Surface Mount
Schottky Barrier rectifiers

SCHOTTKY BARRIER RECTIFIERS

5.0 AMPERES
40 VOLTS

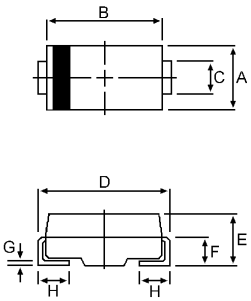
Using the Schottky Barrier principle with a barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlap contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes, in surface mount applications where compact size and weight are critical to the system.

DO-214AC(SMA)

Features

- ∗Low Forward Voltage.
- ∗Low Switching noise.
- ∗High Current Capacity
- ∗Guarantee Reverse Avalanche.
- ∗Guard-Ring for Stress Protection.
- ∗Low Power Loss & High efficiency.
- ∗125℃ Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction.
- ∗Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

∗ *In compliance with EU RoHs 2002/95/EC directives*
∗ *"G" Green product*



MAXIMUM RATINGS

Characteristic	Symbol	SK54	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectifier Forward Current	I_O	5.0	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	100	A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +125	℃

DIM	MILLIMETERS	
	MIN	MAX
A	2.20	2.80
B	4.10	4.70
C	1.30	1.70
D	4.70	5.30
E	1.90	2.50
F		1.30
G		0.30
H	0.95	1.50

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	SK54	Unit
Maximum Instantaneous Forward Voltage (I_F =5 Amp)	V_F	0.55	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.5 50	mA
Maxmum Thermal Resistance Junction to Lead (Note.1)	R_{thjL}	14.0	℃/W
Maxmum Thermal Resistance Junction to Ambient	R_{thjA}	48.0	℃/W
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	340	pF

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

Note:
1. Mounted 1 inch square PCB

SK54

FIG-1 FORWARD CURRENT DERATING CURVE

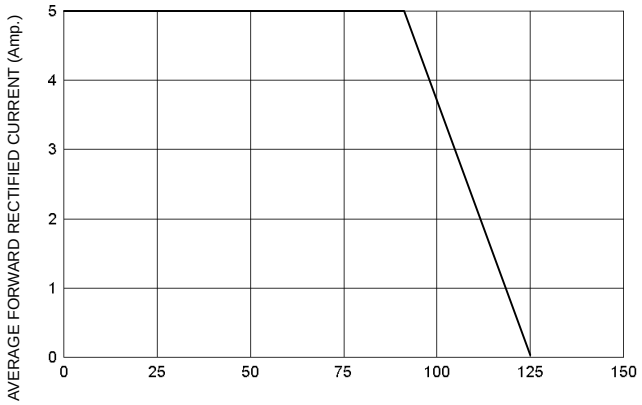


FIG-2 TYPICAL FORWARD CHARACTERISITICS

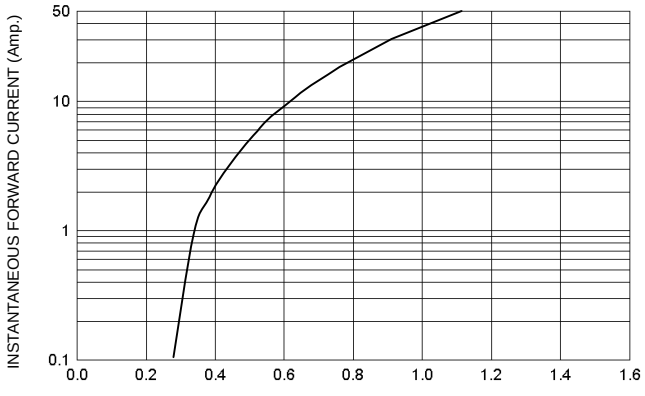


FIG-3 TYPICAL REVERSE CHARACTERISTICS

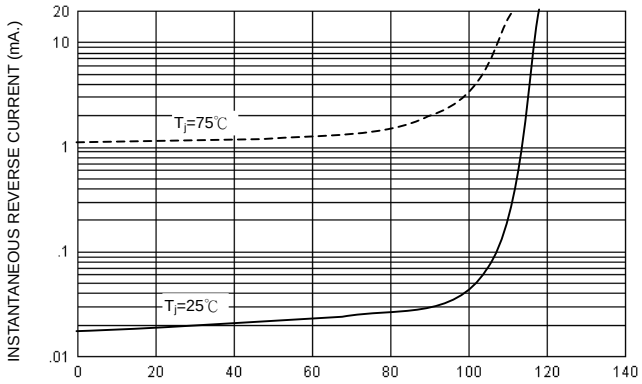


FIG-4 TYPICAL JUNCTION CAPACITANCE

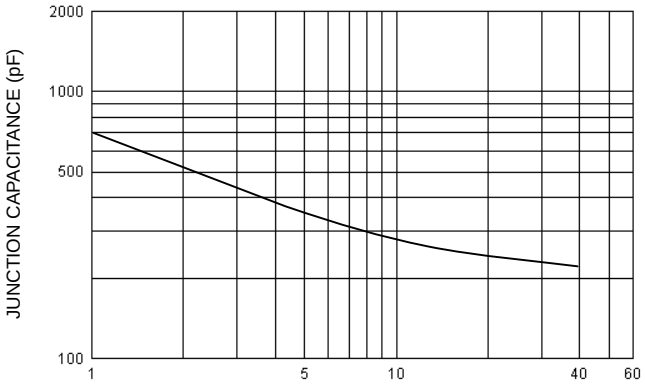


FIG-5 PEAK FORWARD SURGE CURRENT