

# SK53C THRU SK56C

## 5.0 AMPS. Surface Mount Schottky Barrier Rectifiers



Voltage Range  
30 to 60 Volts  
Current  
5.0 Amperes

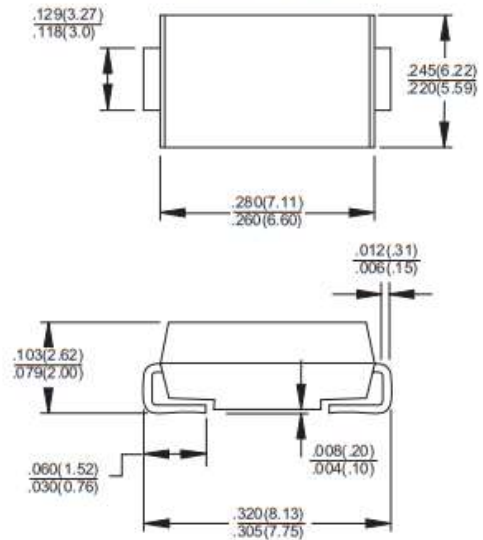
### Features

- ✧ 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

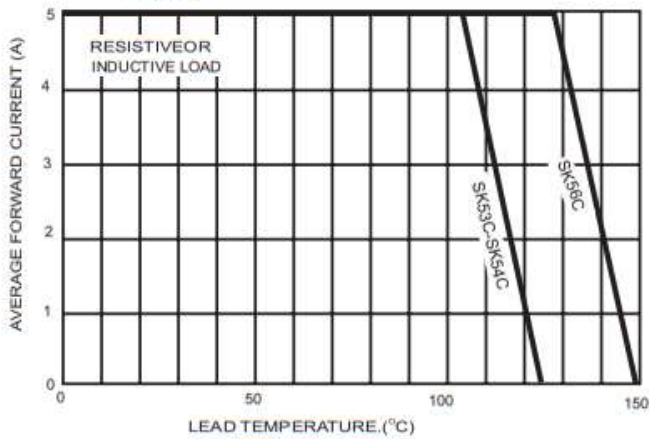


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

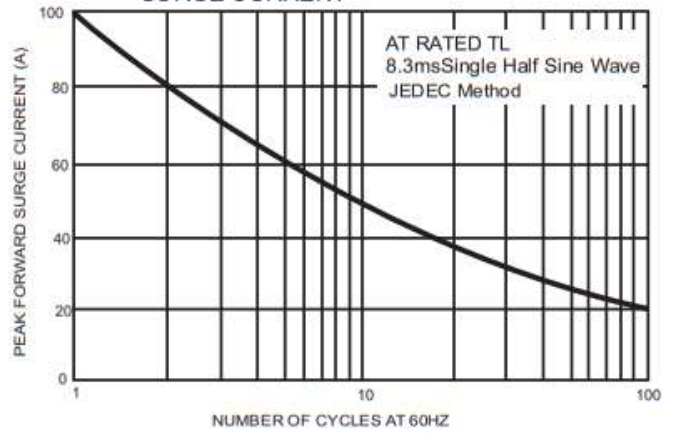


FIG.3-TYPICAL FORWARD CHARACTERISTICS

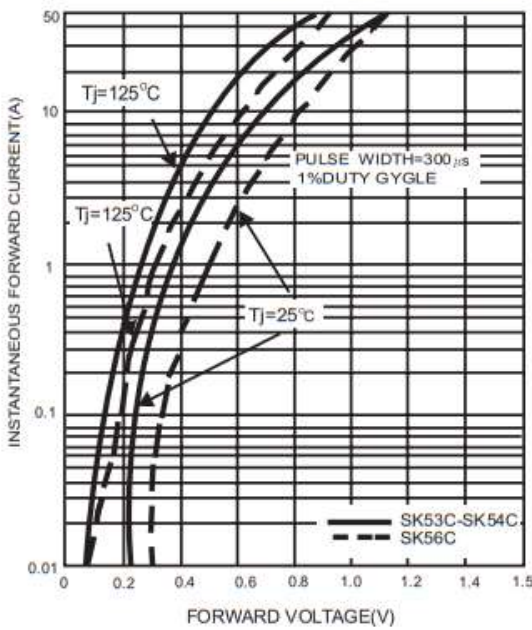


FIG.4-TYPICAL REVERSE CHARACTERISTICS

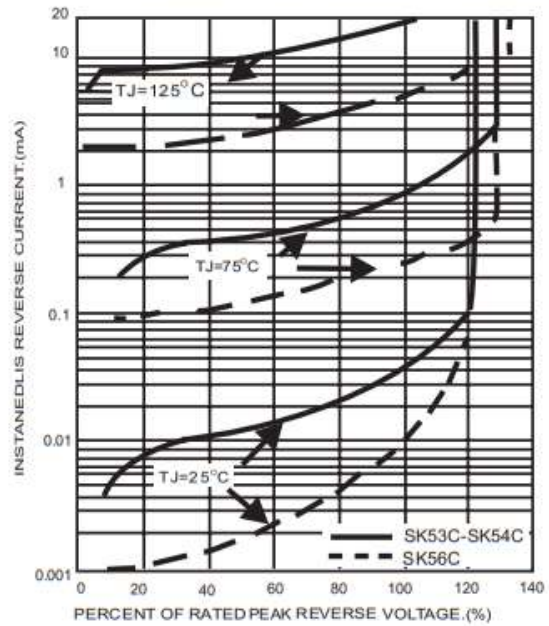


FIG.5-TYPICAL JUNCTION CAPACITANCE

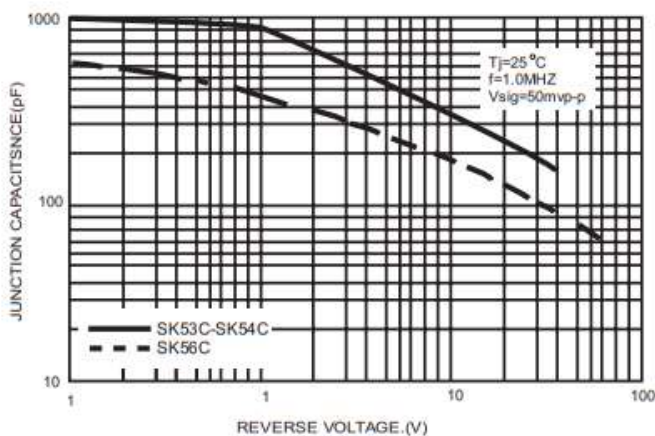


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

