

MBR1030CT THRU MBR1060CT

10 Amp Schottky Barrier Rectifier 30-60 Volts

Features

- Metal of silicon rectifier, majority carrier conduction
- Halogen free available upon request by adding suffix "-HF"
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Mounting Torque: 5 in-lbs Maximum
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

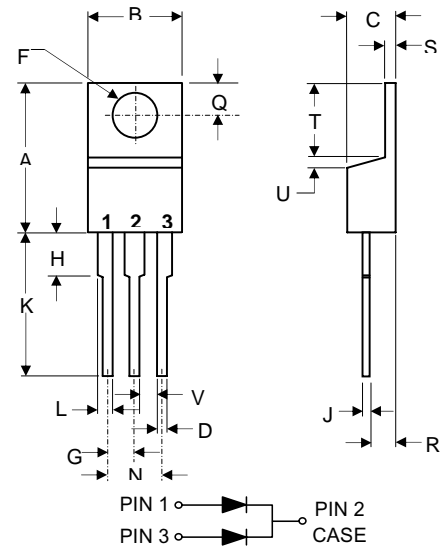
| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| MBR1030CT | MBR1030CT | 30V | 21V | 30V |
| MBR1035CT | MBR1035CT | 35V | 24.5V | 35V |
| MBR1040CT | MBR1040CT | 40V | 28V | 40V |
| MBR1045CT | MBR1045CT | 45V | 31.5V | 45V |
| MBR1050CT | MBR1050CT | 50V | 35V | 50V |
| MBR1060CT | MBR1060CT | 60V | 42V | 60V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 10A | $T_C = 105^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 125A | 8.3ms, half sine |
| Maximum Forward Voltage Drop Per Element | V_F | .70V .80V .57V .65V | $I_{FM} = 5A$ $T_J = 25^\circ\text{C}$ $I_{FM} = 5A$ $T_J = 125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 0.1mA 15mA | $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 170pF 220pF | Measured at 1.0MHz, $V_R=4.0V$ |

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

TO-220AB



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| 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 | ----- | |

RATING AND CHARACTERISTIC CURVES
MBR1030CT thru MBR1060CT

FIG.1 - FORWARD CURRENT DERATING CURVE

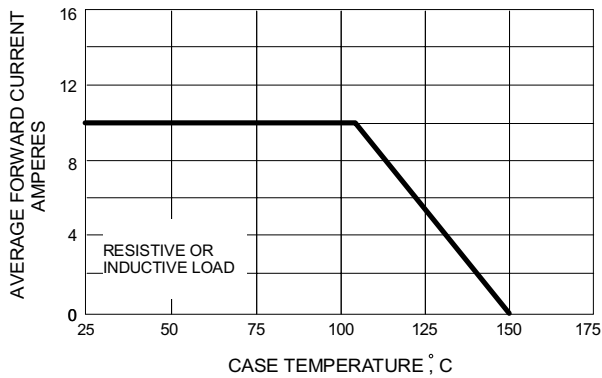


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

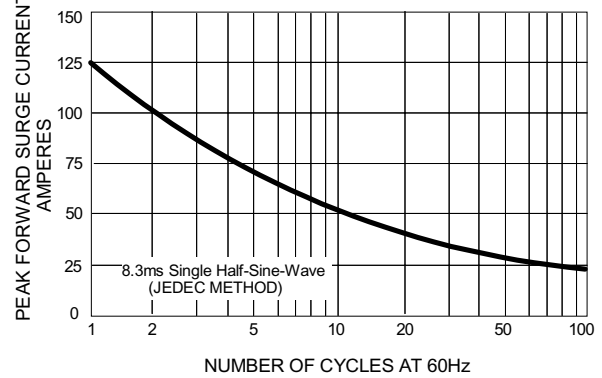


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

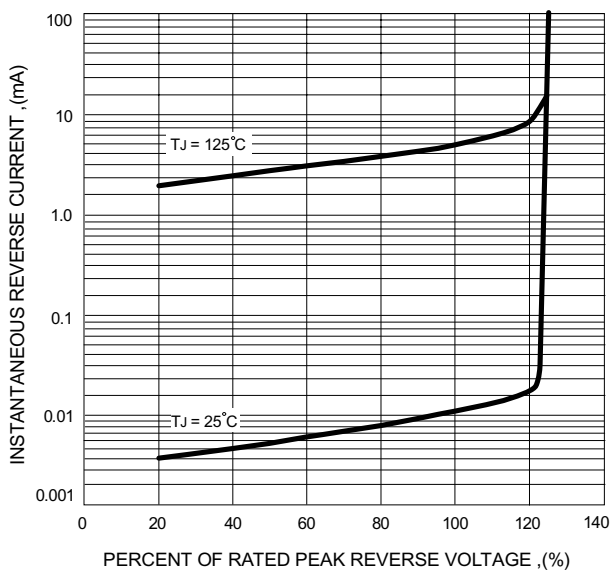


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

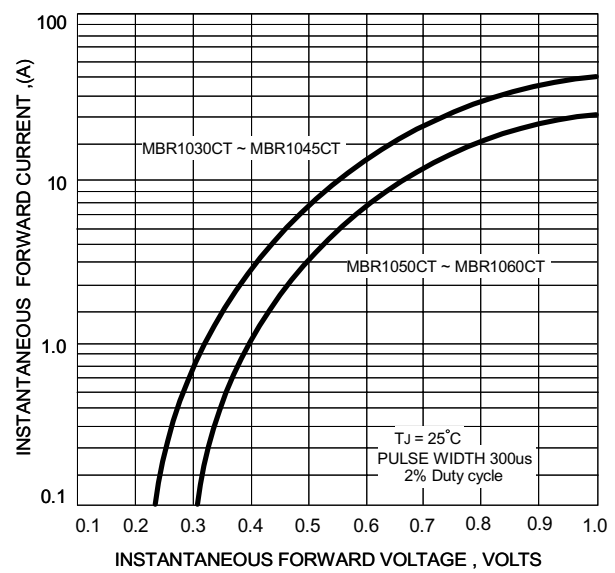
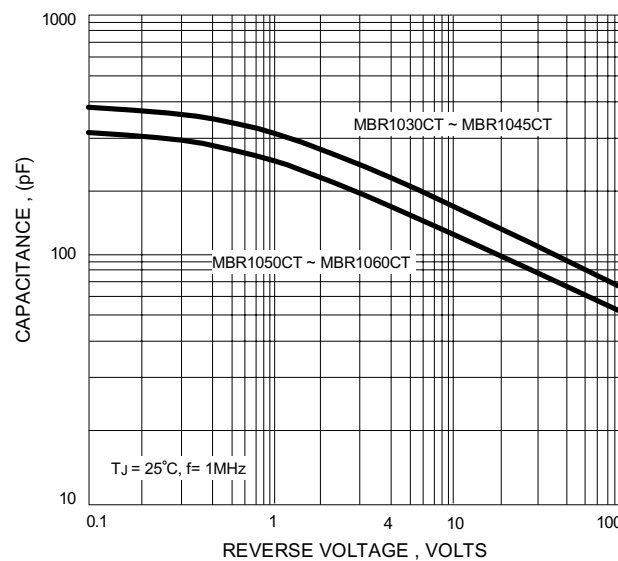


FIG.5 - TYPICAL JUNCTION CAPACITANCE





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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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