# MBR20200CT

## 20 Amp High Voltage Power Schottky Barrier Rectifier 200Volts

# Features

- High Junction Temperature Capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant.  See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
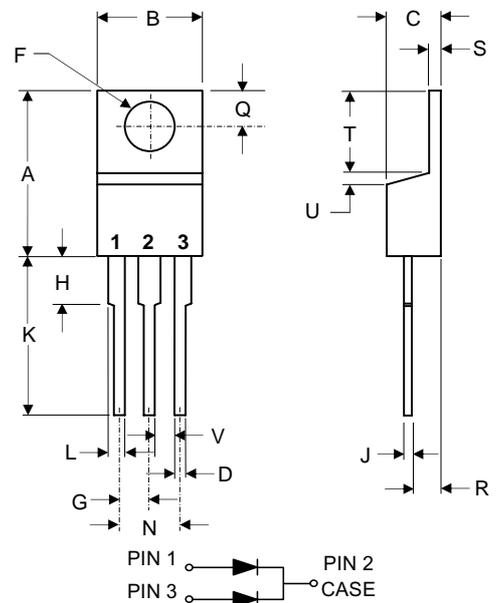- ∉ Marking : type number

# Maximum Ratings

- Operating Junction Temperature : 150°C
- Storage Temperature: - 50 °C to +150°C
- Mounting Torgue: 5 in-lbs Maximum

| MCC Catalog Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|---|---|---|---|
| MBR 20200 CT | 200 V | 140V | 200 V |

# Electrical Characteristics @ 25°C Unless Otherwise Specified

| Average Forward Current | $I_{F(AV)}$ | 20 A | $T_C$ = 125 °C |
|---|---|---|---|
| Peak Forward Surge Current | $I_{FSM}$ | 150A | 8.3ms, half sine wave |
| Maximum Instantaneous Forward Voltage MBR20200CT | $V_F$ / $V_F$ | .95 V / .80V | $I_{FM}$ = 10A $T_J$ = 25°C / $T_J$ =125°C |
| Maximum Reverse Current At Rated DC Blocking Voltage | $I_R$ | 50uA / 15mA | $T_C$ = 25°C / $T_C$ = 125°C |

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## TO-220AB



PIN 1 —▷ PIN 2
PIN 3 —▷ CASE

| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .560 | .625 | 14.22 | 15.88 | |
| B | .380 | .420 | 9.65 | 10.67 | |
| C | .140 | .190 | 3.56 | 4.82 | |
| D | .020 | .045 | 0.51 | 1.14 | |
| F | .139 | .161 | 3.53 | 4.09 | ∅ |
| G | .190 | .110 | 2.29 | 2.79 | |
| H | --- | .250 | --- | 6.35 | |
| J | .012 | .025 | 0.30 | 0.64 | |
| K | .500 | .580 | 12.70 | 14.73 | |
| L | .045 | .060 | 1.14 | 1.52 | |
| N | .190 | .210 | 4.83 | 5.33 | |
| Q | .100 | .135 | 2.54 | 3.43 | |
| R | .080 | .115 | 2.04 | 2.92 | |
| S | .045 | .055 | 1.14 | 1.39 | |
| T | .230 | .270 | 5.84 | 6.86 | |
| U | ----- | .050 | ----- | 1.27 | |
| V | .045 | ----- | 1.15 | ----- | |

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**Figure 1. Typical Forward Voltage (Per Leg)**

I_F, INSTANTEOUS FORWARD CURRENT (AMP)

v_F, INSTANTANEOUS VOLTAGE (VOLTS)

$T_J = 150°C$
$T_J = 125°C$
$T_J = 100°C$
$T_J = 25°C$
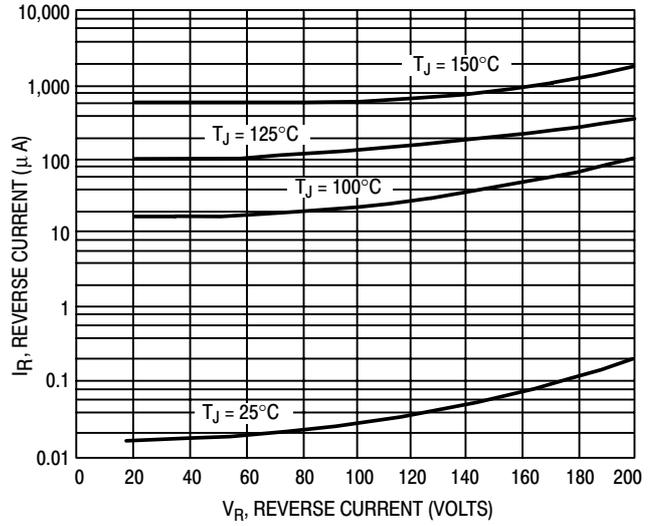
**Figure 2. Typical Reverse Current (Per Leg)**

I_R, REVERSE CURRENT (μ A)

V_R, REVERSE CURRENT (VOLTS)

$T_J = 150°C$
$T_J = 125°C$
$T_J = 100°C$
$T_J = 25°C$
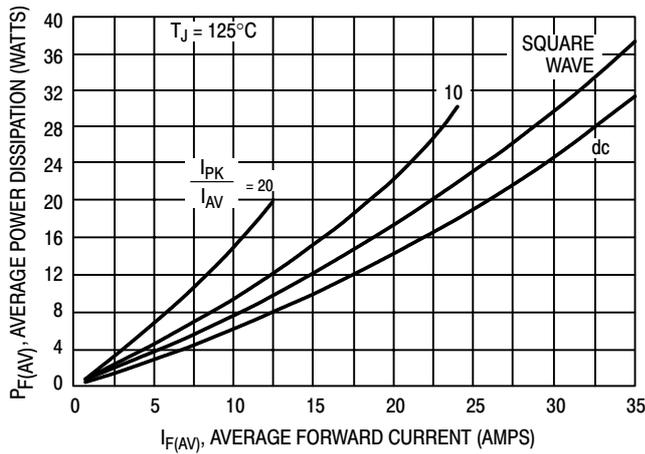
**Figure 3. Forward Power Dissipation**

P_F(AV), AVERAGE POWER DISSIPATION (WATTS)

I_F(AV), AVERAGE FORWARD CURRENT (AMPS)

$T_J = 125°C$
SQUARE WAVE
10
$\dfrac{I_{PK}}{I_{AV}} = 20$
dc
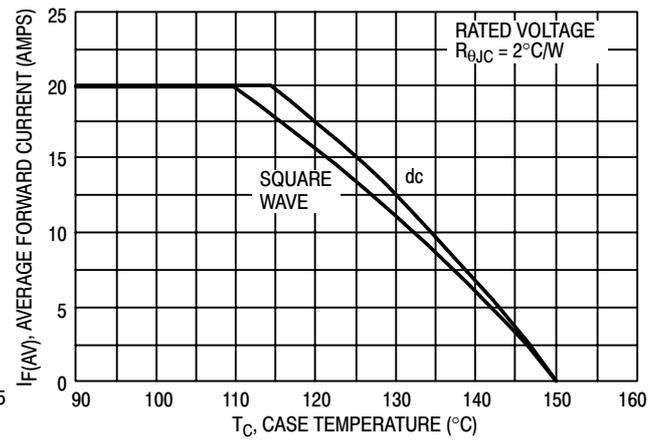
**Figure 4. Current Derating, Case**

I_F(AV), AVERAGE FORWARD CURRENT (AMPS)

T_C, CASE TEMPERATURE (°C)

RATED VOLTAGE
$R_{\theta JC} = 2°C/W$
SQUARE WAVE
dc
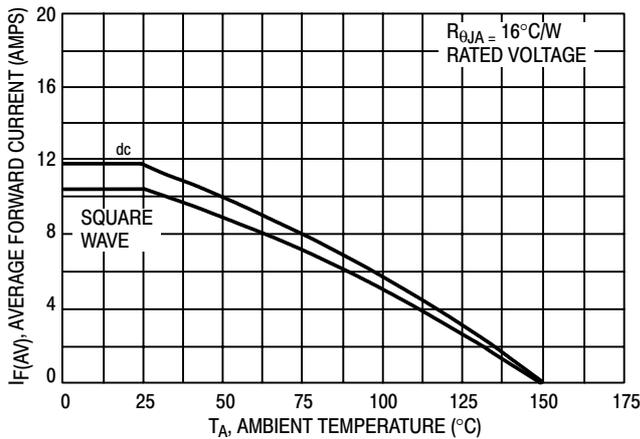
**Figure 5. Current Derating, Ambient**

I_F(AV), AVERAGE FORWARD CURRENT (AMPS)

T_A, AMBIENT TEMPERATURE (°C)

$R_{\theta JA} = 16°C/W$
RATED VOLTAGE
dc
SQUARE WAVE
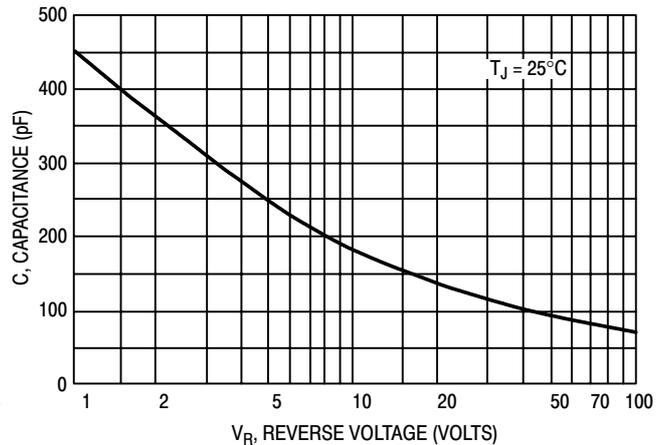
**Figure 6. Typical Capacitance (Per Leg)**

C, CAPACITANCE (pF)

V_R, REVERSE VOLTAGE (VOLTS)

$T_J = 25°C$

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## Ordering Information

| Device | Packing |
|---|---|
| (Part Number)-BP | Bulk;1Kpcs/Box |

Note : Adding "-HF" suffix for halogen free,  eg.  Part Number-BP-HF

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