

## SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

Forward Current - 40 A

### FEATURES

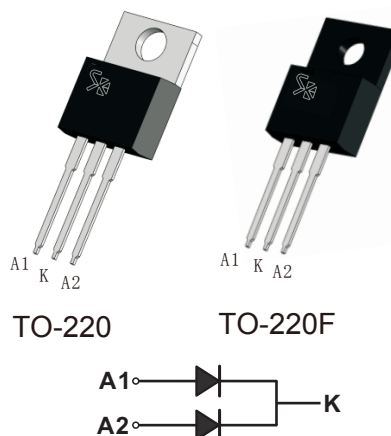
- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

### 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°C ambient temperature unless otherwise specified



CHARACTERISTICS	TO-220	MBR4040CT	MBR4045CT	MBR4060CT	MBR40100CT	MBR40150CT	MBR40200CT	Units
	TO-220F	MBR4040CTF	MBR4045CTF	MBR4060CTF	MBR40100CTF	MBR40150CTF	MBR40200CTF	
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	$I_{F(AV)}$	20 40						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) per diode	$I_{FSM}$	250						A
Max Instantaneous Forward Voltage at 20 ADC Per leg	$V_F$	0.70		0.75	0.85	0.90	0.92	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	$I_R$	0.1 20			0.05 20			mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	600		400				pF
Typical Thermal Resistance TO-220 TO-220F	$R_{\theta JC}$	2 4						°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

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

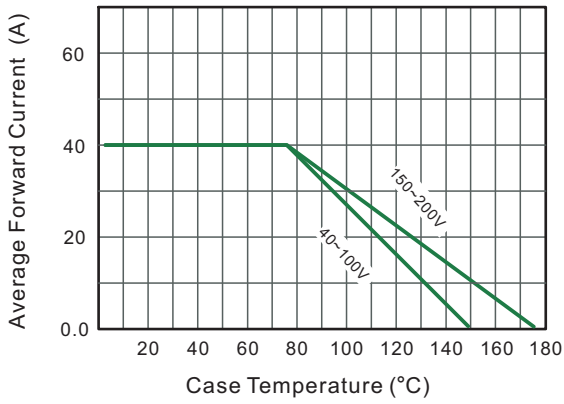


Fig.2 Typical Reverse Characteristics

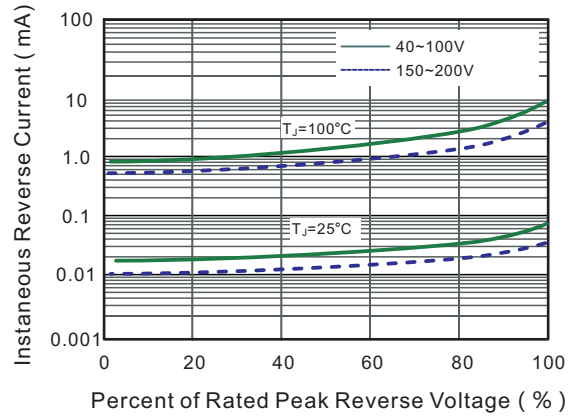


Fig.3 Typical Forward Characteristic(per leg)

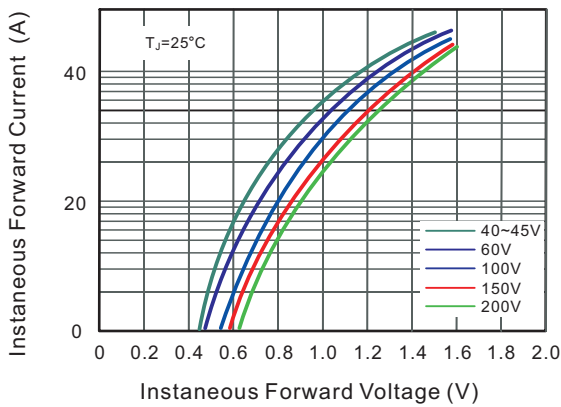


Fig.4 Typical Junction Capacitance

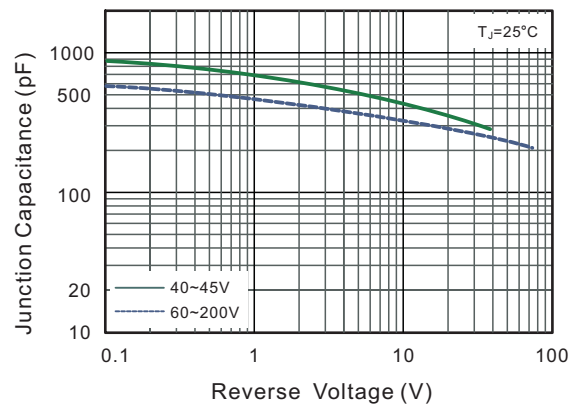


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

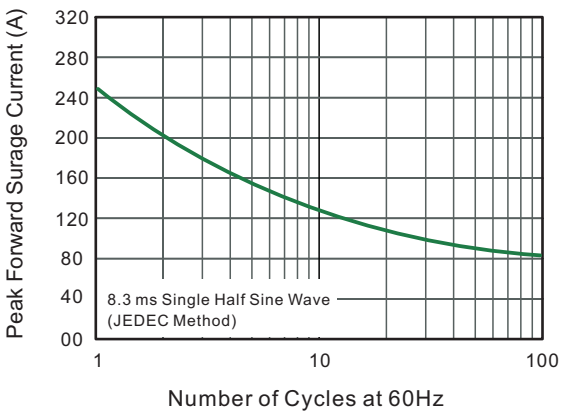
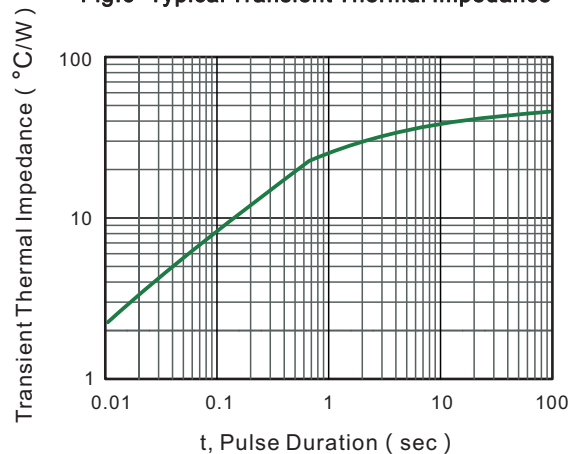


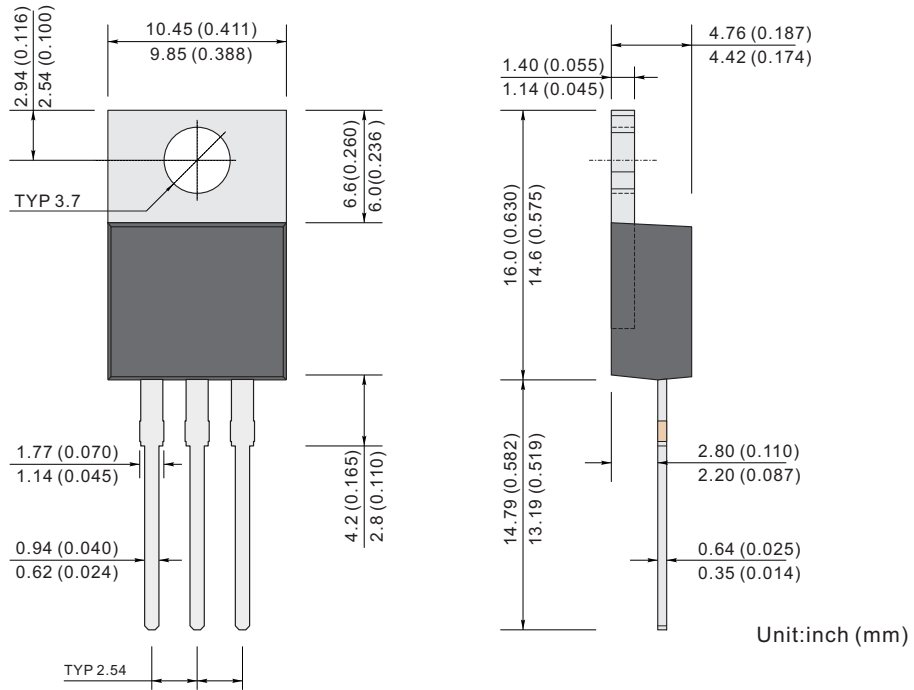
Fig.6- Typical Transient Thermal Impedance



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-220



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-220F

