

Silicon Super Fast Recovery Diode

$V_{RRM} = 200\text{ V} - 600\text{ V}$
 $I_F = 600\text{ A}$

Features

- High Surge Capability
- Types up to 600 V V_{RRM}

Heavy Three Tower Package



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

| Parameter | Symbol | Conditions | MURTA60020 (R) | MURTA60040 (R) | MURTA60060 (R) | Unit |
|--|------------|--|----------------|----------------|----------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 50 | 100 | 200 | V |
| RMS reverse voltage | V_{RMS} | | 35 | 71 | 141 | V |
| DC blocking voltage | V_{DC} | | 50 | 100 | 200 | V |
| Continuous forward current | I_F | $T_C \leq 100\text{ }^\circ\text{C}$ | 600 | 600 | 600 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$ | 4400 | 4400 | 4400 | A |
| Operating temperature | T_j | | -40 to 175 | -40 to 175 | -40 to 175 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -40 to 175 | -40 to 175 | -40 to 175 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | MURTA60020 (R) | MURTA60040 (R) | MURTA60060 (R) | Unit |
|-----------------------|--------|---|----------------|----------------|----------------|---------------|
| Diode forward voltage | V_F | $I_F = 300\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 1.3 | 1.5 | 1.7 | V |
| Reverse current | I_R | $V_R = 50\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ | 25 | 25 | 25 | μA |
| | | $V_R = 50\text{ V}$, $T_j = 125\text{ }^\circ\text{C}$ | 5 | 5 | 5 | mA |

Recovery Time

| | | | | | | |
|-------------------------------|----------|---|-----|-----|-----|----|
| Maximum reverse recovery time | T_{RR} | $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{RR} = 0.25\text{ A}$ | 200 | 220 | 280 | nS |
|-------------------------------|----------|---|-----|-----|-----|----|

Thermal characteristics

| | | | | | | |
|-------------------------------------|------------|--|------|------|------|--------------------|
| Thermal resistance, junction - case | R_{thJC} | | 0.12 | 0.12 | 0.12 | $^\circ\text{C/W}$ |
|-------------------------------------|------------|--|------|------|------|--------------------|

Figure .1- Typical Forward Characteristics

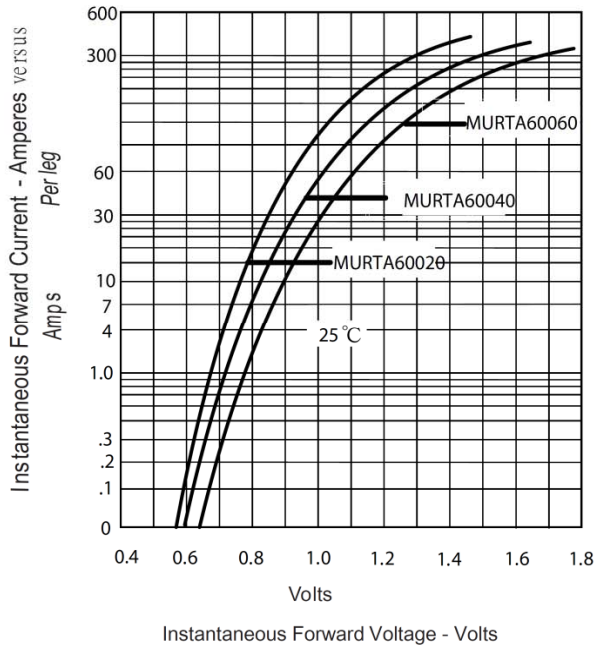


Figure .2- Forward Derating Curve

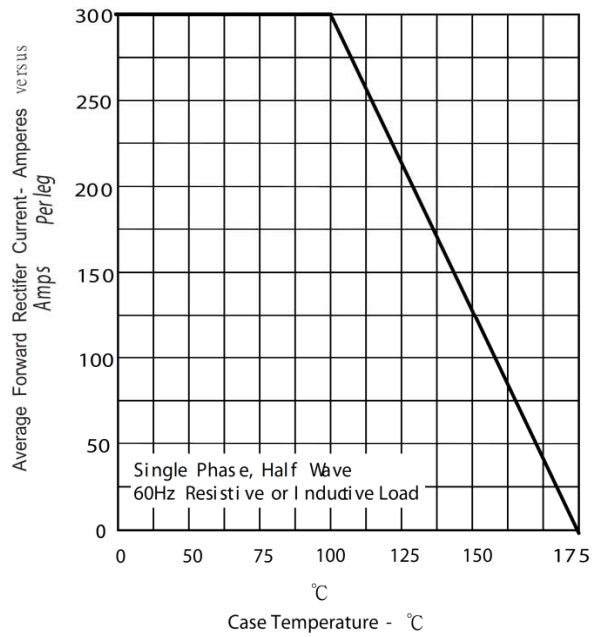


Figure.3-Peak Forward Surge Current

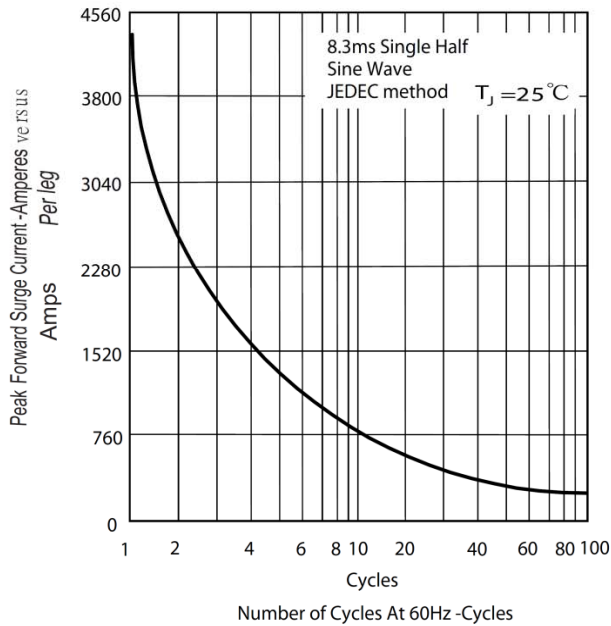
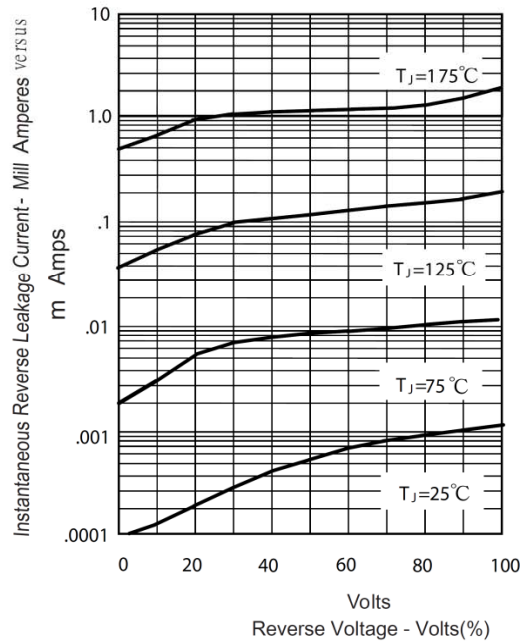
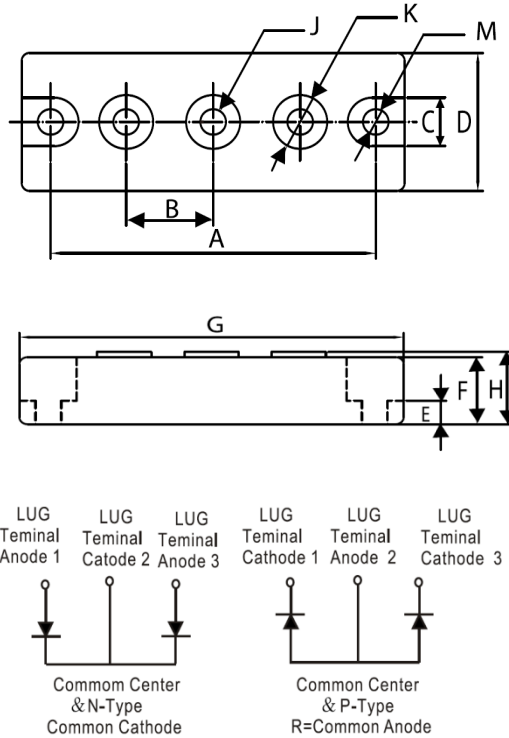


Figure .4-Typical Reverse Characteristics



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIMENSIONS | | | | |
|------------|-----------------|-------|-------------|-------|
| DIM | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| A | 3.150 | NOM | 80.01 | NOM |
| B | .872 | .892 | 22.15 | 22.65 |
| C | .465 | .479 | 11.82 | 12.18 |
| D | 1.337 | 1.356 | 33.95 | 34.45 |
| E | .230 | .234 | 5.84 | 6.16 |
| F | .725 | REF | 18.42 | REF |
| G | 3.668 | 3.768 | 93.17 | 95.71 |
| H | — | .791 | — | 20.10 |
| J | 1/4-20 UNC FULL | | | |
| K | .509 | .538 | 12.92 | 13.68 |
| M | .238 | .258 | 6.05 | 6.55 |