

Surface Mount 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°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * Moisture Sensivity Level: MSL-1



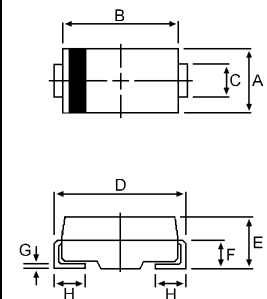
* In compliance with EU RoHs 2002/95/EC directives

SCHOTTKY BARRIER RECTIFIERS

**3.0 AMPERES
20-40 VOLTS**



DO-214AA(SMB)



MAXIMUM RATINGS

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_O	3.0			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	75			A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150			°C

DIM	MILLIMETERS	
	MIN	MAX
A	3.30	3.90
B	4.20	4.60
C	1.80	2.20
D	5.10	5.60
E	1.90	2.50
F		1.30
G		0.22
H	0.95	1.35

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	MS20	MS21	MS22	Unit
Maximum Instantaneous Forward Voltage ($I_F = 3.0$ Amp) ($I_F = 9.0$ Amp)	V_F	0.475 0.850	0.550 0.970		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 20		mA
Typical Thermal Resistance junction to case	$R_{\theta j-c}$	40			°C/w
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P	210	190		pF

CASE---
Transfer molded
plastic

POLARITY---
Cathode indicated
polarity band

MS20 Thru MS22

FIG-1 FORWARD CURRENT DERATING CURVE

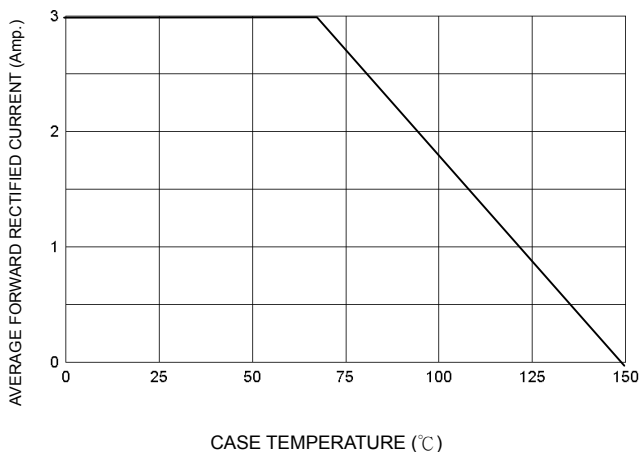


FIG-2 TYPICAL FORWARD CHARACTERISTICS

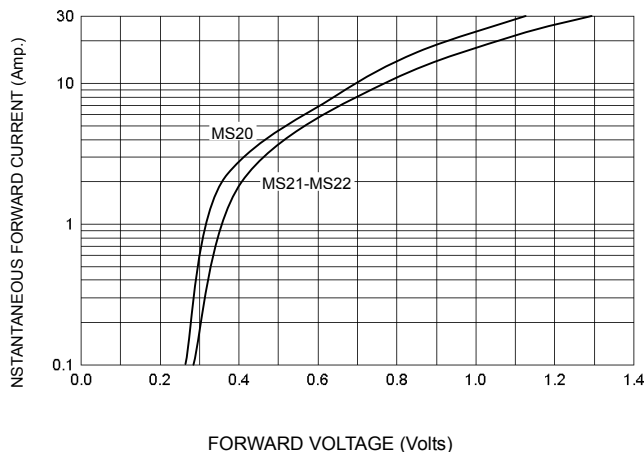


FIG-3 TYPICAL REVERSE CHARACTERISTICS

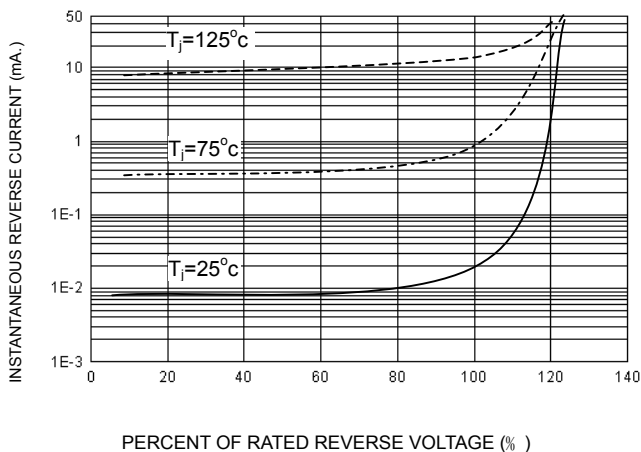


FIG-4 TYPICAL JUNCTION CAPACITANCE

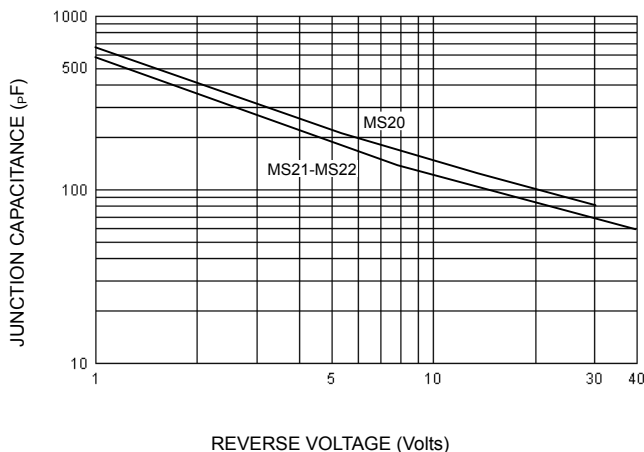


FIG-5 PEAK FORWARD SURGE CURRENT

