

Silicon Power Schottky Diode

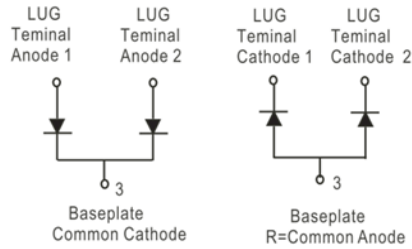
$V_{RRM} = 20\text{ V} - 40\text{ V}$

$I_{F(AV)} = 500\text{ A}$

Features

- High Surge Capability
- Types from 20 V to 40 V V_{RRM}
- Not ESD Sensitive

Twin Tower Package



Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified ("R" devices have leads reversed)

| Parameter | Symbol | Conditions | MBR50020CT(R) | MBR50030CT(R) | MBR50035CT(R) | MBR50040CT(R) | Unit |
|---------------------------------|-----------|------------|---------------|---------------|---------------|---------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 20 | 30 | 35 | 40 | V |
| RMS reverse voltage | V_{RMS} | | 14 | 21 | 25 | 28 | V |
| DC blocking voltage | V_{DC} | | 20 | 30 | 35 | 40 | V |
| Operating temperature | T_j | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |

Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Conditions | MBR50020CT(R) | MBR50030CT(R) | MBR50035CT(R) | MBR50040CT(R) | Unit |
|--|-------------|--|---------------|---------------|---------------|---------------|------|
| Average forward current (per pkg) | $I_{F(AV)}$ | $T_C = 125\text{ }^\circ\text{C}$ | 500 | 500 | 500 | 500 | A |
| Peak forward surge current (per leg) | I_{FSM} | $t_p = 8.3\text{ ms}$, half sine | 3500 | 3500 | 3500 | 3500 | A |
| Maximum forward voltage (per leg) | V_F | $I_{FM} = 250\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 0.75 | 0.75 | 0.75 | 0.75 | V |
| Reverse current at rated DC blocking voltage (per leg) | I_R | $T_j = 25\text{ }^\circ\text{C}$ $T_j = 100\text{ }^\circ\text{C}$ $T_j = 150\text{ }^\circ\text{C}$ | 1 10 50 | 1 10 50 | 1 10 50 | 1 10 50 | mA |

Thermal characteristics

| Parameter | Symbol | Conditions | MBR50020CT(R) | MBR50030CT(R) | MBR50035CT(R) | MBR50040CT(R) | Unit |
|--|-----------------|------------|---------------|---------------|---------------|---------------|--------------------|
| Thermal resistance, junction-case, per leg | $R_{\theta JC}$ | | 0.30 | 0.30 | 0.30 | 0.30 | $^\circ\text{C/W}$ |

Figure .1- Typical Forward Characteristics

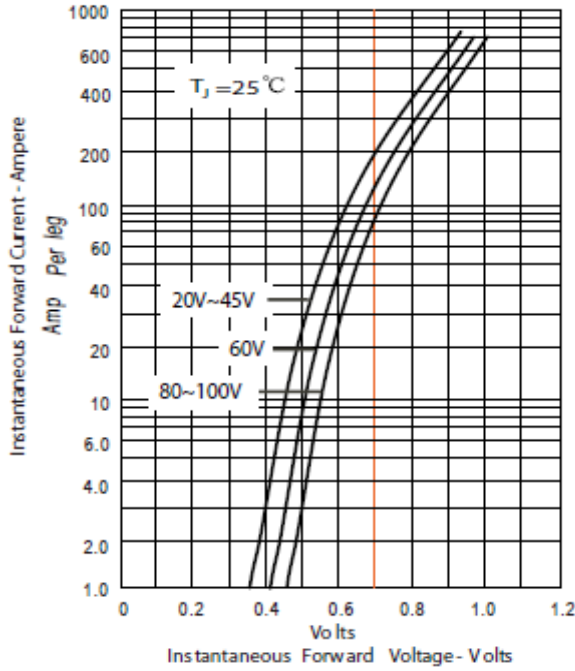


Figure .2- Forward Derating Curve

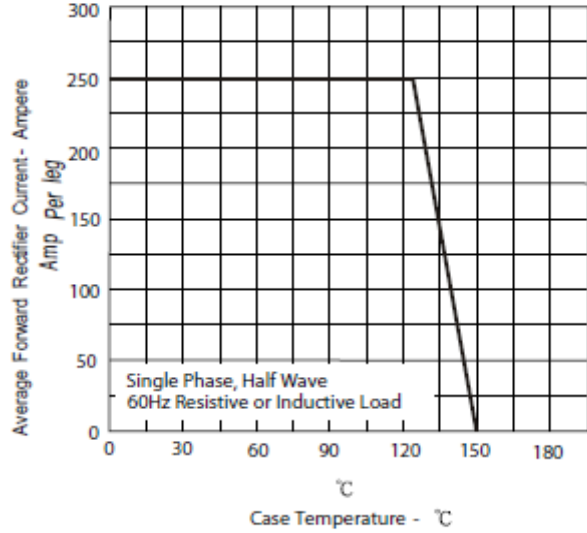


Figure .3- Peak Forward Surge Current

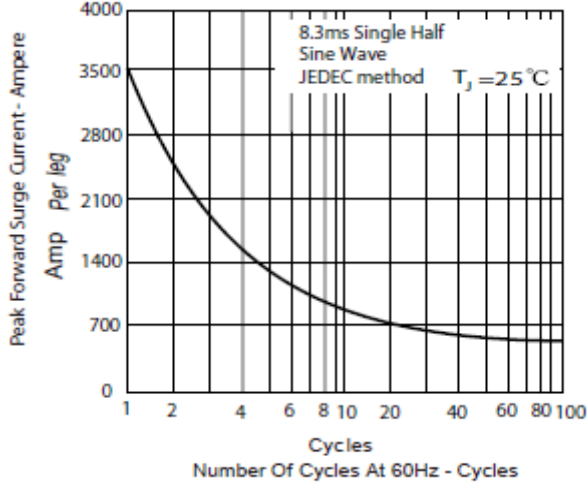
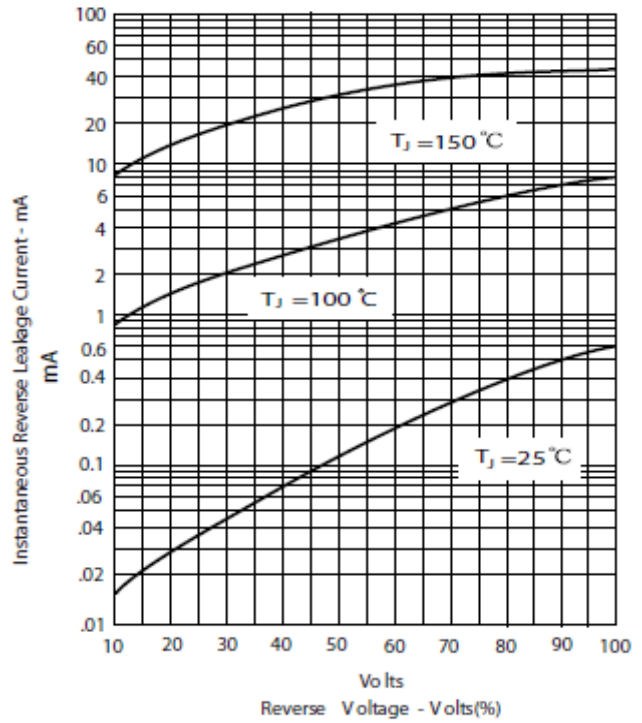
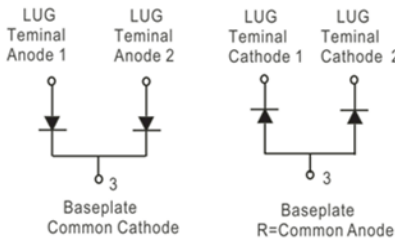
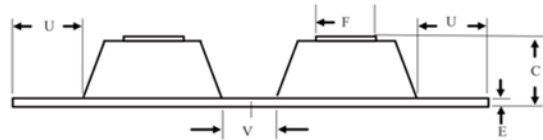
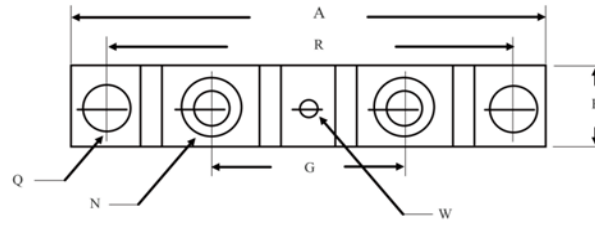


Figure .4- Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIM | Inches | | Millimeters | |
|-----|-----------------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | ----- | 3.630 | ----- | 92.40 |
| B | 0.700 | 0.800 | 17.78 | 20.32 |
| C | ----- | 0.650 | ----- | 16.51 |
| E | 0.130 | 0.141 | 3.30 | 3.60 |
| F | 0.482 | 0.490 | 12.25 | 12.45 |
| G | 1.368 | BSC | 34.75 | BSC |
| N | 1/4-20 UNC FULL | | | |
| Q | 0.275 | 0.290 | 6.99 | 7.37 |
| R | 3.150 | BSC | 80.01 | BSC |
| U | 0.600 | ----- | 15.24 | ----- |
| V | 0.312 | 0.370 | 7.92 | 9.40 |
| W | 0.180 | 0.195 | 4.57 | 4.95 |

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Discrete Semiconductor Modules](#) category:

Click to view products by [GeneSiC Semiconductor](#) manufacturer:

Other Similar products are found below :

[M252511FV](#) [DD260N12K-A](#) [DD380N16A](#) [DD89N1600K-A](#) [APT2X21DC60J](#) [APT58M80J](#) [B522F-2-YEC](#) [MSTC90-16](#) [25.163.0653.1](#)
[25.163.2453.0](#) [25.163.4253.0](#) [25.190.2053.0](#) [25.194.3453.0](#) [25.320.4853.1](#) [25.320.5253.1](#) [25.326.3253.1](#) [25.326.3553.1](#) [25.330.1653.1](#)
[25.330.4753.1](#) [25.330.5253.1](#) [25.334.3253.1](#) [25.334.3353.1](#) [25.350.2053.0](#) [25.352.4753.1](#) [25.522.3253.0](#) [T483C](#) [T484C](#) [T485F](#) [T485H](#)
[T512F-YEB](#) [T513F](#) [T514F](#) [T554](#) [T612FSE](#) [25.161.3453.0](#) [25.179.2253.0](#) [25.194.3253.0](#) [25.325.1253.1](#) [25.326.4253.1](#) [25.330.0953.1](#)
[25.332.4353.1](#) [25.350.1653.0](#) [25.350.2453.0](#) [25.352.1453.0](#) [25.352.1653.0](#) [25.352.2453.0](#) [25.352.5453.1](#) [25.522.3353.0](#) [25.602.4053.0](#)
[25.640.5053.0](#)