

**Micro Commercial Components** 

Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 Fax: (818) 701-4939

## MBRB1520CT THRU MBRB15100CT

## 15 Amp Schottky Barrier Rectifier 20 to 100 Volts

# Features Guard ring

- Guard ring for transient protection
- Low Forward Voltage Drop
- High Current Capability, High Efficiency
- Low Power Loss
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking : type number

### Maximum Ratings

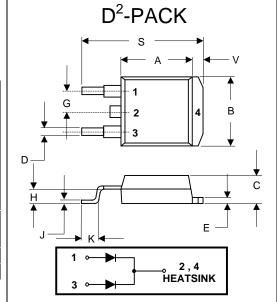
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

| MCC         | Maximum       | Maximum | Maximum  |
|-------------|---------------|---------|----------|
| Catalog     | Recurrent RMS |         | DC       |
| Number      | Peak Reverse  | Voltage | Blocking |
|             | Voltage       | _       | Voltage  |
| MBRB1520CT  | 20V           | 14V     | 20V      |
| MBRB1530CT  | 30V           | 21V     | 30V      |
| MBRB1535CT  | 35V           | 24.5V   | 35V      |
| MBRB1540CT  | 40V           | 28V     | 40V      |
| MBRB1545CT  | 45V           | 31.5V   | 45V      |
| MBRB1560CT  | 60V           | 42V     | 60V      |
| MBRB1580CT  | 80V           | 56V     | 80V      |
| MBRB15100CT | 100V          | 70V     | 100V     |

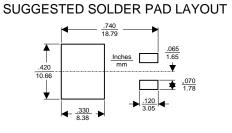
#### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Liectifical characteristics @ 25 C offiess offiel wise specified |                    |       |                         |  |  |  |
|--|--------------------|-------|-------------------------|--|--|--|
| Average Forward  | I <sub>F(AV)</sub> | 15 A  | $T_C = 105^{\circ}C$    |  |  |  |
| Current  |                    |       |                         |  |  |  |
| Peak Forward Surge   | $I_{FSM}$          | 150A  | 8.3ms, half sine        |  |  |  |
| Current  |                    |       |                         |  |  |  |
| Maximum  |                    |       |                         |  |  |  |
| Instantaneous  |                    |       |                         |  |  |  |
| Forward Voltage  |                    |       |                         |  |  |  |
| 1520CT-45CT  | $V_{F}$            | .84V  | $I_{FM} = 15A;$         |  |  |  |
| 1560CT   |                    | .75V  | IFм = 7.5A              |  |  |  |
| 1580CT-100CT   |                    | .92V  | $T_J = 25^{\circ}C$     |  |  |  |
| Maximum DC   |                    |       |                         |  |  |  |
| Reverse Current At   |                    |       |                         |  |  |  |
| Rated DC Blocking  |                    |       |                         |  |  |  |
| Voltage  | $I_R$              | 0.1mA | T <sub>J</sub> = 25°C   |  |  |  |
| Voltage<br>1520CT-45CT<br>1560CT-100CT                           | 'R                 | 1.0mA | 11 – 23 C               |  |  |  |
|  |                    | 15mA  | T <sub>.l</sub> = 125°C |  |  |  |
| 1520CT-45CT  |                    | 50mA  | 11 - 120 0              |  |  |  |
| 1560CT<br>1580CT-100CT   |                    | 100mA |                         |  |  |  |

<sup>\*</sup>Pulse Test: Pulse Width 300µsec, Duty Cycle 2%



| DIMENSIONS |        |      |       |       |      |  |  |
|------------|--------|------|-------|-------|------|--|--|
| DIM        | INCHES |      | MM    |       | NOTE |  |  |
|            | MIN    | MAX  | MIN   | MAX   | NOTE |  |  |
| Α          | .320   | .359 | 8.13  | 9.14  |      |  |  |
| В          | .380   | .411 | 9.65  | 10.45 |      |  |  |
| C          | .160   | .190 | 4.06  | 4.83  |      |  |  |
| D          | .020   | .035 | 0.51  | 0.89  |      |  |  |
| Е          | .045   | .055 | 1.14  | 1.40  |      |  |  |
| O          | .095   | .105 | 2.41  | 2.67  |      |  |  |
| Η          | .096   | .120 | 2.43  | 3.03  |      |  |  |
| J          | .014   | .021 | 0.35  | 0.53  |      |  |  |
| K          | .090   | .110 | 2.29  | 2.79  |      |  |  |
| S          | .575   | .625 | 14.60 | 15.80 |      |  |  |
| V          | .045   | .055 | 1.14  | 1.40  |      |  |  |

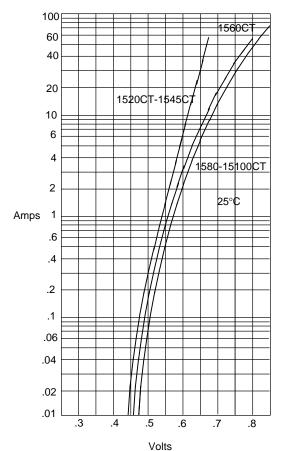


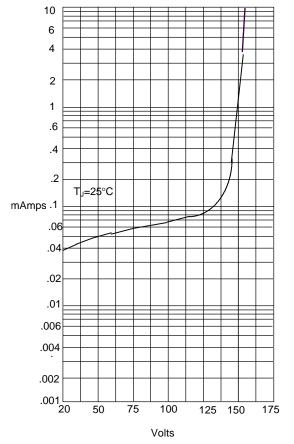
#### MBRB1520CT thru MBRB15100CT



Figure 1
Typical Forward Characteristics



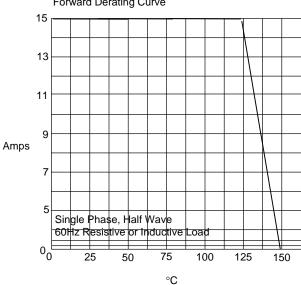


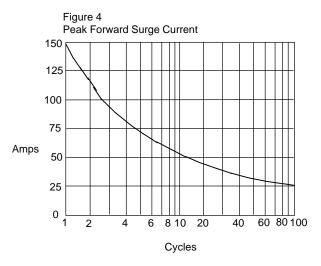


Instantaneous Forward Current - Amperesversus Instantaneous Forward Voltage - Volts

Instantaneous Reverse Leakage Current - MicroAmperesversus Percent Of Rated Peak Reverse Voltage - Volts







Average Forward Rectified Current - Amperes/ersus Case Temperature -  $^{\circ}$ C

Peak Forward Surge Current - Amperesversus Number Of Cycles At 60Hz - Cycles

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