

Surface Mount Schottky Power Rectifiers

(Pb) Lead(Pb)-Free

Feature:

- *Low Forward Voltage
- *Low Switching Noise
- *High Surge Capacity
- *Guarantee Reverse Avalance
- *Gurad-ing for Stress Protection
- *Low Power Loss & High Efficiency
- *125°C Operating Junction Temperature
- *Low Stored Charge Majority Carrier Conduction
- *Case: Epoxy, Molded

Product Description:

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-are 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.

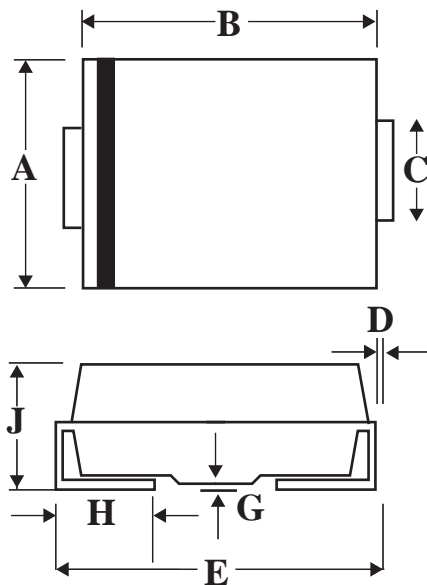
**SCHOTTKY BARRIER
RECTIFIERS
1.0 AMPERES
20-40 VOLTS**



SMA(DO-214AC)

SMA Outline Dimension

Unit:mm



SMA		
Dim	Min	Max
A	2.20	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.48	5.59
G	0.10	0.20
H	0.76	1.52
J	1.70	2.62

Maximum Rating

Characteristic	Symbol	SM17	SM18	SM19	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	20	30	40	V
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectifier Forward Current	$I_{F(AV)}$	1.0			A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20 KHz)	I_{FM}	1.0			A
Non-Repetitive Peak Square Current (Surge Applied at Rated Load Condition Halfwave, Single Phase, 60Hz)	I_{FSM}	25			A
Thermal Resistance Junction-ambient	$R_{\theta JA}$	88			°C/W
Thermal Resistance Junction-case	$R_{\theta JC}$	40			°C/W
Operating Temperature Range	T_J	+125			°C
Storage Temperature Range	T_{STG}	-65 to +125			°C
Operating Ambient Temperature Range	T_{op}	-65 to +150			°C

Electrical Characteristic

Characteristic	Symbol	SM17	SM18	SM19	UNIT
Maximum Instantaneous Forward Voltage ($I_F=1.0A$)	V_F	0.450	0.50	0.50	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c=25^\circ C$) (Rated DC Voltage, $T_c=100^\circ C$)	I_R	0.5 50			mA
Typical Junction Capacitance ($V_R=4.0V$, $f=1.0MHz$)	C_p	50			pF

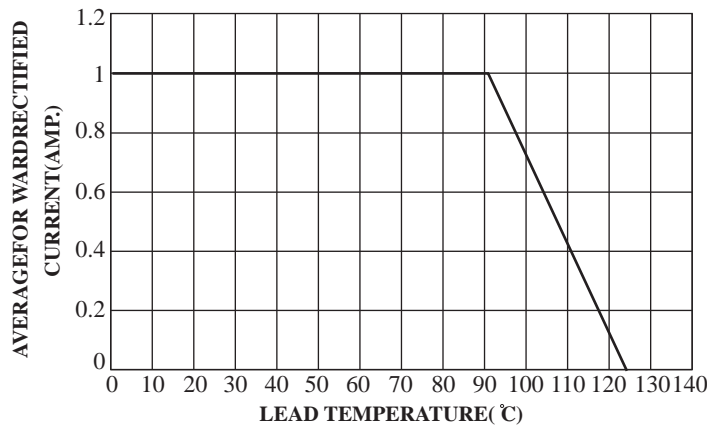


FIG.1 Forward Current Derating Curve

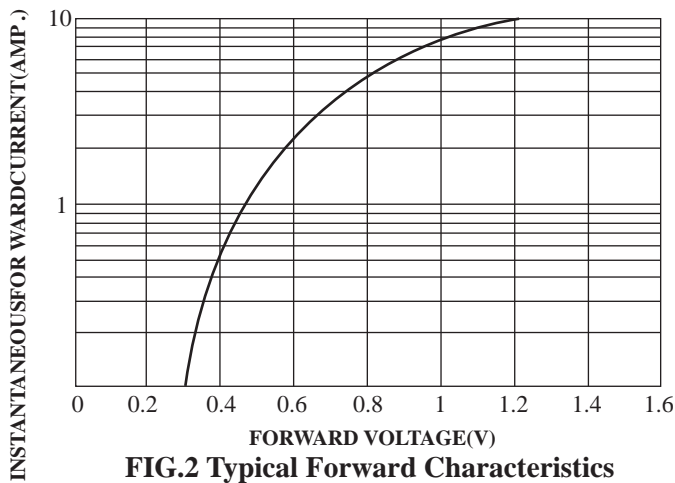


FIG.2 Typical Forward Characteristics

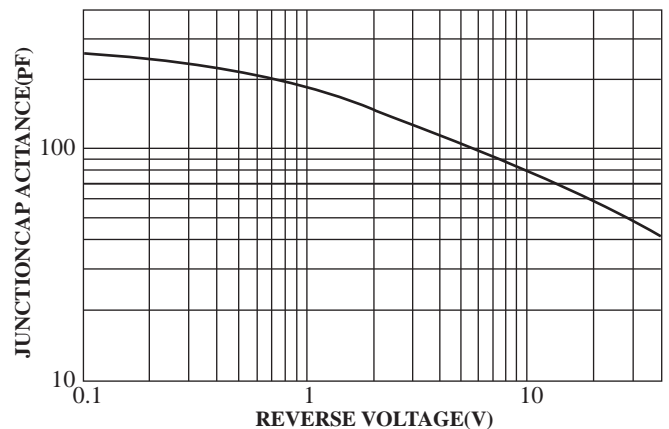


FIG.3 Typical Junction Capacitance

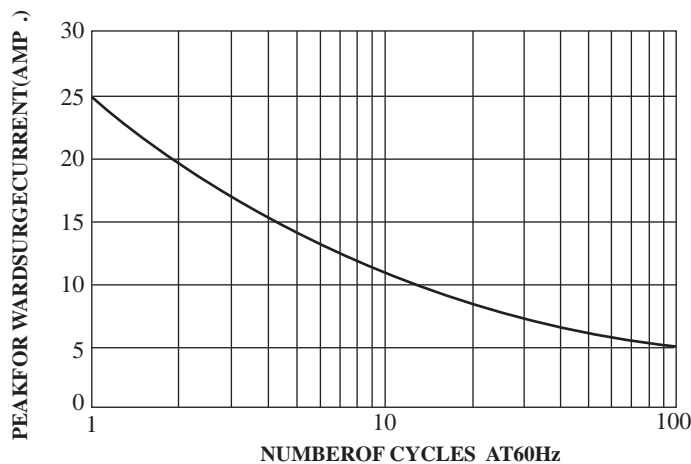


FIG.4 Peak Forward Surge Current