

Low V_F Silicon Power Schottky Diode

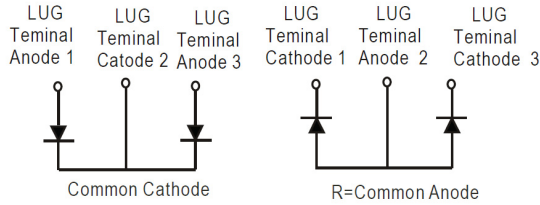
$V_{RRM} = 40\text{ V}$

$I_{F(AV)} = 600\text{ A}$

Features

- High Surge Capability
- Type 40 V V_{RRM}
- Isolation Type Package
- Electrically Isolated Base Plate
- Not ESD Sensitive

Three Tower Package



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

| Parameter | Symbol | Conditions | MBRT60040(R)L | Unit |
|----------------------------------------|-----------|------------|---------------|------------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | | 40 | V |
| Maximum RMS voltage | V_{RMS} | | 28 | V |
| Maximum DC blocking voltage | V_{DC} | | 40 | 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 | MBRT60040(R)L | Unit |
|------------------------------------------------------------------------------|-------------|----------------------------------------------------------|---------------|------|
| Average forward current (per pkg) | $I_{F(AV)}$ | $T_C = 100\text{ }^\circ\text{C}$ | 600 | A |
| Peak forward surge current (per leg) | I_{FSM} | $t_p = 8.3\text{ ms, half sine}$ | 4000 | A |
| Maximum instantaneous forward voltage (per leg) | V_F | $I_{FM} = 300\text{ A, } T_j = 25\text{ }^\circ\text{C}$ | 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

| | | | | |
|-------------------------------------------------------|-----------------|--|------|--------------------|
| Maximum thermal resistance, junction - case (per leg) | $R_{\theta JC}$ | | 0.28 | $^\circ\text{C/W}$ |
|-------------------------------------------------------|-----------------|--|------|--------------------|

Figure .1-Typical Forward Characteristics

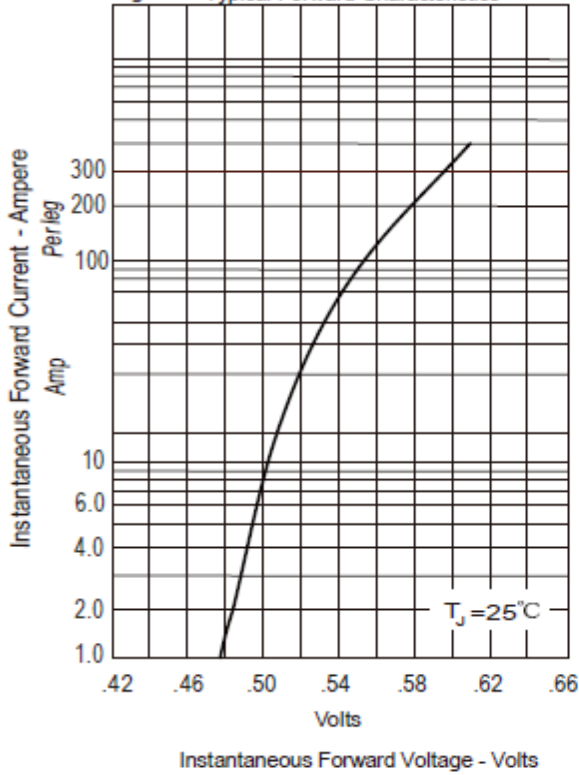


Figure .2- Forward Derating Curve

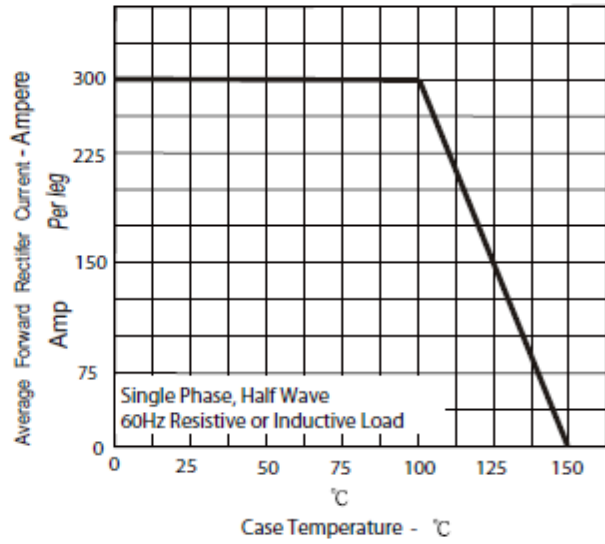


Figure .4-Typical Reverse Characteristics

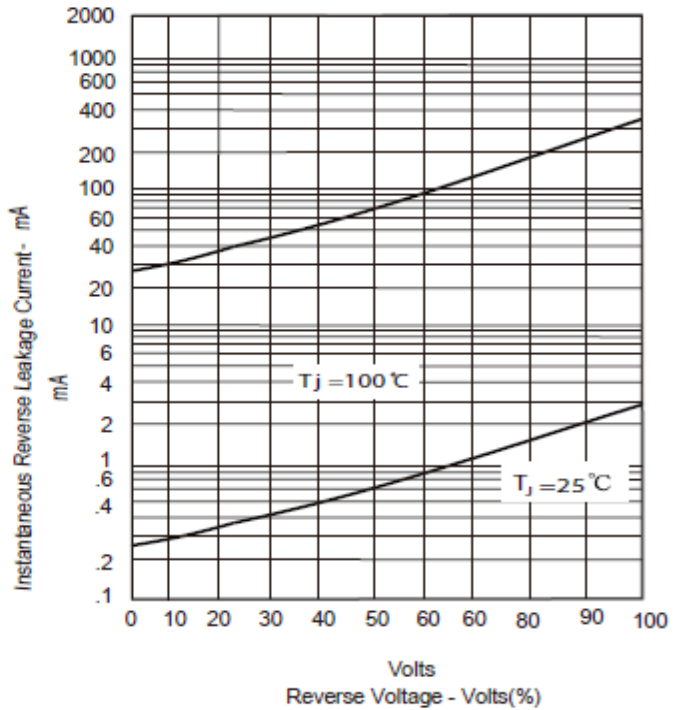
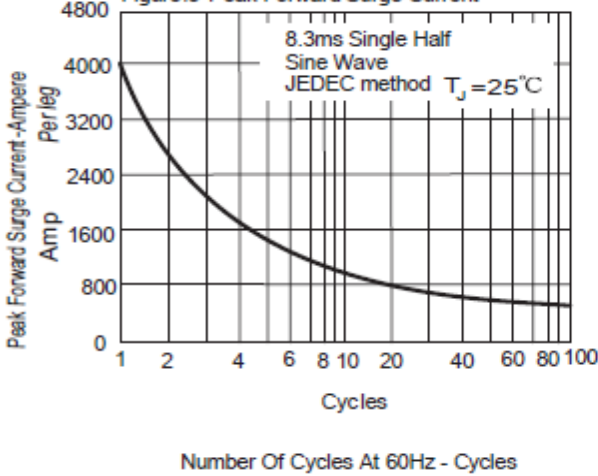
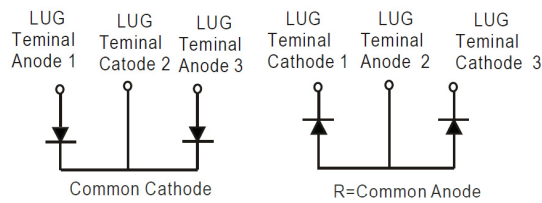
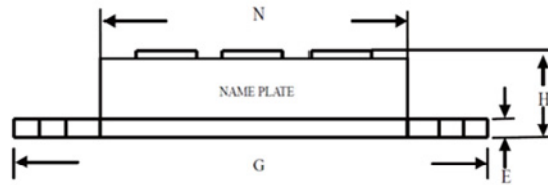
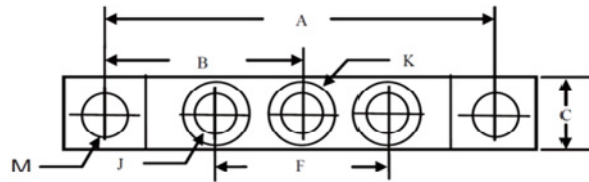


Figure.3-Peak Forward Surge Current



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIM | Inches | | Millimeters | |
|-----|-----------------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 3.150 | NOM | 80.01 | NOM |
| B | 1.565 | 1.585 | 39.75 | 40.26 |
| C | .700 | .800 | 17.78 | 20.32 |
| E | .119 | .132 | 3.02 | 3.35 |
| F | 1.327 | REF | 33.72 | REF |
| G | 3.55 | 3.65 | 90.17 | 92.71 |
| H | ---- | .73 | ---- | 18.30 |
| J | 1/4-20 UNC FULL | | | |
| K | .472 | .511 | 12 | 13 |
| M | .275 | .295 | 6.99 | 7.49 |
| N | 2.38 | 2.46 | 60.5 | 62.5 |