



# MBR2040CT~MBR20200CT 20.0Amp Schottky Barrier Rectifiers

## Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed  
250°C/10 seconds at terminals

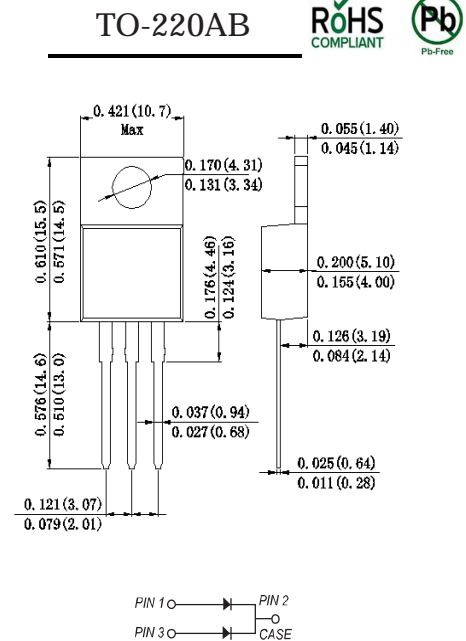
## Mechanical Data

Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any



Dimensions in inches and (millimeters)

## Maximum Ratings And Electrical Characteristics

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

Parameter	SYMBOLS	MBR 2040CT	MBR 2045CT	MBR 2060CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	UNITS
Maximum repetitive 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 at $T_c=110^\circ\text{C}$ per device per diode	$I_{(AV)}$	20.0 10.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150.0						A
Maximum instantaneous forward voltage per diode at 10.0A	$V_F$	0.55		0.70	0.85	0.95		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	0.5 50			0.05 10			mA
Typical thermal resistance	$R_{qJC}$	35.0						°C/W
Operating junction temperature range	$T_J$	-55 to +150						°C
Storage temperature range	$T_{STG}$	-55 to +150						°C



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## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

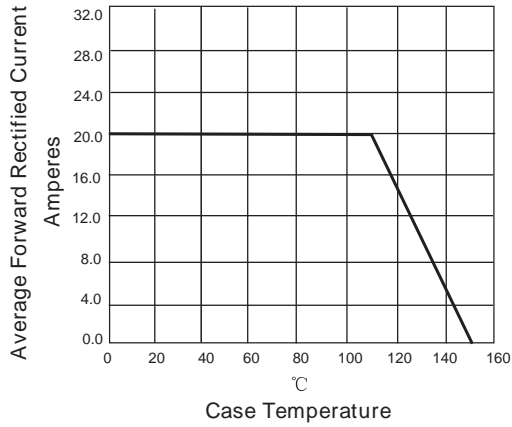


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

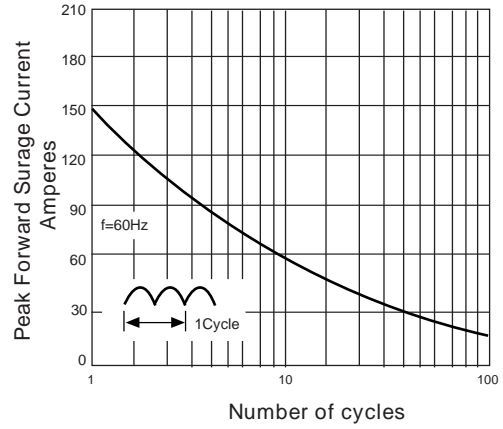


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

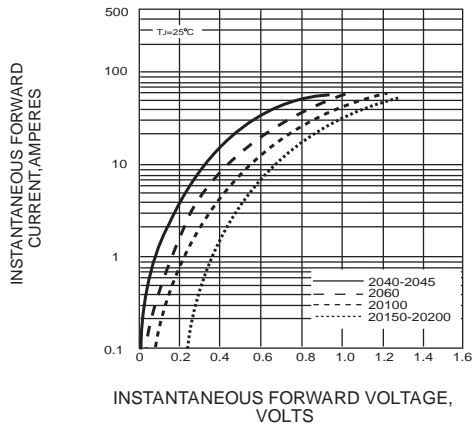
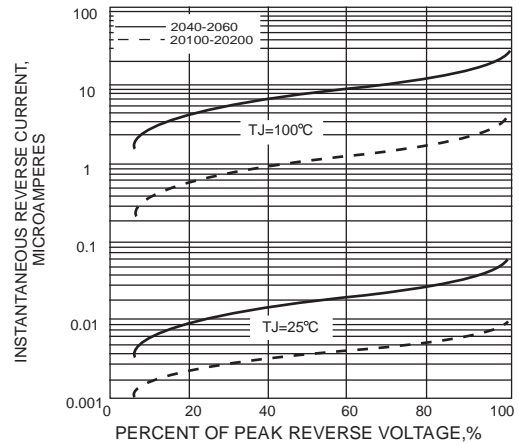
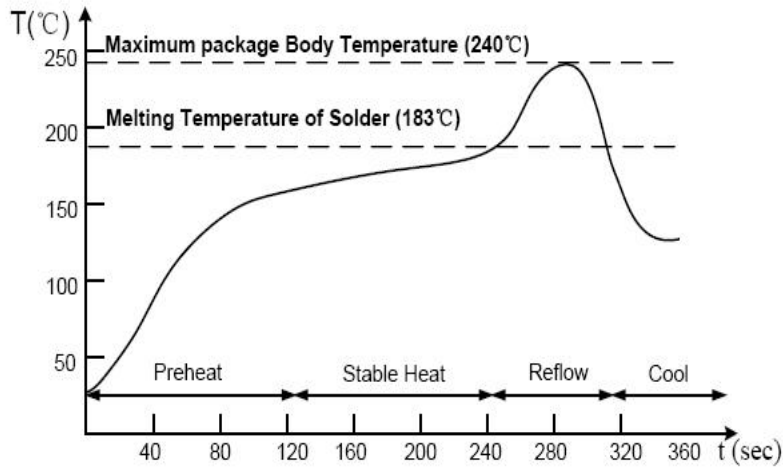


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS





### **Suggested Soldering Temperature Profile**



#### **Note**

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

### **Package Information**

#### **Tube Package**

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO	525*31.9*6.4	0.05	545*150*45	1.0	575*245*170	5.0