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MBR1030 - MBR1060

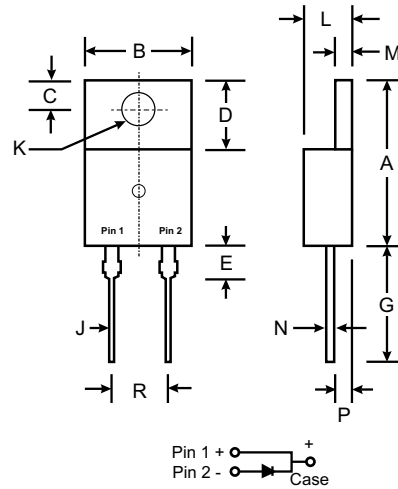
10A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
J	0.51	1.14
K	3.53 \varnothing	4.09 \varnothing
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	MBR 1030	MBR 1035	MBR 1040	MBR 1045	MBR 1050	MBR 1060	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	35	40	45	50	60	V
Working Peak Reverse Voltage	V _{RWM}							
DC Blocking Voltage	V _R							
RMS Reverse Voltage	V _{R(RMS)}	21	24.5	28	31.5	35	42	V
Average Rectified Output Current (Note 1)	I _O	10						A
@T _C = 125°C								
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150						A
Forward Voltage Drop	V _{FM}		0.84			0.95		V
@I _F = 10A, T _C = 25°C			0.57			0.70		
@I _F = 10A, T _C = 125°C								
Peak Reverse Current	I _{RM}		0.1			0.1		mA
@T _C = 25°C			15			25		
@T _C = 125°C								
Typical Junction Capacitance (Note 2)	C _j	400						pF
Typical Thermal Resistance Junction to Case (Note 1)	R _{θJc}	2.5						°C/W
Voltage Rate of Change (Rated V _R)	dV/dt	1000						V/μs
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150						°C

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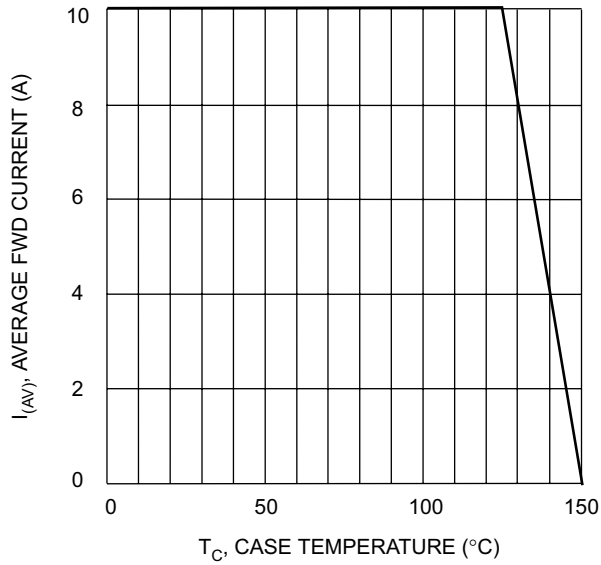


Fig. 1 Forward Current Derating Curve

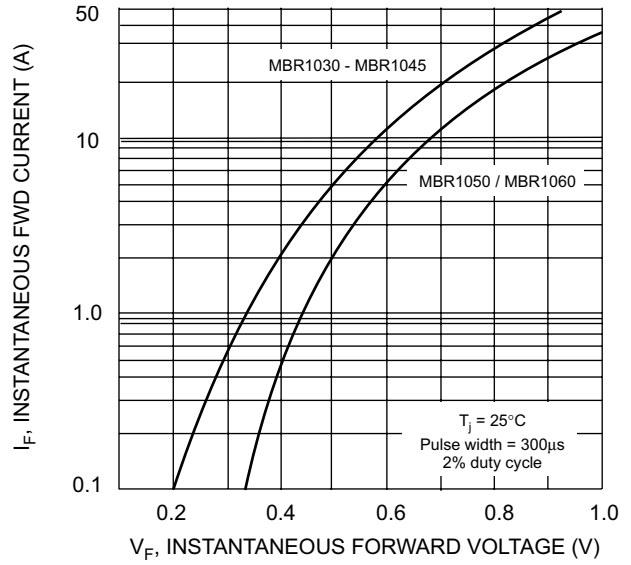


Fig. 2 Typical Forward Characteristics

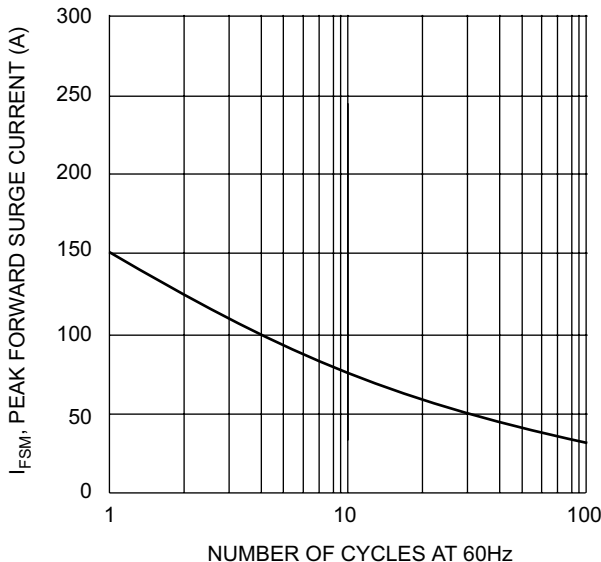


Fig. 3 Max Non-Repetitive Surge Current

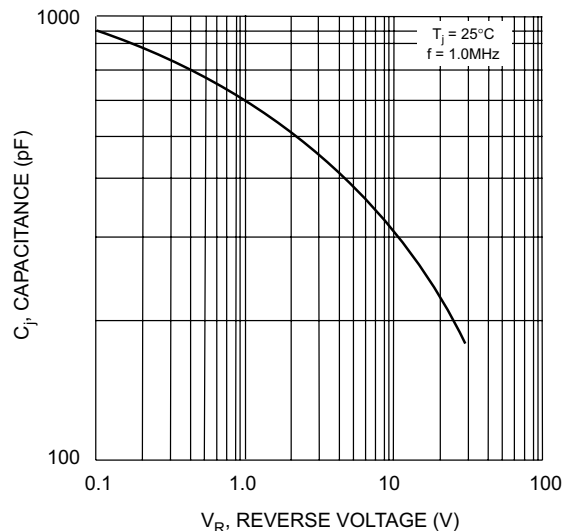


Fig. 4 Typical Junction Capacitance

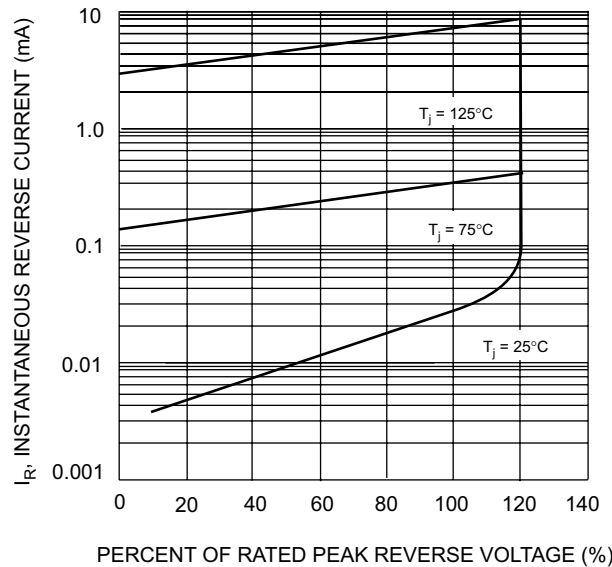


Fig. 5 Typical Reverse Characteristics