

Surface Mount Schottky Barrier rectifiers

Using the Schottky Barrier principle with a Refractory barrier metal. 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.
- * High Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * Pb free
- * In compliance with EU RoHs directives

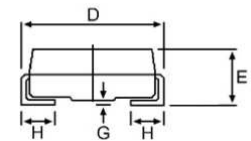
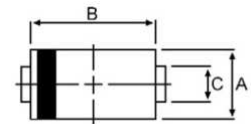


SCHOTTKY BARRIER RECTIFIERS

**1.0 AMPERES
20-40 VOLTS**



DO-214AC(SMA)



MAXIMUM RATINGS

Characteristic	Symbol	SM17	SM18	SM19	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectifier Forward Current	I_O	1.0			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	25			A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150			°C

DIM	MILLIMETERS	
	MIN	MAX
A	2.20	2.80
B	3.90	4.50
C	1.30	1.70
D	4.70	5.30
E	1.90	2.50
G	---	0.20
H	0.75	1.55

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SM17	SM18	SM19	Unit
Maximum Instantaneous Forward Voltage ($I_F = 1.0$ Amp)	V_F	0.45	0.55		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R	0.5 10			mA
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	60			°C/W
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f = 1$ MHz)	C_P	90	80		pF

CASE---
Transfer molded
plastic

POLARITY---
Cathode indicated
polarity band

SM17 Thru SM19

FIG-1 FORWARD CURRENT DERATING CURVE

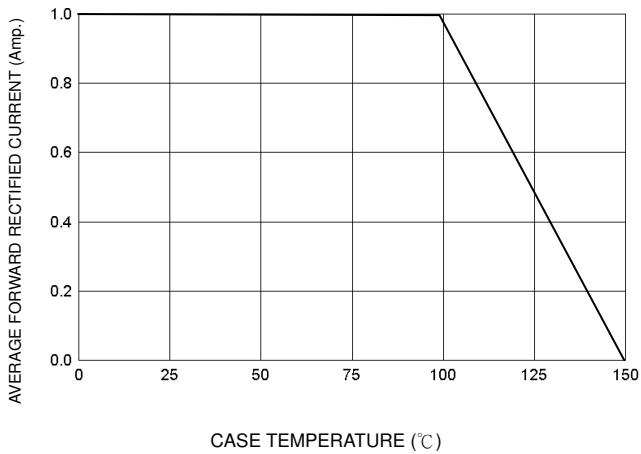


FIG-2 TYPICAL FORWARD CHARACTERISTICS

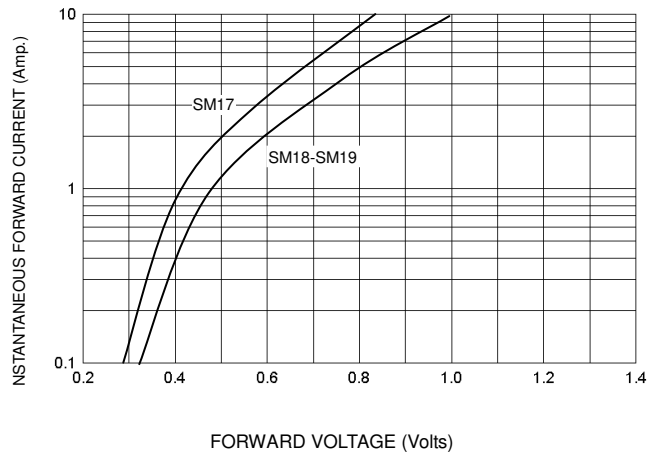


FIG-3 TYPICAL REVERSE CHARACTERISTICS

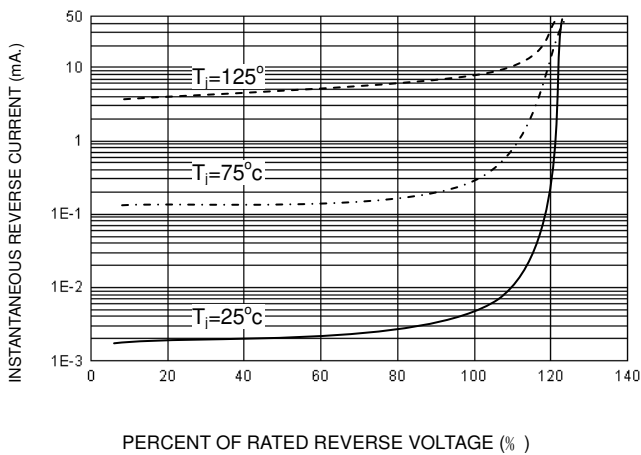


FIG-4 TYPICAL JUNCTION CAPACITANCE

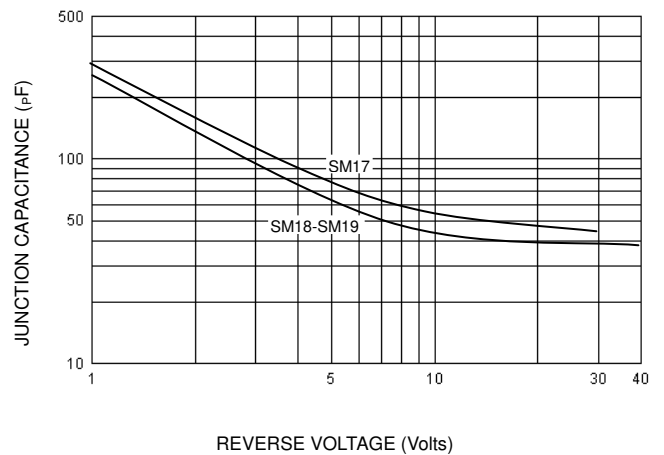
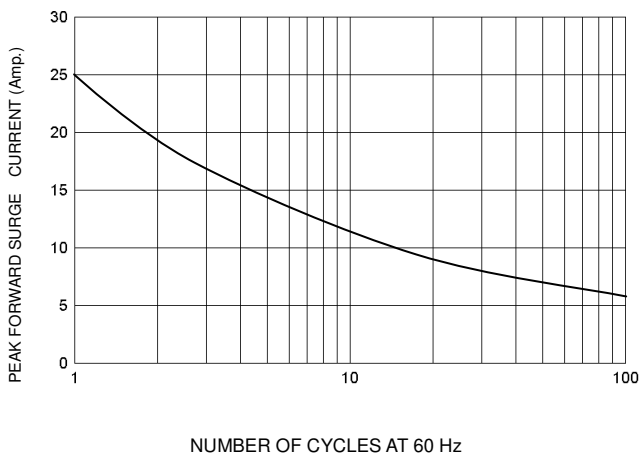


FIG-5 PEAK FORWARD SURGE CURRENT



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