MBR1090CT ~ MBR10100CT

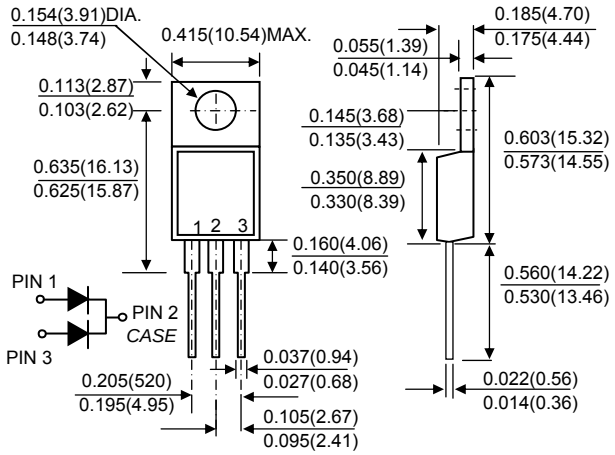
SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 90~100 Volts
Io : 10 Amperes

FEATURES :
* Guardring for overvoltage protection
* Low power loss, high efficiency
* Low forward voltage drop
* High forward surge capability
* High frequency operation
* Pb / RoHS Free

MECHANICAL DATA :
* Case : TO-220AB Molded plastic
* Polarity : As marked on the body
* Mounting position : Any
* Weight : 2.24 grams

TO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Tc = 25 °C unless otherwise noted)

RATINGS	SYMBOL	MBR1090CT	MBR10100CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	90	100	V
Maximum Working Peak Reverse Voltage	V_{RWM}	90	100	V
Maximum DC Blocking Voltage	V_{DC}	90	100	V
Maximum Average Forward Rectified Total device	$I_{F(AV)}$	10		A
Current at Tc = 105 °C Per diode		5.0		
Peak Forward Surg Current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120		A
Maximum Instantaneous Forward Voltage (Note 1) at I_F = 5 A, T_C = 25 °C	V_F	0.85		V
at I_F = 5 A, T_C = 125 °C		0.75		
Maximum Average Reverse Current at T_J = 25 °C	I_R	0.1		mA
Rate Peak Reverse Voltage (Note 1) T_J = 100 °C		6.0		
Typical Thermal Resistance (Junction to Case)	$R_{\theta JC}$	4.4		°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-65 to + 150		°C

Note :
(1) Pulse test : 300 µs pluse width, 1% duty cycle.

RATING AND CHARACTERISTIC CURVES (MBR1090CT ~ MBR10100CT)

FIG.1 - FORWARD CURRENT DERATING CURVE

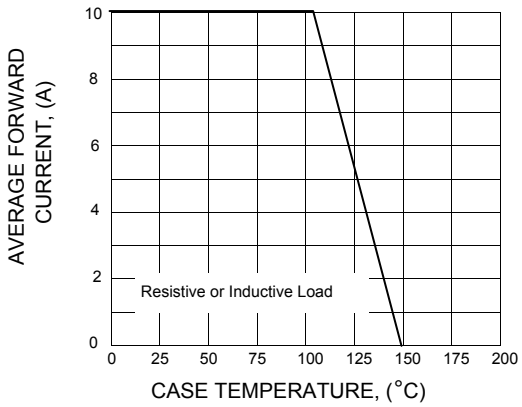


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

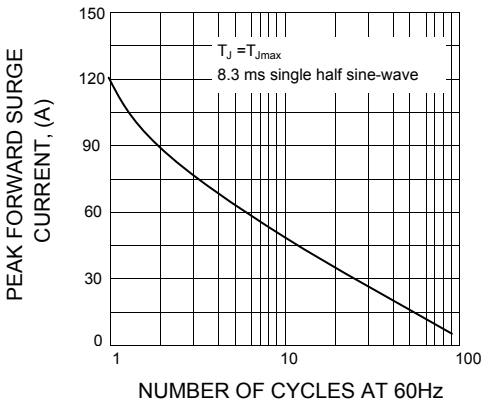


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS (PER DIODE)

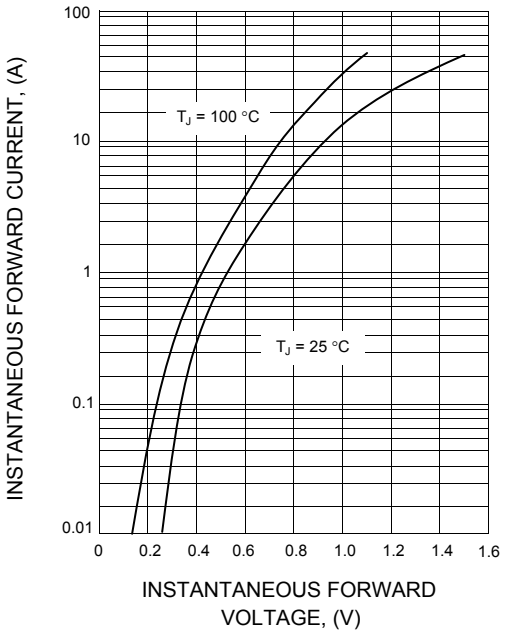


FIG.4 - TYPICAL REVERSE CHARACTERISTICS (PER DIODE)