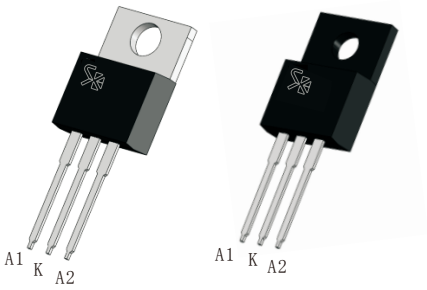
MBR1040CT/TF THRU MBR10200CT/TF

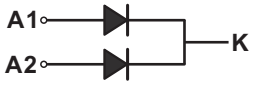
SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

Forward Current - 10 A



TO-220 TO-220F



FEATURES

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

Mechanical data

- Case: TO-220
- Approx. Weight: 1.9g (0.067oz)
- Case: TO-220F
- Approx. Weight: 2.1g (0.07oz)
- Terminals: Lead solderable per MIL-STD-202, Method 208

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified

CHARACTERISTICS	TO-220 / TO-220F	MBR1040CT / MBR1040CTF	MBR1045CT / MBR1045CTF	MBR1060CT / MBR1060CTF	MBR10100CT / MBR10100CTF	MBR10150CT / MBR10150CTF	MBR10200CT / MBR10200CTF	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current — Per diode / Per device	$I_{F(AV)}$	5 / 10						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) per diode	I_{FSM}	100						A
Max Instantaneous Forward Voltage at 5 A(per diode)	V_F	0.70		0.75	0.85	0.90	0.92	V
Maximum DC Reverse Current T_a = 25°C / at Rated DC Reverse Voltage T_a =125°C	I_R	0.1 / 20			0.05 / 20			mA
Typical Junction Capacitance (1)	C_j	600		400				pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	45						°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150				-55 ~ +175		°C
Storage Temperature Range	T_{stg}	-55 ~ +150				-55 ~ +175		°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

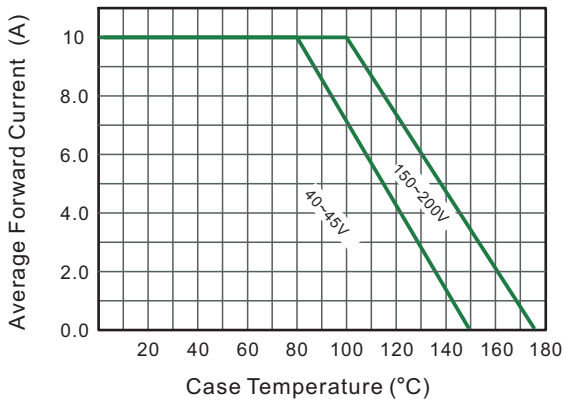


Fig.2 Typical Reverse Characteristics

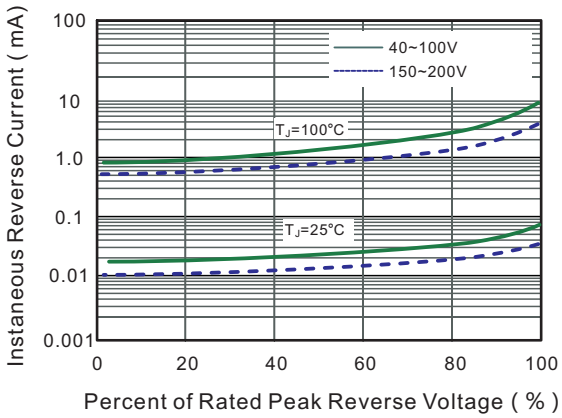


Fig.3 Typical Forward Characteristic(per leg)

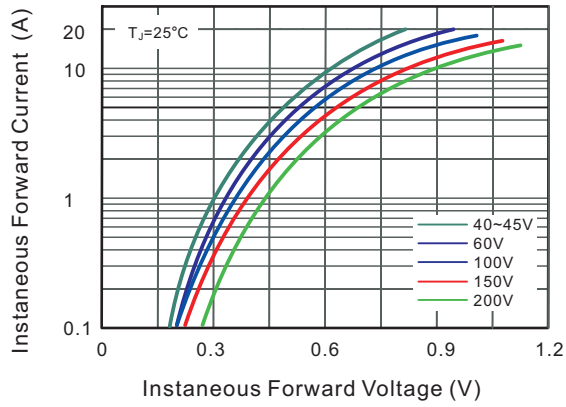


Fig.4 Typical Junction Capacitance

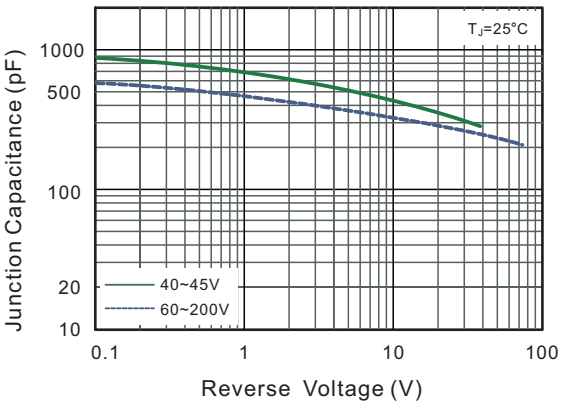


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

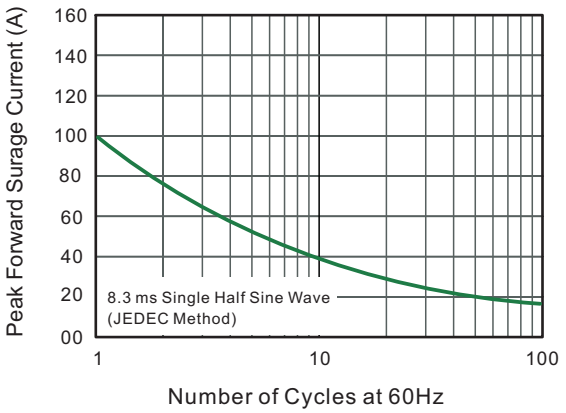
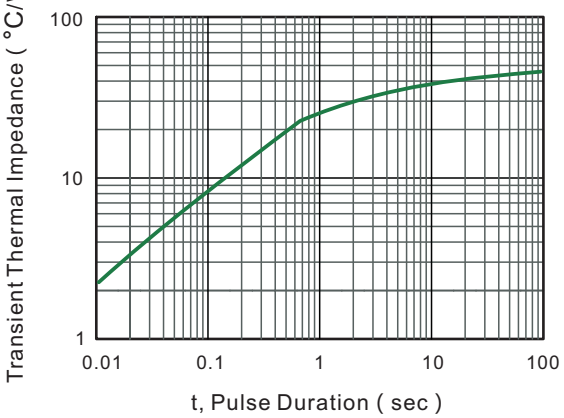
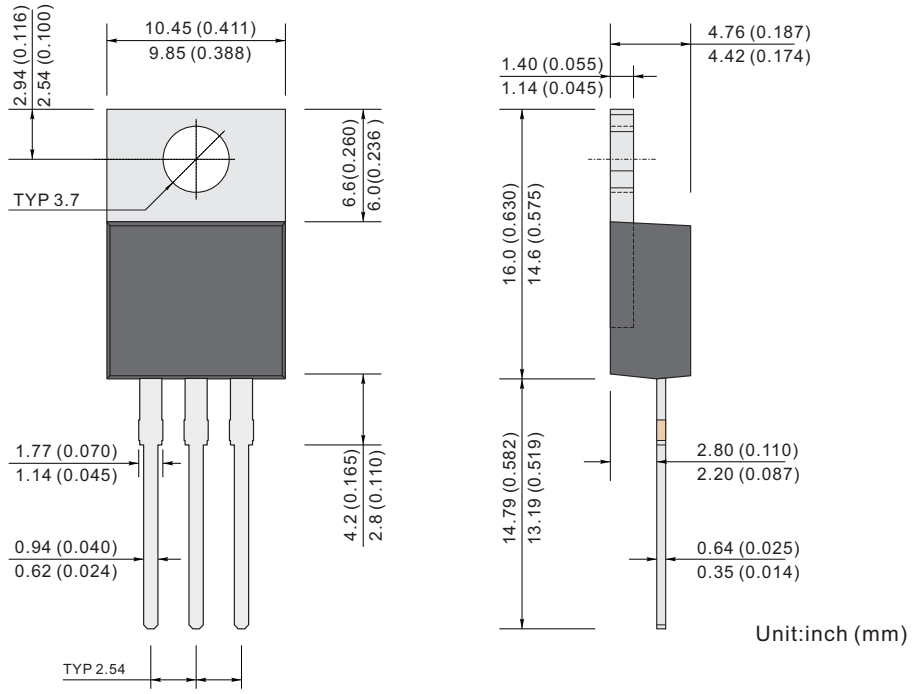


Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

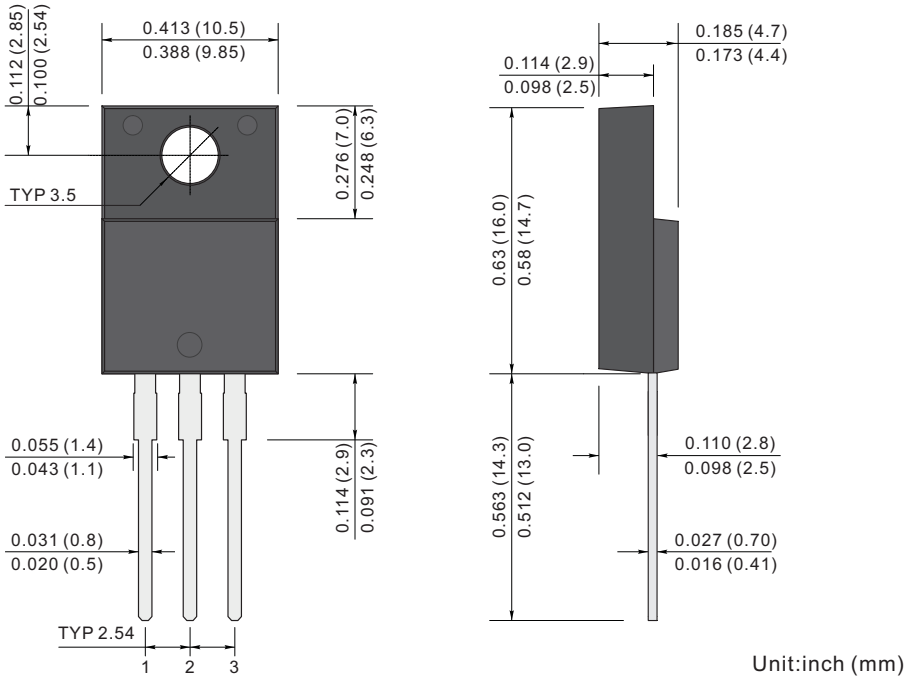
TO-220



Unit:inch (mm)

PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

TO-220F



Unit:inch (mm)