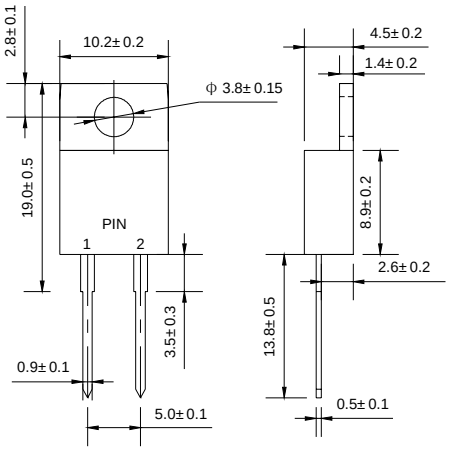
MBR1020-MBR10100

Schottky Barrier Rectifiers

VOLTAGE RANGE: 30 - 100 V
CURRENT: 10 A

TO-220AC



Dimensions in millimeters

Features

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ Guard ring for over voltage protection.

Mechanical Data

- ◇ Case:JEDEC TO-220AC,molded plastic body
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.069 ounces,1.96 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60Hz,resistive or inductive load.For capactive load,derate current by 20%.

		MBR 1020	MBR 1030	MBR 1035	MBR 1040	MBR 1045	MBR 1050	MBR 1060	MBR 1090	MBR 10100	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	35	40	45	50	60	90	100	V
Maximum RMS Voltage	V_{RMS}	14	21	25	28	32	35	42	63	70	V
Maximum DC blocking voltage	V_{DC}	20	30	35	40	45	50	60	90	100	V
Maximum average forw ard total device rectified current @T_C = 125°C	$I_{F(AV)}$	10									A
Peak forw ard surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150									A
Maximum forw ard voltage (Note 1) (I_F=10A,T_C=25℃)	V_F	-					0.80		0.80		V
(I_F=10A,T_C=125℃)		0.57					0.70		0.65		
(I_F=20A,T_C=25℃)		0.84					0.95		0.95		
(I_F=20A,T_C=125℃)		0.72					0.85		0.75		
Maximum reverse current @T_C=25℃	I_R	0.1									m A
at rated DC blocking voltage @T_C=125℃		15							6.0[3]		
Maximum thermal resistance (Note2)	$R_{\theta JC}$	2.0									℃/W
Operating junction temperature range	T_J	- 55 ---- + 150									℃
Storage temperature range	T_{STG}	- 55 ---- + 150									℃

NOTE: 1. Pulse test:300μs pulse width,1% duty cycle.
2. Thermal resistance from junction to case.
3.T_C=100℃

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Ratings AND Charactieristic Curves

FIG.1 -- FORWARD CURRENT DERATING CURVE

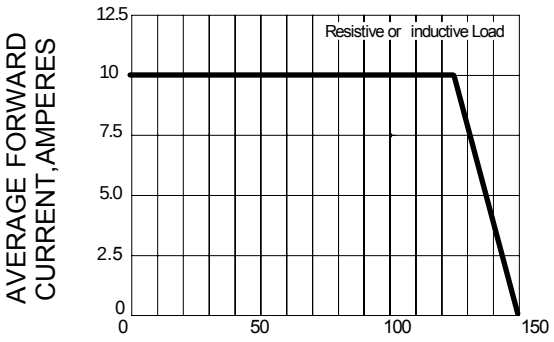

FIG.2 -- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

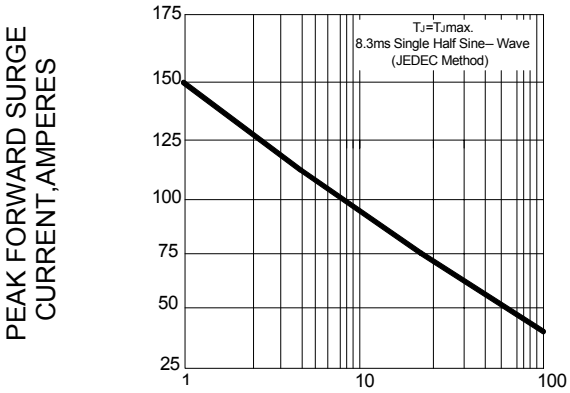

FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PERLEG

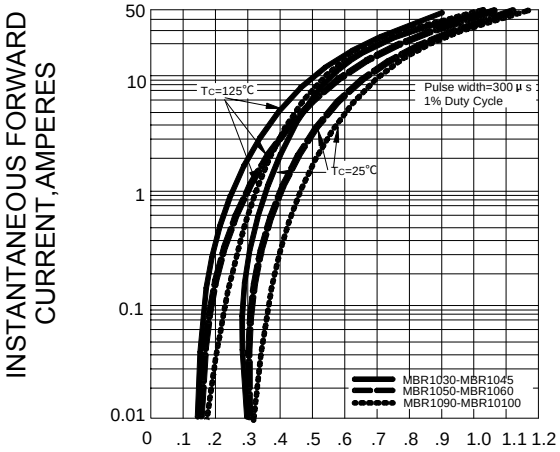

FIG.4 -- TYPICAL REVERSE CHARACTERISTICS