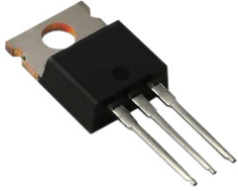


Schottky Barrier Rectifier



Features:

- Schottky barrier chip
- Guard ring for over voltage protection
- Low power loss, high efficiency
- Low reverse leakage current
- High surge current capability
- Plastic material has UL flammability classification 94V-0

Mechanical Data:

Case	: TO-220AB Type, molded plastic
Terminals	: Pure tin plated, lead free solderable per MIL-STD-750, method 2026
Polarity	: As marked on the body
Weight	: 2.1 grams (approx.)
Mounting Position	: Any
Reverse Voltage	: 45 to 200 Volts
Forward Current	: 20 Amperes

Typical Applications:

For use in low voltage, high frequency inverters mode power supplies, freewheeling diode and polarity protection application.

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	MBR2045CT+	MBR20200CT+	Unit
Max. Repetitive Peak Reverse Voltage	V_{RRM}	45	200	V
Max. RMS Voltage	V_{RMS}	31.5	140	
Max. DC Blocking Voltage	V_{DC}	45	200	
Max. Average Forward	$I_{F(AV)}$	20		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	150		
Max. Forward Voltage at 10A per leg	V_F	0.7	0.92	V
Max. DC Reverse Current Rated DC Blocking Voltage	I_R	0.15 15	0.1 7.5	mA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.2		°C/W
Operating Temperature Range	T_J	-55 to +150		°C
Storage Temperature Range	T_{STG}	-55 to +150		°C

Notes:

1. Mounted on 14mm × 14mm pad areas, 1oz. FR4 P.C.B.
2. Free air, mounted on recommended copper pad area.
3. Pulse test: 300us pulse width, 1% duty cycle.
4. Pulse test: Pulse width \leq 40ms
5. The typical data above is for reference only

Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

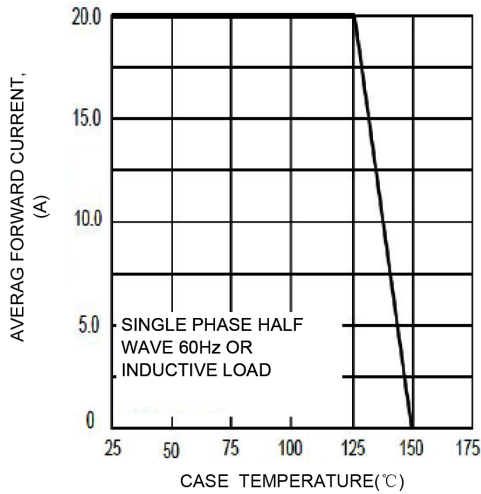


FIG.2-INSTANTANEOUS FORWARD CHARACTERISTICS

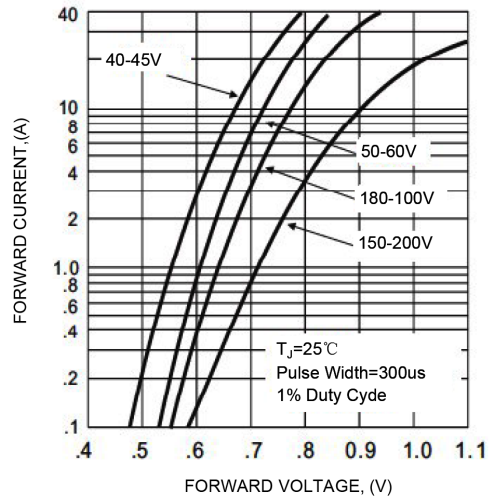


FIG. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

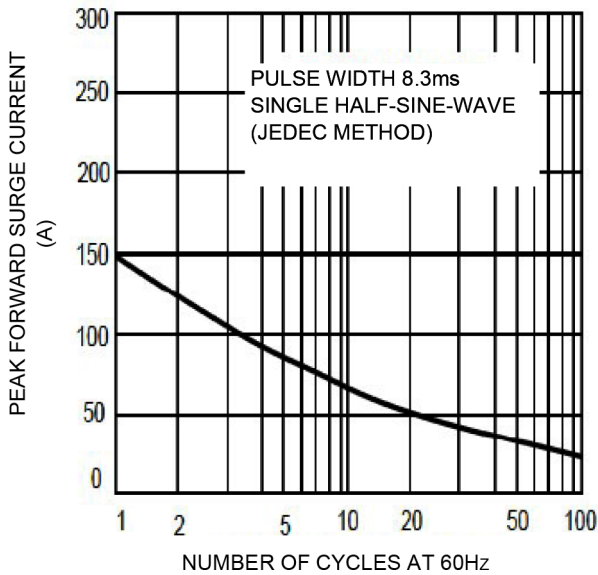
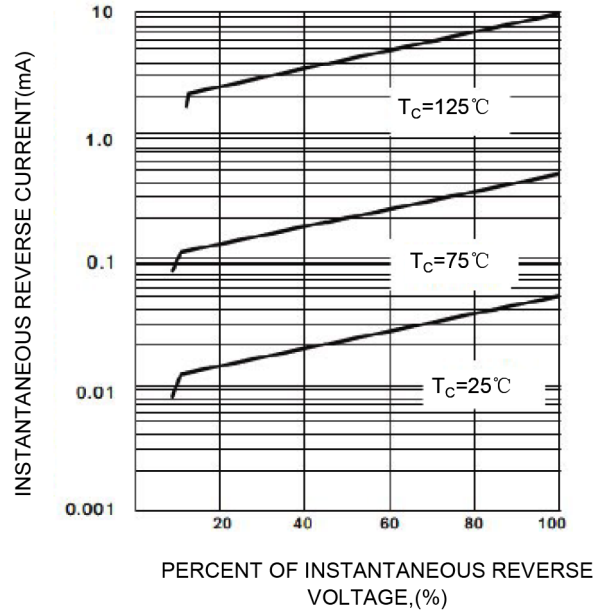


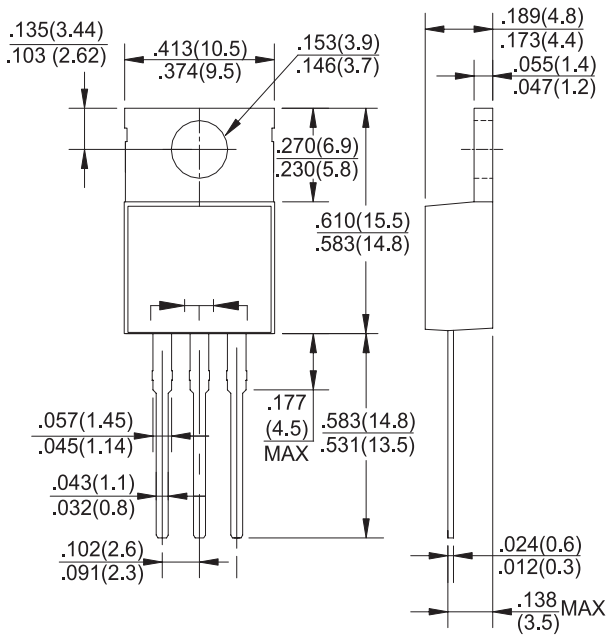
FIG.4-TYPICAL REVERSE CHARACTERISTICS



Schottky Barrier Rectifier

Dimensions:

TO-220AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBR2045CT+
	MBR20200CT+

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