



MBR2040CT/TF THRU MBR20200CT/TF

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 200 V

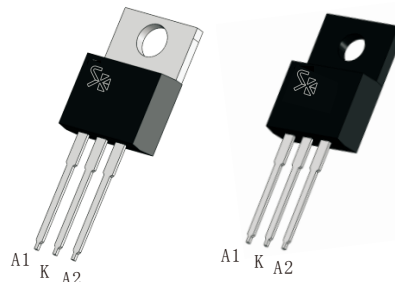
Forward Current - 20 A

FEATURES

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

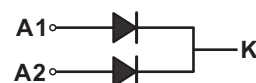
Mechanical data

- 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



TO-220

TO-220F



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

CHARACTERISTICS	TO-220	MBR2040CT	MBR2045CT	MBR2060CT	MBR20100CT	MBR20150CT	MBR20200CT	Units
	TO-220F	MBR2040CTF	MBR2045CTF	MBR2060CTF	MBR20100CTF	MBR20150CTF	MBR20200CTF	
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)}	10 20						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) per diode	I _{FSM}	150						A
Max Instantaneous Forward Voltage at 10 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 _{θJA}	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.



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Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

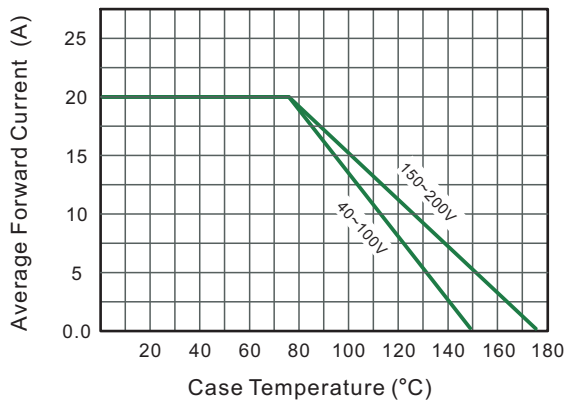


Fig.2 Typical Reverse Characteristics

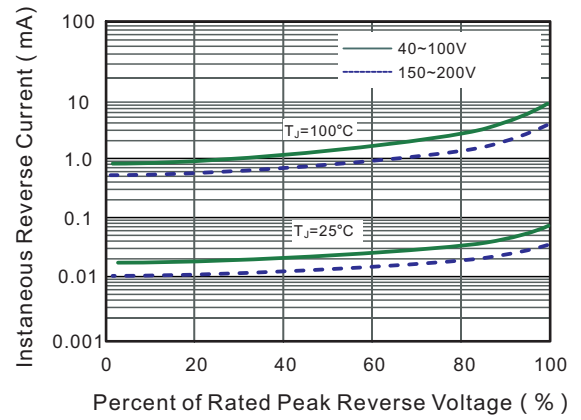


Fig.3 Typical Forward Characteristic(per leg)

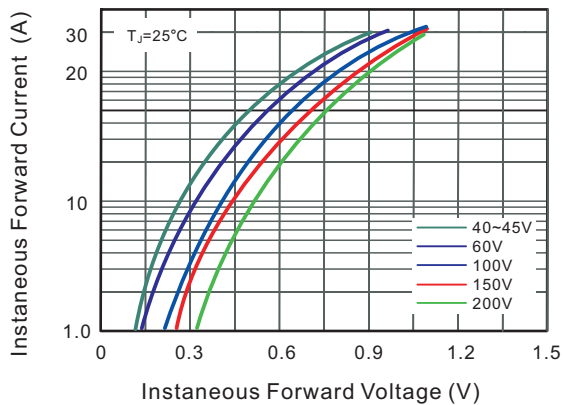


Fig.4 Typical Junction Capacitance

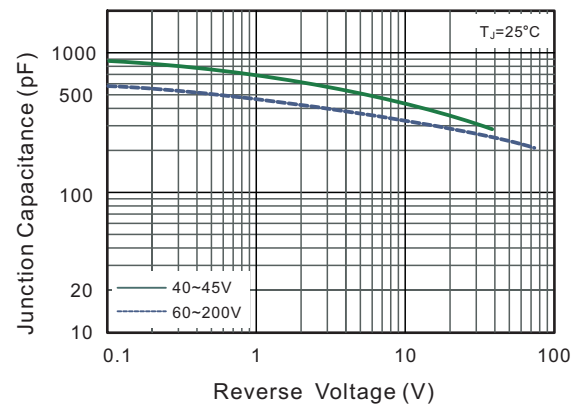


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

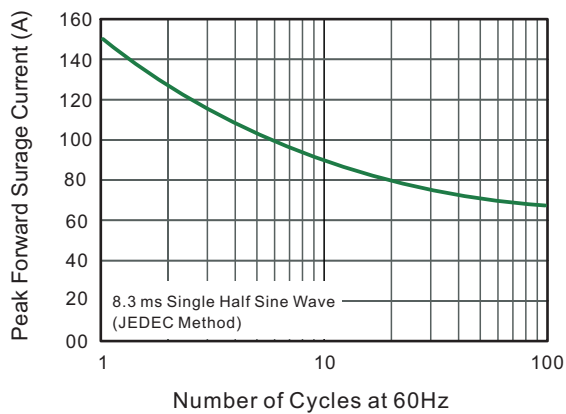
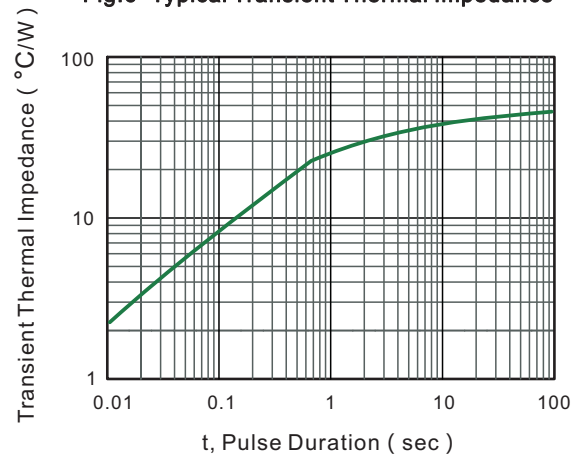


Fig.6- Typical Transient Thermal Impedance





TO-220

Unit:inch (mm)

TO-220F

Unit:inch (mm)