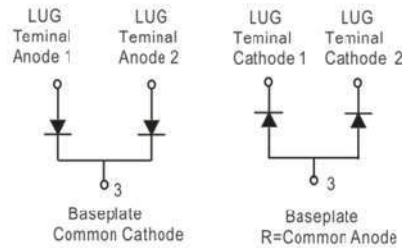


# Low $V_F$ Silicon Power Schottky Diode

 $V_{RRM} =$ 
 $I_{F(AV)} =$ 
**Features**

- High Surge Capability
- Type 45 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 | MBR40045CT(R)L | Unit             |
|--|-----------|------------|----------------|------------------|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ |            | 45             | V                |
| Maximum RMS voltage                    | $V_{RMS}$ |            | 32             | V                |
| Maximum DC blocking voltage            | $V_{DC}$  |            | 45             | V                |
| Operating temperature                  | $T_j$     |            | -55 to 150     | $^\circ\text{C}$ |
| Storage temperature                    | $T_{stg}$ |            | -55 to 150     | $^\circ\text{C}$ |

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

| Parameter  | Symbol      | Conditions   | MBR40045CT(R)L | Unit |
|--|-------------|--|----------------|------|
| Average forward current (per pkg)  | $I_{F(AV)}$ | $T_C = 100\text{ }^\circ\text{C}$                          | 400            | A    |
| Peak forward surge current (per leg)   | $I_{FSM}$   | $t_p = 8.3\text{ ms}$ , half sine                          | 3000           | A    |
| Maximum instantaneous forward voltage (per leg)                              | $V_F$       | $I_{FM} = 200\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$ | 0.60           | V    |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | $I_R$       | $T_j = 25\text{ }^\circ\text{C}$                           | 5              | mA   |
|  |             | $T_j = 100\text{ }^\circ\text{C}$                          | 350            |      |

**Thermal characteristics**

| Parameter   | Symbol          | Conditions | MBR40045CT(R)L | Unit               |
|---|-----------------|------------|----------------|--------------------|
| Maximum thermal resistance, junction - case (per leg) | $R_{\theta JC}$ |            | 0.35           | $^\circ\text{C/W}$ |

Figure .1-Typical Forward Characteristics

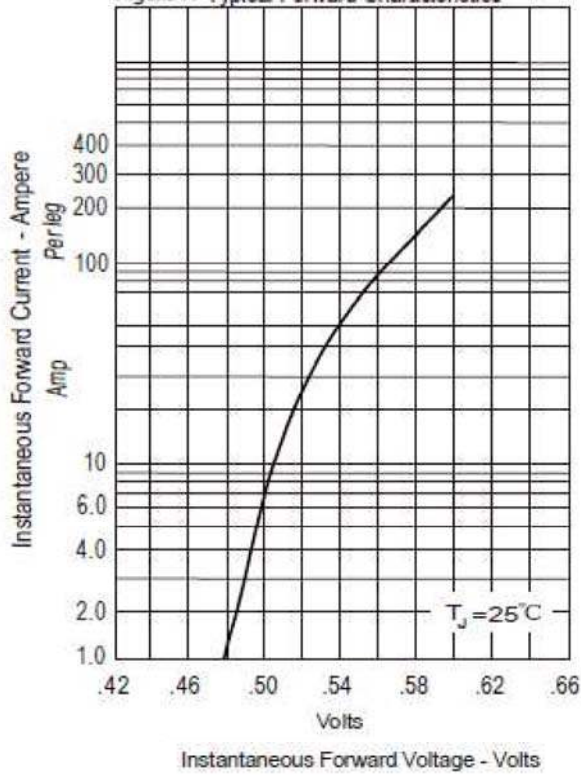


Figure .2- Forward Derating Curve

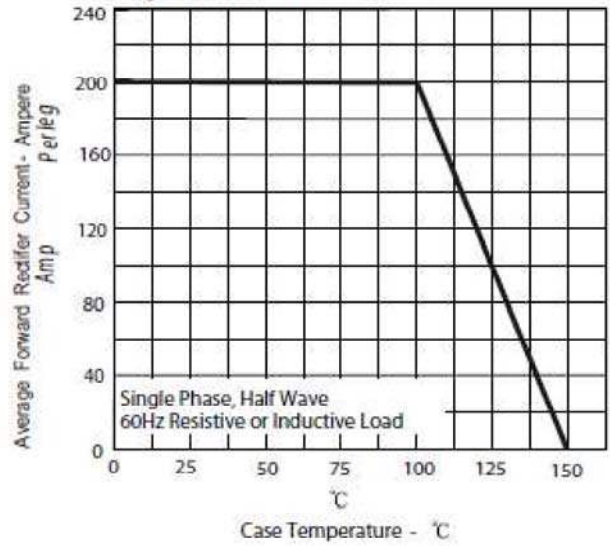


Figure .4- Typical Reverse Characteristics

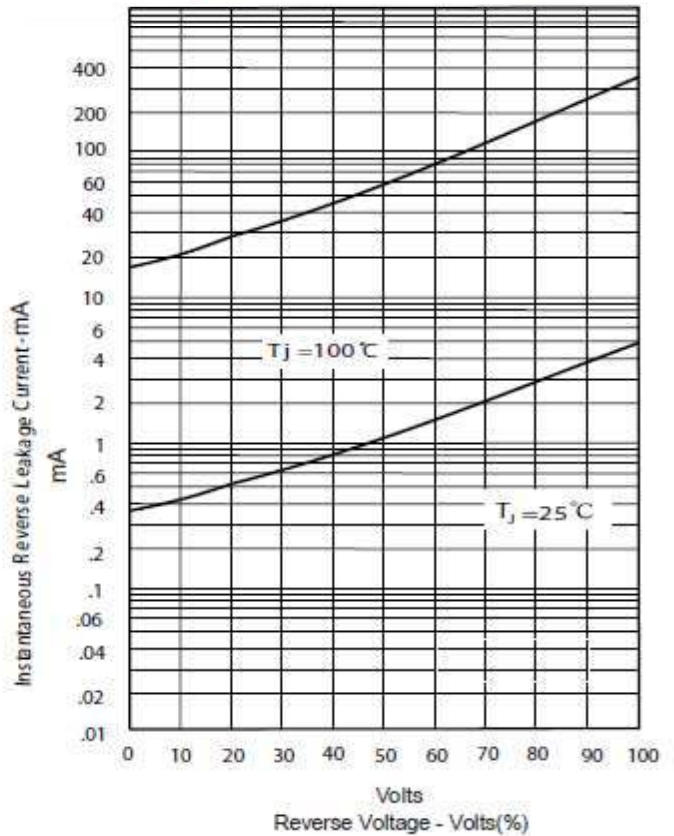
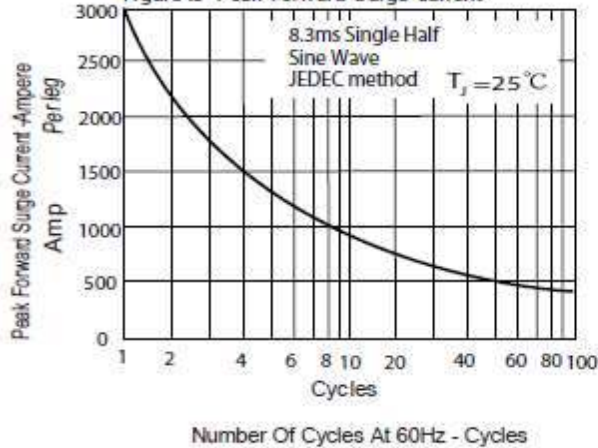
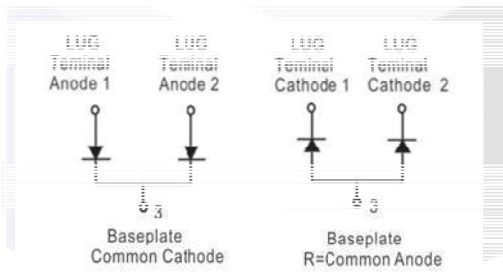
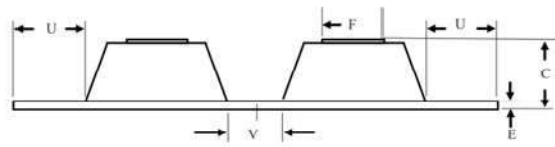
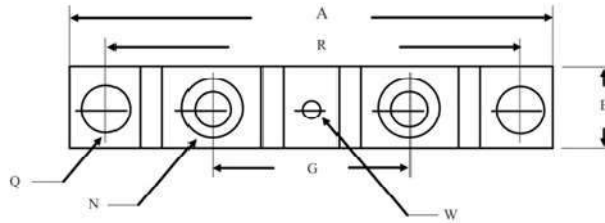


Figure .3- Peak Forward Surge Current



### 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  |