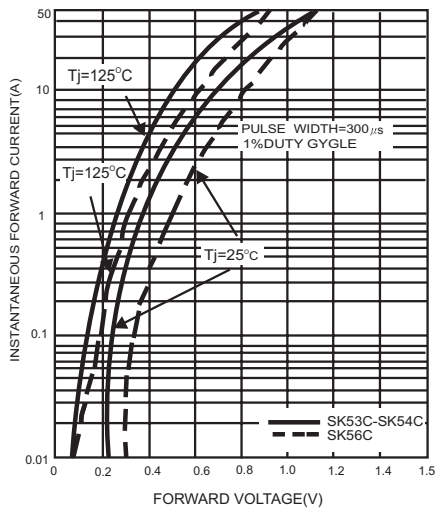
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



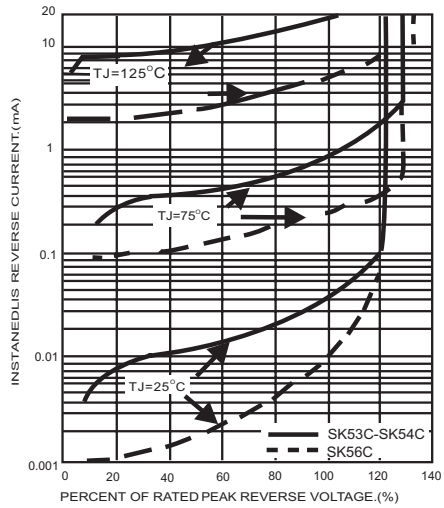
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



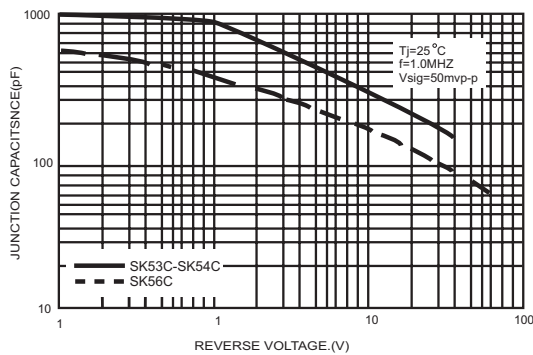
**FIG.3-TYPICAL FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS**

