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.

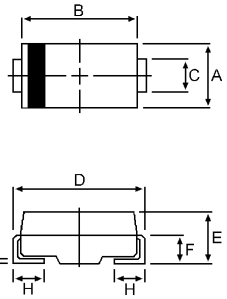
SCHOTTKY BARRIER RECTIFIERS

1.0 AMPERES
20-40 VOLTS

Featres

- ∗Low Forward Voltage.
- ∗Low Switching noise.
- ∗High Current Capacity
- ∗Guarantee Reverse Avalanche.
- ∗Guard-Ring for Stress Protection.
- ∗Low Power Loss & High efficiency.
- ∗150℃ Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction.
- ∗Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- ∗ ESD: 8KV(Min.) Human-Body Model
- ∗ *In compliance with EU RoHs 2002/95/EC directives*

DO-214AA(SMB)



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

CASE---
Transfer molded plastic

OLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	MS17	MS18	MS19	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 halfware, single phase, 60Hz)	I_{FSM}	25			A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +150			℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta j\text{-}c}$	60	℃/w

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	MS17	MS18	MS19	
Maximum Instantaneous Forward Voltage (I_F =1.0 Amp) (I_F =3.0 Amp)	V_F	0.450 0.750	0.550 0.875		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.5 20			mA
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	85	75		pF

MS17 Thru MS19

FIG-1 FORWARD CURRENT DERATING CURVE

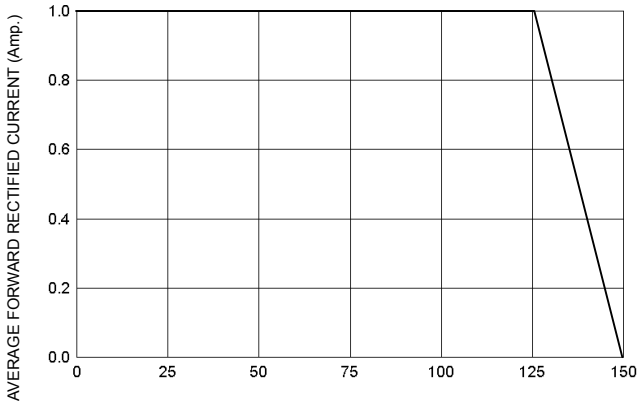


FIG-2 TYPICAL FORWARD CHARACTERISITICS

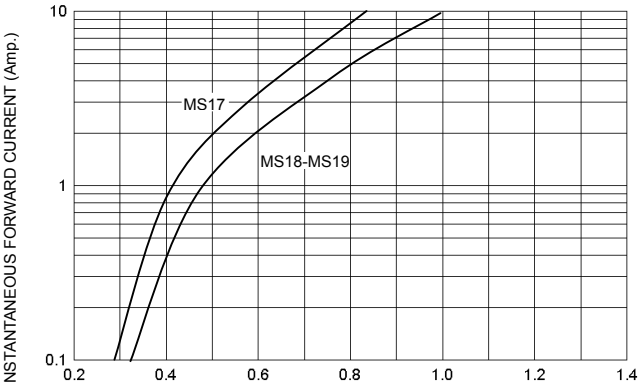


FIG-3 TYPICAL REVERSE CHARACTERISTICS

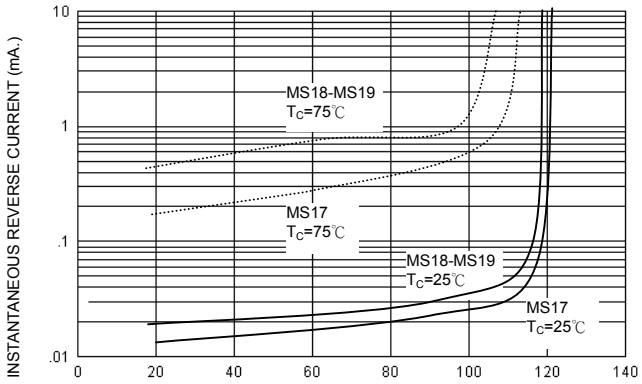


FIG-4 TYPICAL JUNCTION CAPACITANCE

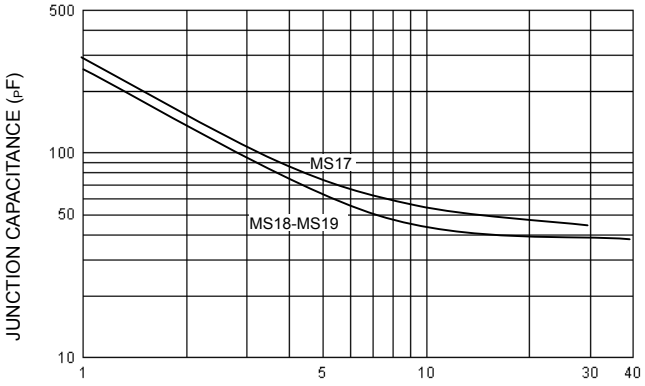
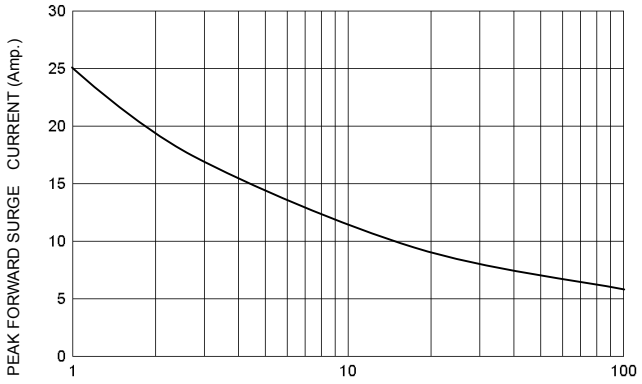


FIG-5 PEAK FORWARD SURGE CURRENT



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