

# SK52C-SK510C

Surface Mount Schottky Barrier Rectifiers

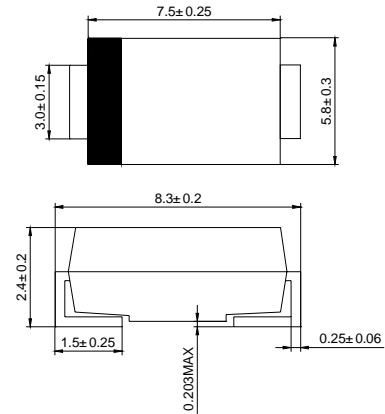
**REVERSE VOLTAGE: 20 --- 100 V**  
**CURRENT: 5.0 A**



## Features

- Plastic package has Underwriters Laborator Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- High current capability, low forward voltage drop
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

## SMC



Dimensions in millimeters

## Mechanical Data

- Case: JEDEC SMC, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

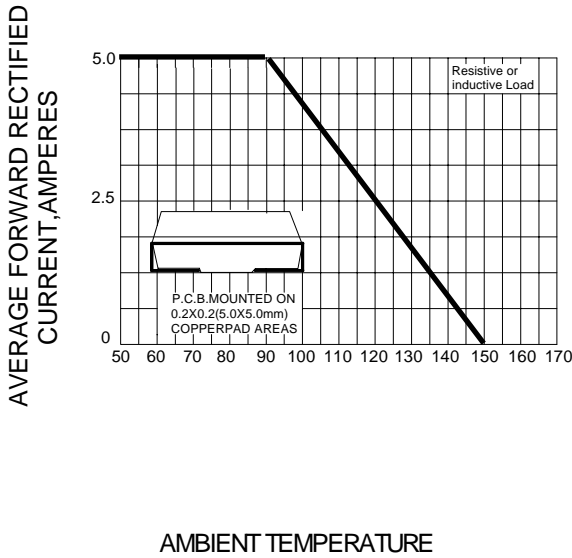
Ratings at 25°C ambient temperature unless otherwise specified

		SK52C	SK53C	SK54C	SK55C	SK56C	SK58C	SK59C	SK510C	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	V
Maximum average forward rectified current at $T_L$ (SEE FIG.1) (NOTE 2)	$I_{(AV)}$	5.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150								A
Maximum instantaneous forward voltage at 5.0A (NOTE.1)	$V_F$	0.55		0.70		0.85				V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE1) @ $T_A=100^\circ\text{C}$	$I_R$	0.5								mA
		20				10				
Typical thermal resistance (NOTE2)	$R_{JA}$ $R_{JL}$	55 17								°C/W
Operating junction temperature range	$T_J$	-55 --- +150								°C
Storage temperature range	$T_{STG}$	-55 --- +150								°C

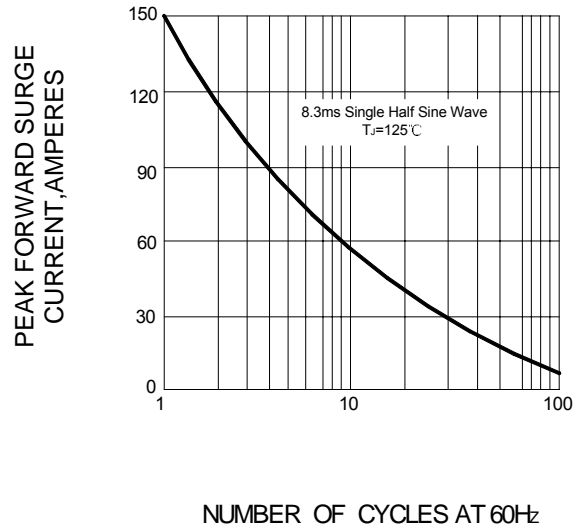
NOTE: 1. Pulse test: 300 μs pulse width, 1% duty cycle  
 2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm<sup>2</sup>) copper pad areas

## Ratings AND Characteristic Curves

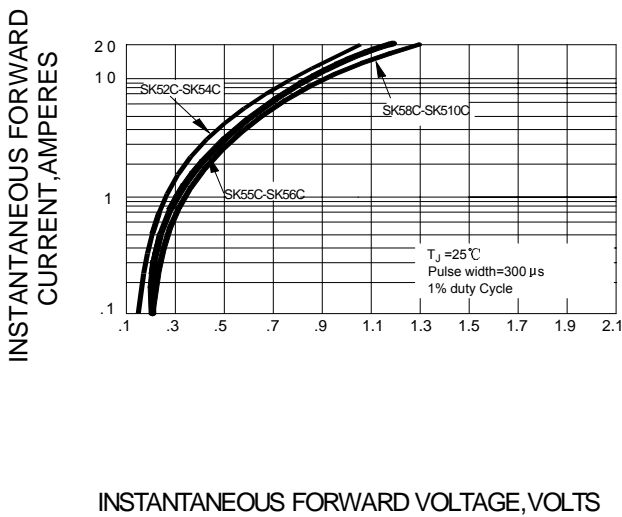
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2- PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

