MOSPEC

MBRS20100CT

Surface Mount
Schottky Barrier Rectifiers

SCHOTTKY BARRIER RECTIFIERS

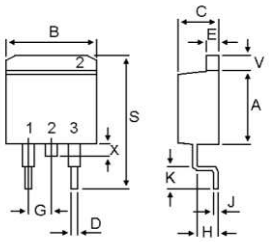
20 AMPERES
100 VOLTS

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. proprietary barrier technology allows for reliable operation up to 175℃ junction temperature. Typical applications are in switching Mode Power Supplies such as adaptors, DC/DC converters free-wheeling and polarity protection diodes.

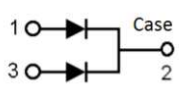
Features

- ＊Low Forward Voltage.
- ＊Low Switching noise.
- ＊High Current Capacity
- ＊Guarantee Reverse Avalanche.
- ＊Guard-Ring for Stress Protection.
- ＊Low Power Loss & High efficiency.
- ＊High Operating Junction Temperature
- ＊Low Stored Charge Majority Carrier Conduction.
- ＊Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- ＊Pb free
- ＊In compliance with EU RoHs directives

TO-263



DIM	MILLIMETERS	
	MIN	MAX
A	8.30	9.20
B	9.80	10.40
C	4.30	4.80
D	0.65	0.95
E	1.17	1.43
G	2.39	2.69
H	2.68	3.32
J	0.35	0.65
K	2.29	2.90
S	14.60	15.88
V	1.10	1.50
X	---	2.00



MAXIMUM RATINGS

Characteristic	Symbol	MBRS20100CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R)	$I_{F(AV)}$	10 20	A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-ware, single phase, 60Hz)	I_{FSM}	150	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +175	℃

THERMAL RESISTANCES

Characteristic	Symbol				Unit
Typical Thermal Resistance junction to case	$R_{\theta jc}$		5.4		℃/w

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) (I_F =10 Amp T_C = 25℃) (I_F =10 Amp T_C = 125℃)	V_F	--- ---	0.80 0.65	0.85 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	--- ---	2 5	10 ---	uA mA

FIG-1 FORWARD CURRENT DERATING CURVE

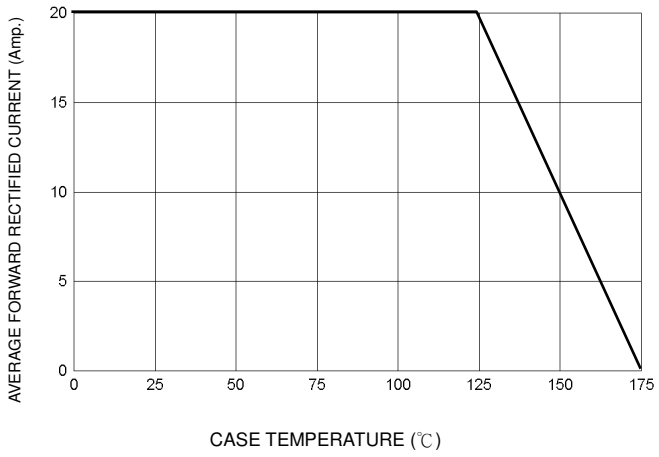


FIG-2 TYPICAL FORWARD CHARACTERISTICS

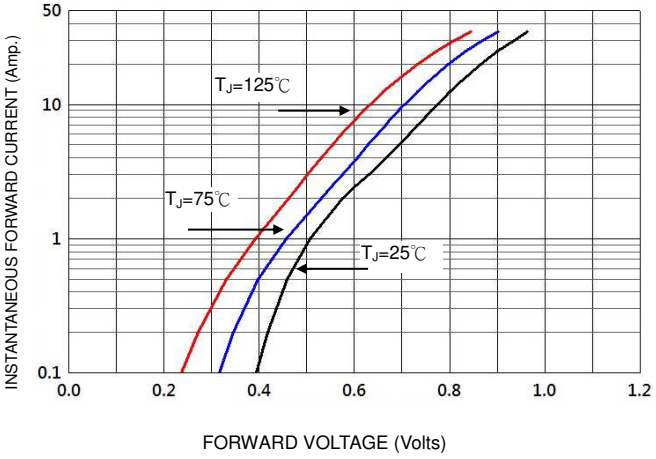


FIG-3 TYPICAL REVERSE CHARACTERISTICS

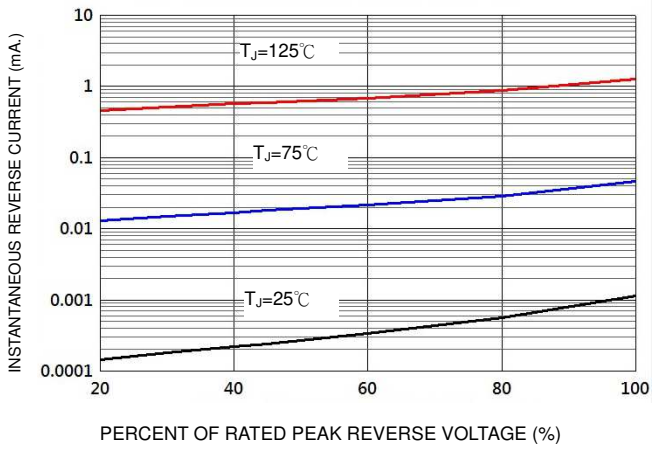


FIG-4 TYPICAL JUNCTION CAPACITANCE

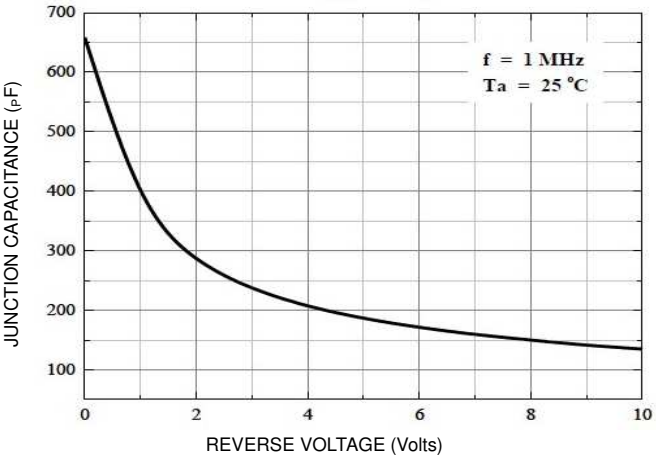
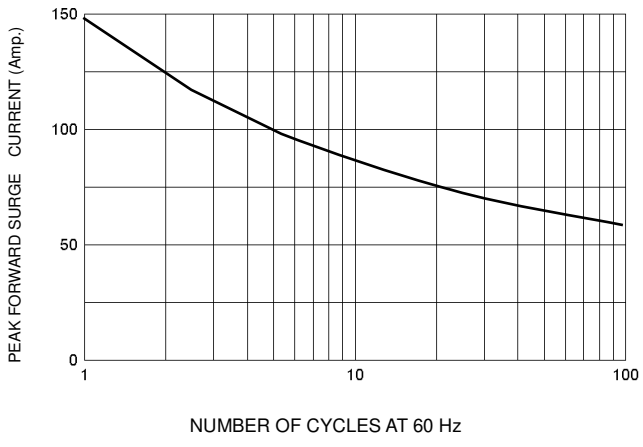


FIG-5 PEAK FORWARD SURGE CURRENT



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