SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 35 --- 60 V
CURRENT: 16.0 A

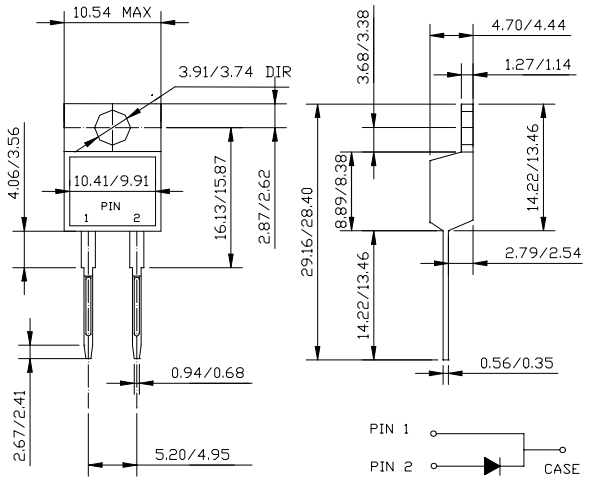
FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop,Low switching losses
- ◇ High surge capability
- ◇ For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC TO-220AC,molded plastic
- ◇ Terminals: Leads solderable per MIL- STD-750,Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.064 ounce, 1.81 grams
- ◇ Mounting position: Any

TO-220AC



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

		MBR1635	MBR1640	MBR1645	MBR1650	MBR1660	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	35	40	45	50	60	V
Maximum RMS voltage	V_{RMS}	25	28	32	35	42	V
Maximum DC blocking voltage	V_{DC}	35	40	45	50	60	V
Maximum average forw ard rectified current @T_A=133℃	$I_{(AV)}$	16.0					A
Peak repetitive forw ard current at T_C=125℃	I_{FSM}	32.0					A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=125℃	I_{FSM}	150					A
Maximum instantaneous forward voltage at (Note 1) I_F=16A,T_C=25℃	V_F	0.63			0.75		V
I_F=16A,T_C=125℃		0.57			0.65		
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=125℃	I_R	0.2			1.0		mA
		40.0			50.0		
Typical thermal resistance (Note2)	$R_{\theta JC}$	1.5					℃/W
Operating junction temperature range	T_J	-65 --- +125					℃
Storage temperature range	T_{STG}	-65 --- +150					℃

NOTE: 1. Pulse test : 300 μs pulse width,1% duty cycle.
2.Thermal resistance junction to case

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FIG.1 – FORWARD CURRENT DERATING CURVE

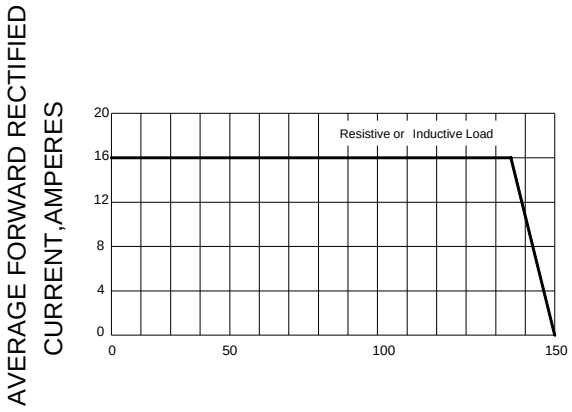

FIG.2 –MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

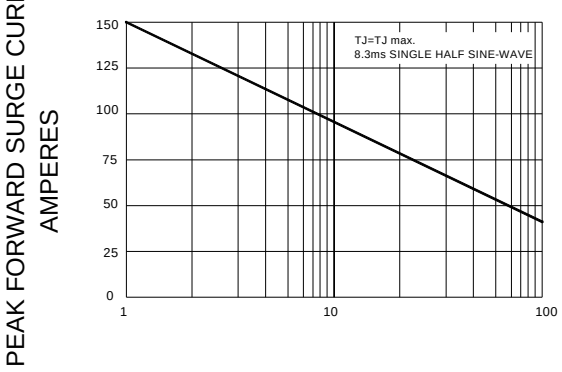

FIG.3 –TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

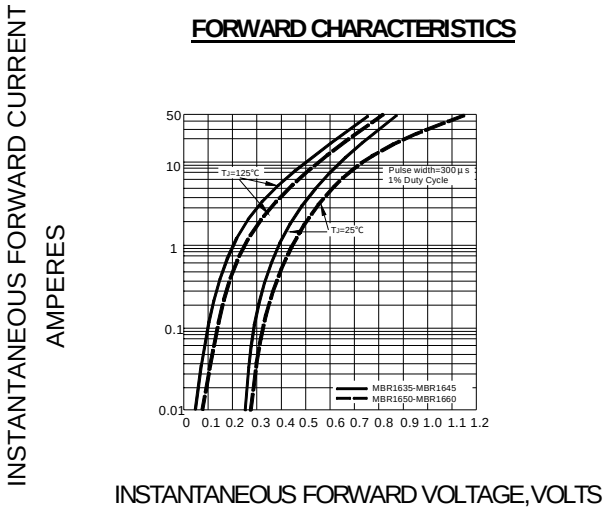

FIG.4–TYPICAL REVERSE CHARACTERISTICS

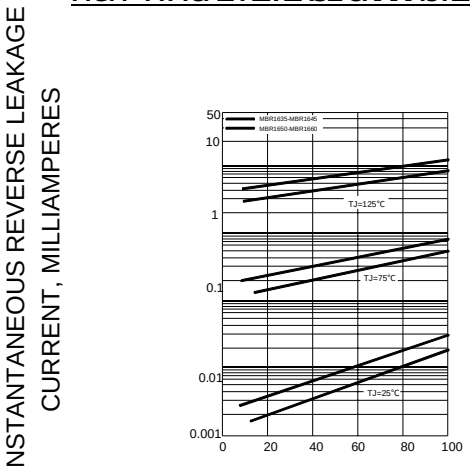

FIG.5–TYPICAL JUNCTION CAPACITANCE

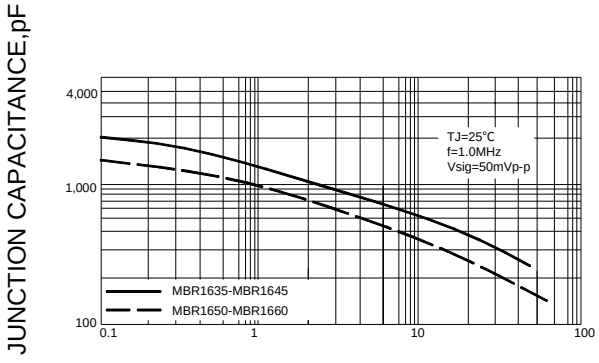

FIG.6–TYPICAL TRANSIENT THERMAL IMPEDANCE