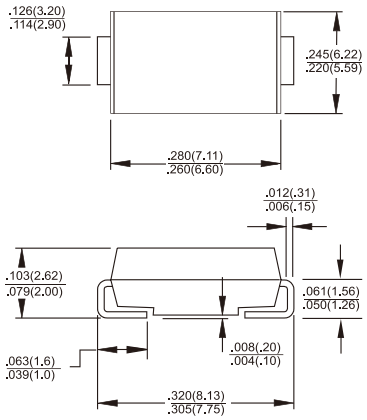
TAIWAN SEMICONDUCTOR

SK82C - SK86C

8.0 AMPS. Surface Mount Schottky Barrier Rectifiers

SMC/DC-214AB

Pb RoHS COMPLIANCE



Dimensions in inches and (millimeters)

Features

- ✧ UL Recognized File # E-326243
- ✧ 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

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

SK8XC = Specific Device Code
G = Green Compound
Y = Year
M = Work Month

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	SK 82C	SK 83C	SK 84C	SK 85C	SK 86C	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS Voltage	V_{RMS}	20	30	40	50	60	V
Maximum DC Blocking Voltage	V_{DC}	14	21	28	35	42	V
Maximum Average Forward Rectified Current at T_L (See Fig. 1)	$I_{F(AV)}$	8.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150					A
Maximum Instantaneous Forward Voltage @8.0A	V_F	0.55			0.75		V
Maximum DC Reverse Current @ T_A =25°C	I_R	0.5					mA
at Rated DC Blocking Voltage @ T_A=100°C (Note 1)		15			10		mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20					°C /W
Operating Temperature Range	T_J	-55 to +125			-55 to +150		°C
Storage Temperature Range	T_{STG}	-55 to +150					°C

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Measured on P.C.Board with 0.6 x 0.6" (16.0 x 16.0mm) Copper Pad Areas.

Version: B10

TAIWAN SEMICONDUCTOR

RATINGS AND CHARACTERISTIC CURVES (SK82C THRU SK86C)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

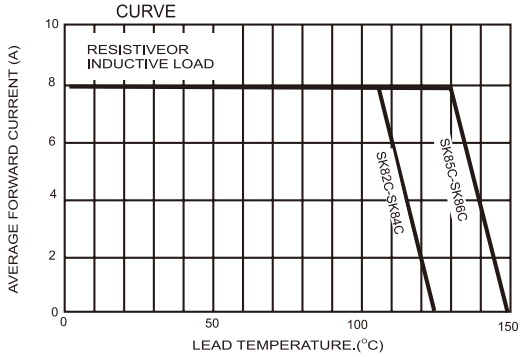


FIG.2-MAXIMUM NON-REPETIVE PEAK FORWARD SURGE CURRENT

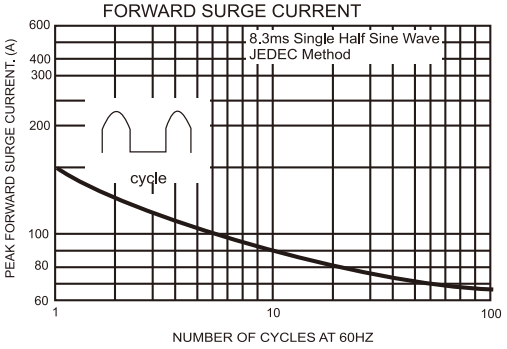


FIG.3-TYPICAL FORWARD CHARACTERISTICS

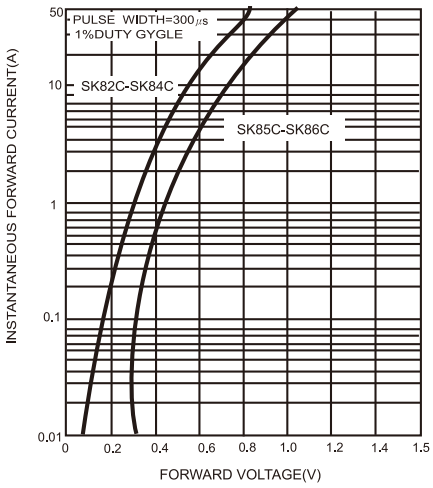


FIG.4-TYPICAL REVERSE CHARACTERISTICS

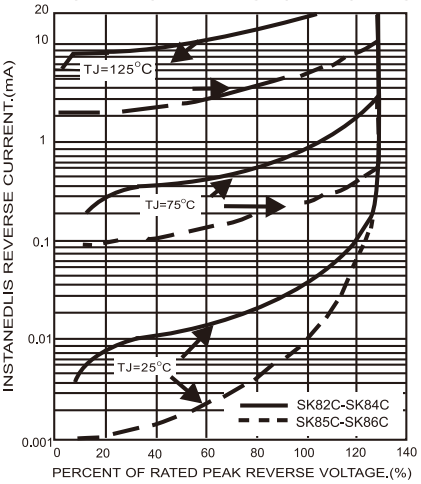


FIG.5-TYPICAL JUNCTION CAPACITANCE

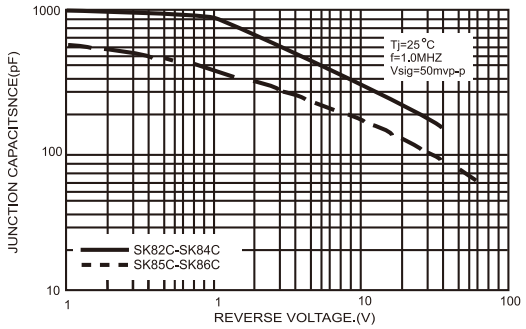


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS