



Shanghai Lunsure Electronic  
Technology Co.,Ltd  
Tel:0086-21-37185008  
Fax:0086-21-57152769

# MBRB1520CT THRU MBRB15100CT

## Features

- Meatl of Silicon Rectifier, Majority Conductor
- Guard ring for transient protection
- Low Forward Voltage Drop
- High Current Capability, High Efficiency
- Low Power Loss

## 15 Amp Schottky Barrier Rectifier 20 to 100 Volts

## Maximum Ratings

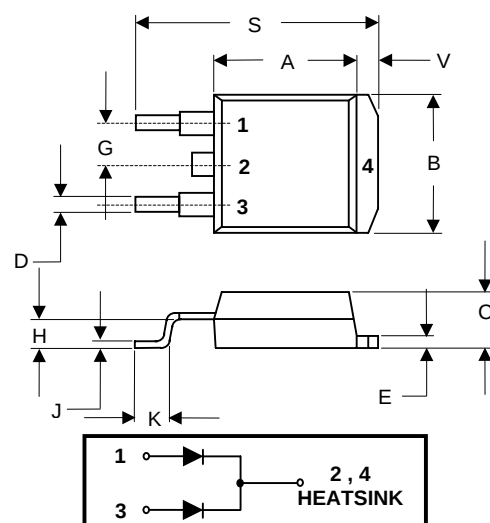
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

| Catalog Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking 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

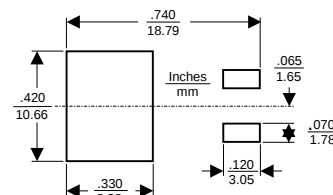
| Average Forward Current                                 | $I_{F(AV)}$ | 15 A                                    | $T_C = 105^\circ\text{C}$                                      |
|---------------------------------------------------------|-------------|-----------------------------------------|----------------------------------------------------------------|
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A                                    | 8.3ms, half sine                                               |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | .84V<br>.75V<br>.92V                    | $I_{FM} = 15A;$<br>$I_{FM} = 7.5A$<br>$T_J = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 0.1mA<br>1.0mA<br>15mA<br>50mA<br>100mA | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$          |

## D<sup>2</sup>-PACK



| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| A   | .320   | .359 | 8.13  | 9.14  |      |
| B   | .380   | .411 | 9.65  | 10.45 |      |
| C   | .160   | .190 | 4.06  | 4.83  |      |
| D   | .020   | .035 | 0.51  | 0.89  |      |
| E   | .045   | .055 | 1.14  | 1.40  |      |
| G   | .095   | .105 | 2.41  | 2.67  |      |
| H   | .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  |      |

## SUGGESTED SOLDER PAD LAYOUT

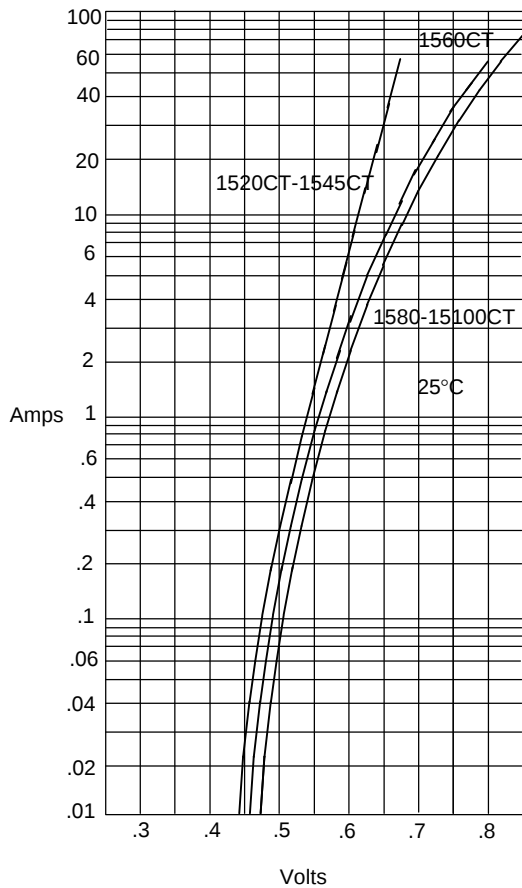


\*Pulse Test: Pulse Width 300μsec, Duty Cycle 2%

# MBRB1520CT thru MBRB15100CT

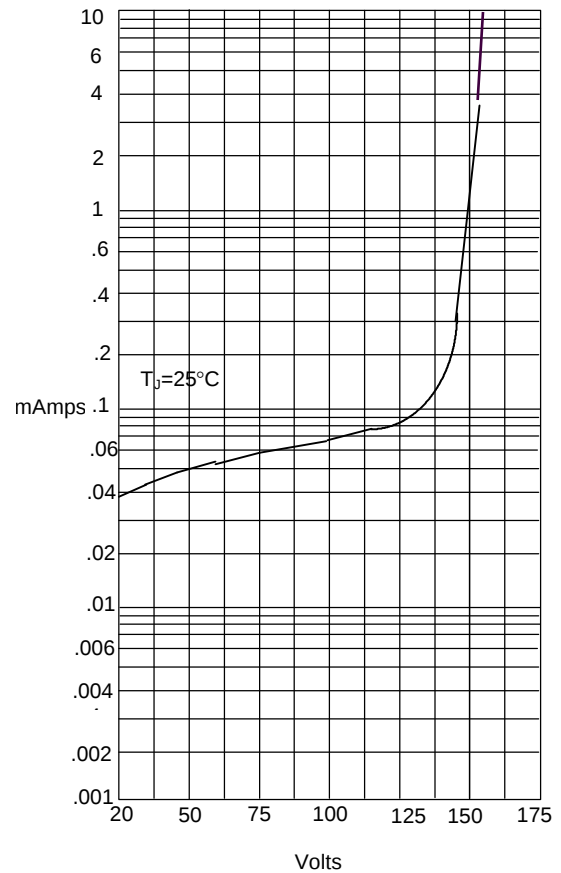


Figure 1  
Typical Forward Characteristics



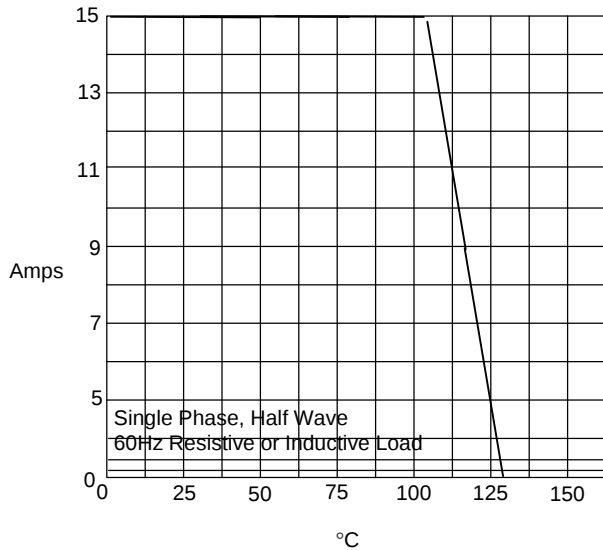
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



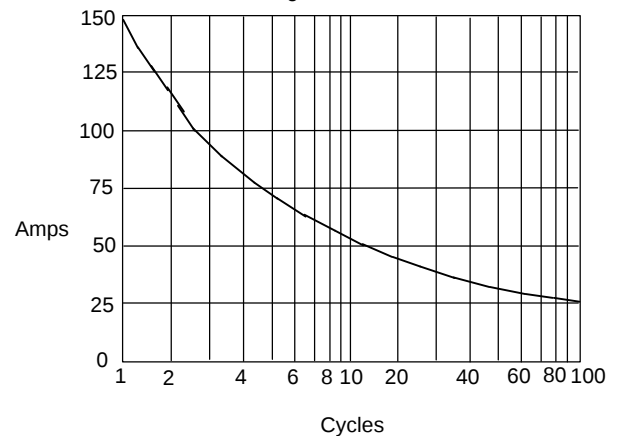
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Case Temperature - °C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles