



# SK53C THRU SK56C

## 5.0 AMPS. Surface Mount Schottky Barrier Rectifiers



Voltage Range  
 30 to 60 Volts  
 Current  
 5.0 Amperes

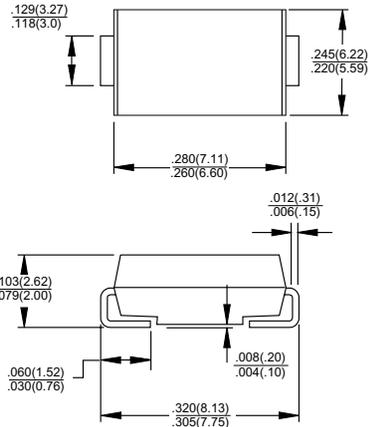
### SMC/DO-214AB

### 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: 250°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



### 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	SK53C	SK54C	SK56C	Units
Maximum Recurrent Peak Reverse Voltage	30	40	60	V
Maximum RMS Voltage	21	28	42	V
Maximum DC Blocking Voltage	30	40	60	V
Maximum Average Forward Rectified Current at T <sub>L</sub> (See Fig. 1)	5.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	100			A
Maximum Instantaneous Forward Voltage (Note 1) @ 5.0A	0.55		0.75	V
Maximum DC Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C	0.5			mA
	20		10	mA
Typical Thermal Resistance ( Note 2 ) R θ JC R θ JA	17			°C/W
	55			°C/W
Operating Temperature Range T <sub>J</sub>	-55 to +125		-55 to +150	°C
Storage Temperature Range T <sub>STG</sub>	-55 to +150			°C

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

2. Measured on P.C.Board with 0.55 x 0.55" (14 x 14mm) Copper Pad Areas.

## RATINGS AND CHARACTERISTIC CURVES ( SK53C THRU SK56C)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

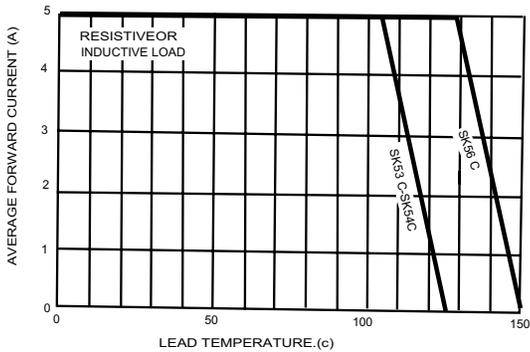


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

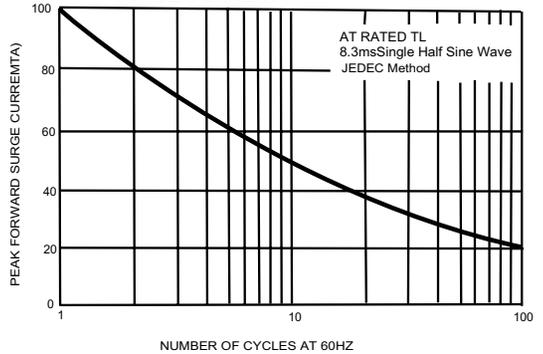


FIG.3-TYPICAL FORWARD CHARACTERISTICS

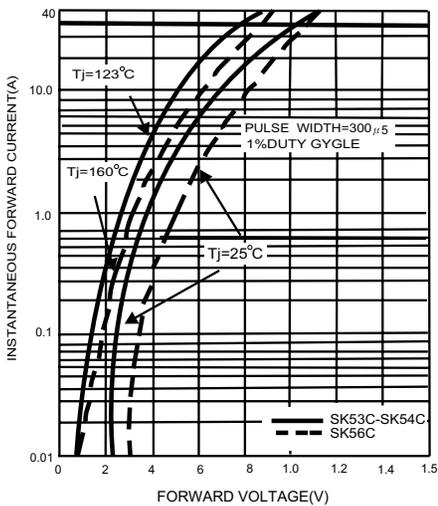


FIG.5-TYPICAL JUNCTION CAPACITANCE

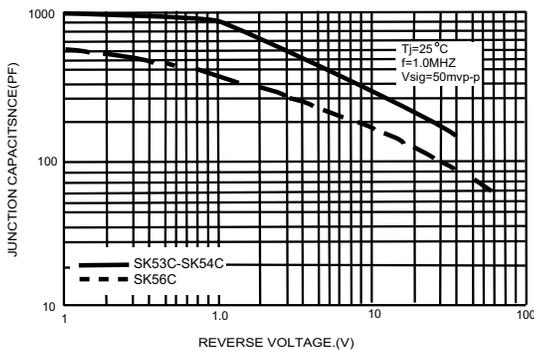


FIG.4-TYPICAL REVERSE CHARACTERISTICS

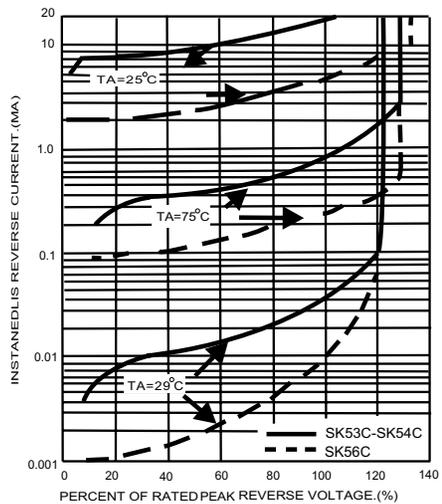


FIG.6-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

