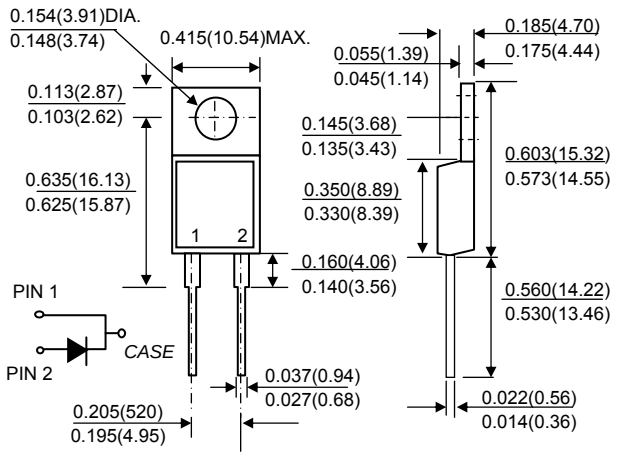
MBR2045

SCHOTTKY BARRIER RECTIFIER DIODE

PRV : 45 Volts
I_O : 20 Amperes

TO-220AC



Dimensions in inches and (millimeters)

FEATURES :

* High current capability
* Low forward voltage drop
* High surge capacity
* Low power loss, High efficiency
* Guard ring for transient protection
* Pb / RoHS Free

MECHANICAL DATA :

* Case : JEDEC TO-220AC molded plastic body
* Terminals: Plated leads, solderable per MIL-STD-750 Method 2026
* Polarity: As marked
* Mounting Position: Any
* Weight : 2.24 grams (Approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Current at Tc = 135 °C	$I_{F(AV)}$	20	A
Maximum Peak Forward Surge Current @ 8.3 ms sine wave	I_{FSM}	300	A
Maximum Instantaneous Forward Voltage at I_F = 20 A	V_F	0.65	V
Maximum Reverse Current at @ (T_J = 25 °C)	I_R	1.0	mA
Rated DC Blocking Voltage (Note 1) @ (T_J = 125 °C)	$I_{R(H)}$	70	mA
Thermal Resistance Junction to Case	$R_{\Theta JC}$	1.5	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	- 55 to + 175	°C

Note :

(1) Pulse Test : Pulse Width = 300 µs, Duty Cycle = 2%.

RATING AND CHARACTERISTIC CURVES (MBR2045)

FIG.1 - FORWARD CURRENT DERATING CURVE

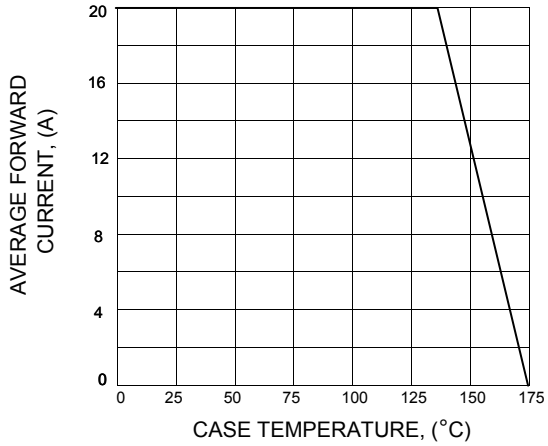


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

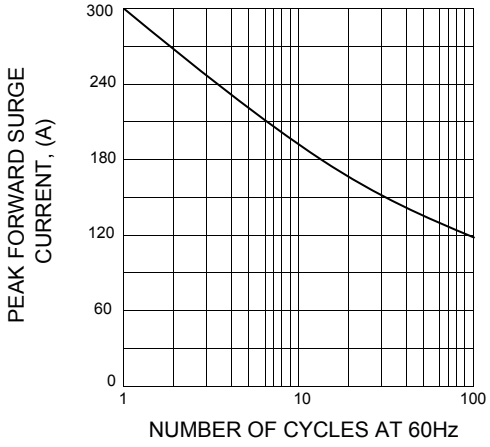


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

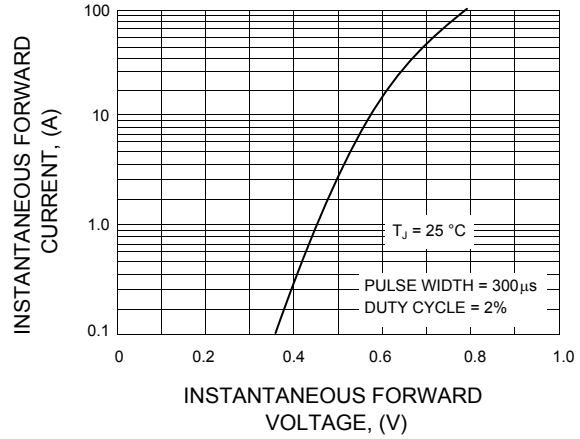


FIG.4 - TYPICAL REVERSE CHARACTERISTICS