

# **Schottky Barrier Rectifiers**

Using the Schottky Barrier principle with a Molybdenum barrier meta. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay 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.

### Features

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* 150 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- \* Moisture Sensitivity Level: MSL-1

#### \* ESD: 4KV(Min.) Humen-Body Model

\* In compliance with EU RoHs 2002/95/EC directives

#### **MAXIMUM RATINGS**

Characteristic	Symbol	SK310	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	100	V
RMS Reverse Voltage	VR <sub>(RMS)</sub>	70	V
Average Rectifier Forward Current	lo	3.0	А
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase,60Hz )	I <sub>FSM</sub>	75	A
Operating and Storage Junction Temperature Range	Τ <sub>J</sub> , Τ <sub>STG</sub>	-65 to +150	

## THERMAL RESISTANCES

Typical Thermal Resistance junction to case	R <sub>θ j-c</sub>	45	/w	

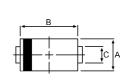
# **ELECTRIAL CHARACTERISTICS**

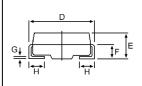
Characteristic	Symbol	SK310	Unit
Maximum Instantaneous Forward Voltage (I <sub>F</sub> =3.0 Amp)	VF	0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$ ) (Rated DC Voltage, $T_C = 125$ )	I <sub>R</sub>	0.01 10	mA
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	CP	150	₽F

SCHOTTKY BARRIER RECTIFIERS

> 3.0 AMPERES 100 VOLTS







DIM	MILLIMETERS		
	MIN	MAX	
Α	2.20	2.80	
В	4.10	4.70	
С	1.30	1.70	
D	4.70	5.30	
Е	1.90	2.50	
F		1.30	
G		0.30	
Н	0.95	1.50	

CASE---Transfer molded plastic

OLARITY---Cathode indicated polarity band

# SK310

# SK310

#### FIG-1 FORWARD CURRENT DERATING CURVE

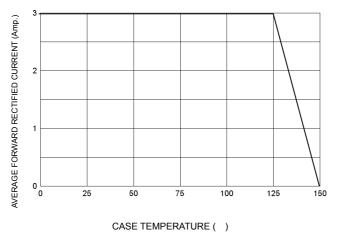
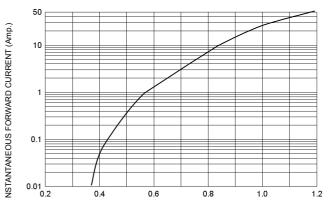
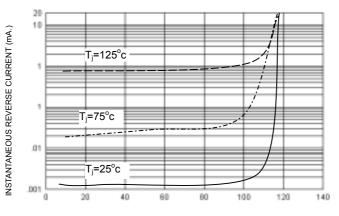


FIG-2 TYPICAL FORWARD CHARACTERISITICS

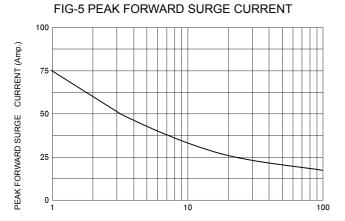


FORWARD VOLTAGE (Volts)

FIG-3 TYPICAL REVERSE CHARACTERISTICS

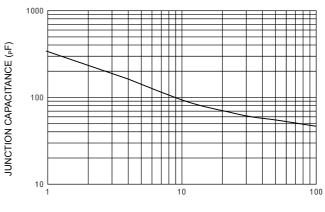


PERCENT OF RATED REVERSE VOLTAGE (%)



NUMBER OF CYCLES AT 60 Hz

FIG-4 TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE (Volts)