

### 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.

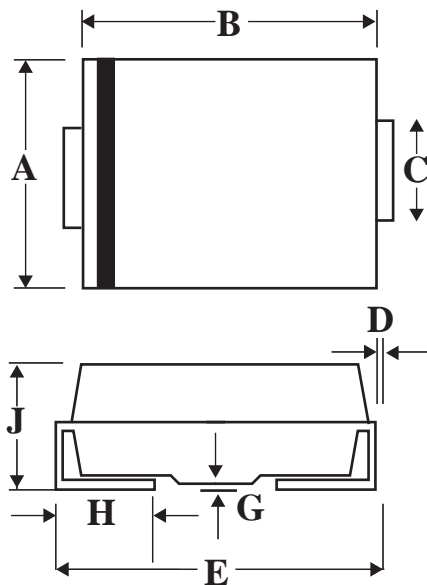
**SCHOTTKY BARRIER  
RECTIFIERS  
1.0 AMPERES  
20-40 VOLTS**



**SMA(DO-214AC)**

### SMA Outline Dimension

Unit:mm



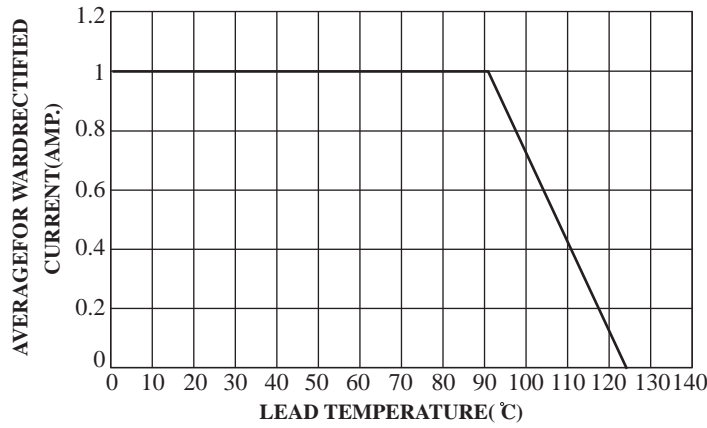
SMA		
Dim	Min	Max
<b>A</b>	2.20	2.92
<b>B</b>	4.00	4.60
<b>C</b>	1.27	1.63
<b>D</b>	0.15	0.31
<b>E</b>	4.48	5.59
<b>G</b>	0.10	0.20
<b>H</b>	0.76	1.52
<b>J</b>	1.70	2.62

## Maximum Rating

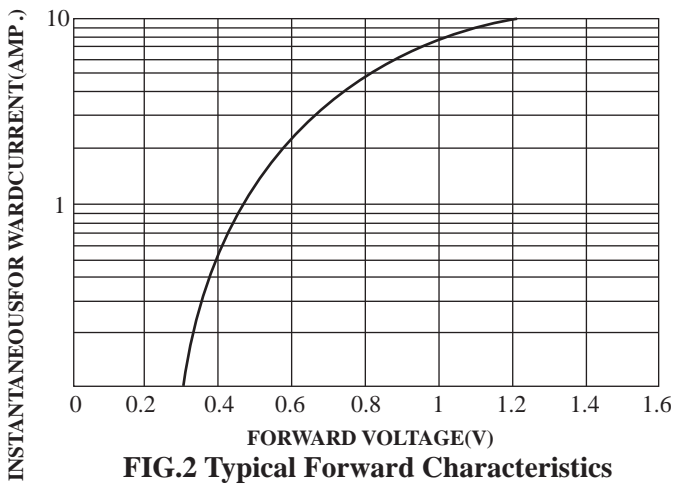
Characteristic	Symbol	SM17	SM18	SM19	UNIT
Peak Repetitive Reverse Voltage	$V_{RRM}$				
Working Peak Reverse Voltage	$V_{RWM}$	20	30	40	V
DC Blocking Voltage	$V_R$				
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectifier Forward Current	$I_{F(AV)}$	1.0			A
Peak Repetitive Forward Current (Rate $V_R$ , 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

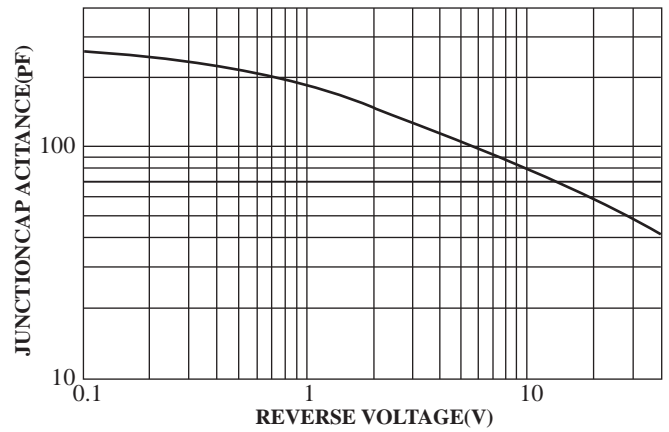
Characteristic	Symbol	SM17	SM18	SM19	UNIT
Maximum Instantaneous Forward Voltage ( $I_F=1.0A$ )	$V_F$	0.450	0.50	0.50	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c=25^\circ C$ ) (Rated DC Voltage, $T_c=100^\circ C$ )	$I_R$	0.5 50			mA
Typical Junction Capacitance ( $V_R=4.0V$ , $f=1.0MHz$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



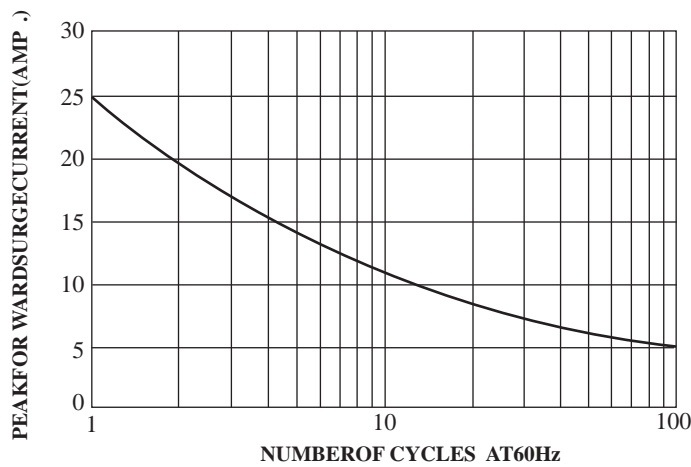
**FIG.1 Forward Current Derating Curve**



**FIG.2 Typical Forward Characteristics**



**FIG.3 Typical Junction Capacitance**



**FIG.4 Peak Forward Surge Current**