

Surface Mount Schottky Power Rectifiers

(Pb) Lead(Pb)-Free

Features:

- *Low Forward Voltage
- *Low Switching Noise
- *High Surge Capacity
- *Guarantee Reverse Avalance
- *Guard-ring 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

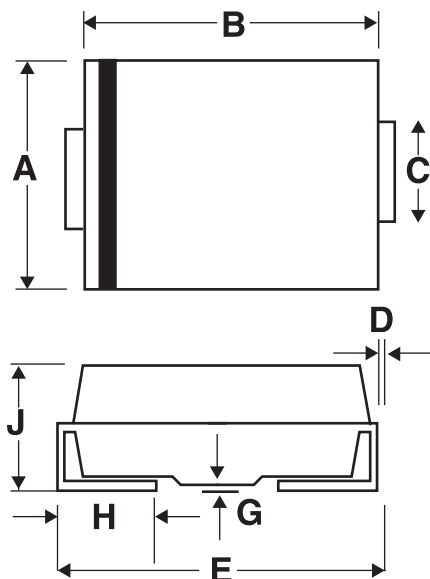
3.0 AMPERES
20-40 VOLTS



SMB(DO-214AA)

SMB Outline Dimensions

Unit:mm



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.80
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62

Maximum Rating

Characteristic	Symbol	MS20	MS21	MS22	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	$I_{F(AV)}$	3.0			A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20 KHz)	I_{FM}	3.0			A
Non-Repetitive Peak Square Current (Surge Applied at Rated Load Condition Halfwave, Single Phase, 60Hz)	I_{FSM}	100			A
Perating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to + 125			°C

Electrical Characteristic

Characteristic	Symbol	MS20	MS21	MS22	UNIT
Maximum Instanatneous Forward Voltage ($I_F=3.0Amp$)	V_F	0.475	0.500	0.525	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 80			mA
Typical Junction Capacitance ($V_R=40V, f=1.0MHz$)	C_p	300			pF

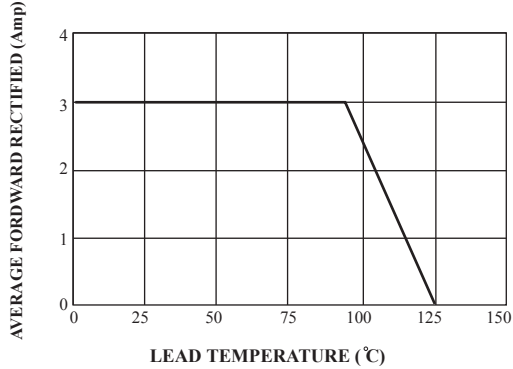


FIG.1 Forward Current Derating Curve

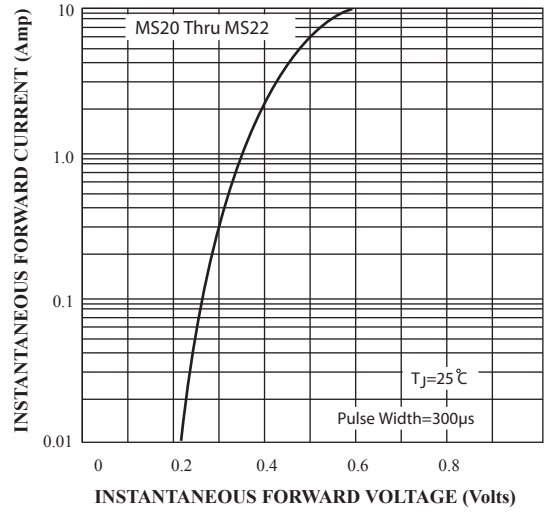


FIG.2 Typical Forward Characteristics

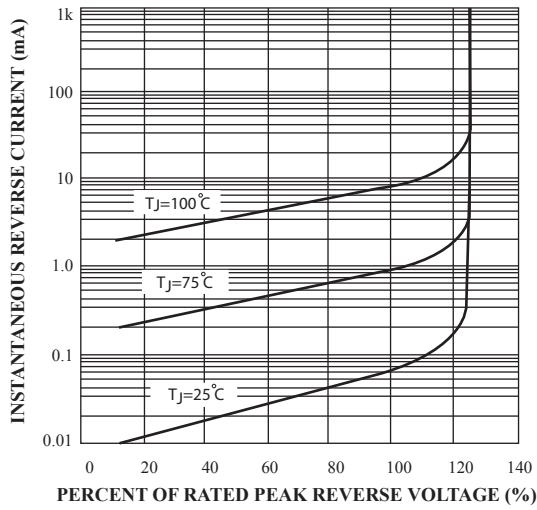


FIG.3 Typical Reverse Characteristics

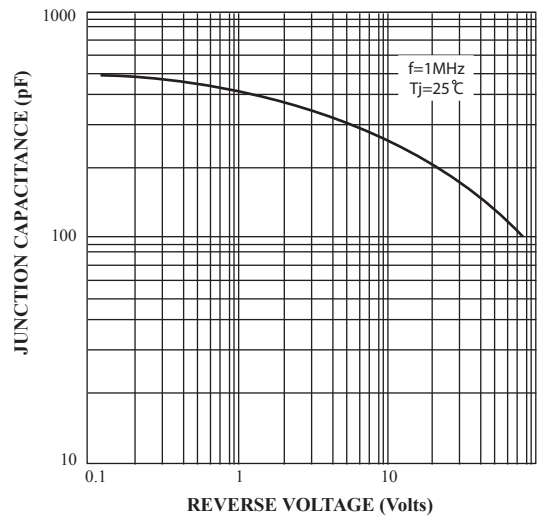


FIG.4 Typical Junction Capacitance

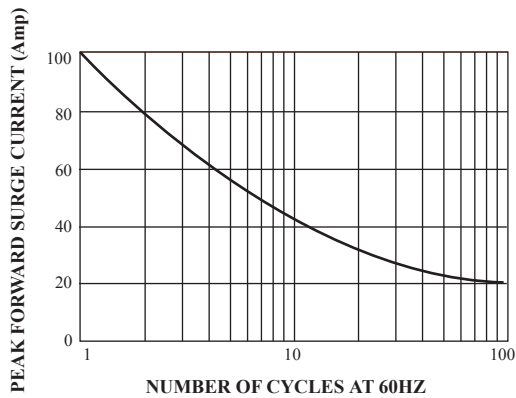


FIG.5 Peak Forward Surge Current