

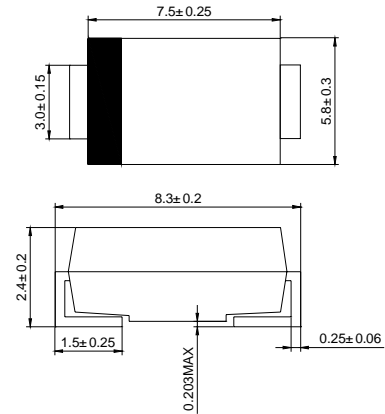


REVERSE VOLTAGE: 20 --- 100 V
CURRENT: 5.0 A

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				10				mA
Typical thermal resistance (NOTE2)	R_{JA}	55								°C/W
	R_{JL}	17								
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" X 0.55" (14.0 X 14.0 mm²) copper pad areas

Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

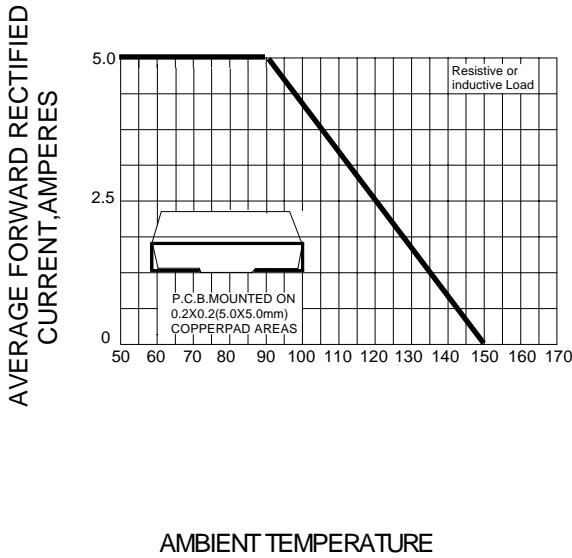


FIG.2- PEAK FORWARD SURGE CURRENT

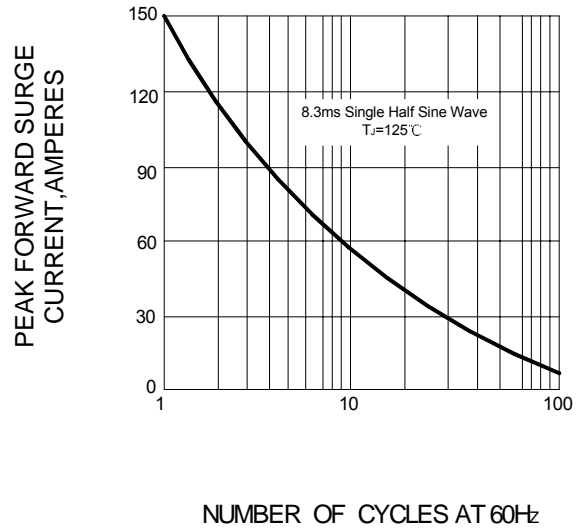


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

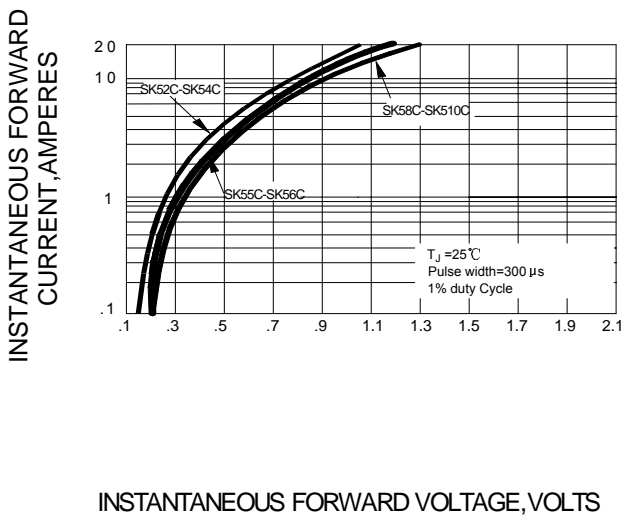


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

