

## Silicon Super Fast Recovery Diode

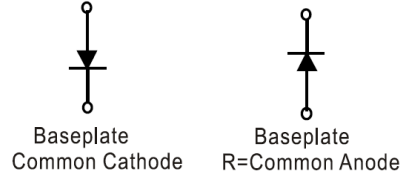
$V_{RRM} = 400\text{ V} - 600\text{ V}$

$I_{F(AV)} = 100\text{ A}$

### Features

- High Surge Capability
- Types from 400 V to 600 V  $V_{RRM}$
- Not ESD Sensitive

D-67 Package



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

| Parameter                       | Symbol    | Conditions | MURH10040(R) | MURH10060(R) | Unit |
|---------------------------------|-----------|------------|--------------|--------------|------|
| Repetitive peak reverse voltage | $V_{RRM}$ |            | 400          | 600          | V    |
| RMS reverse voltage             | $V_{RMS}$ |            | 280          | 420          | V    |
| DC blocking voltage             | $V_{DC}$  |            | 400          | 600          | V    |
| Operating temperature           | $T_j$     |            | -55 to 150   | -55 to 150   | °C   |
| Storage temperature             | $T_{stg}$ |            | -55 to 150   | -55 to 150   | °C   |

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

| Parameter                                            | Symbol      | Conditions                                                                | MURH10040(R) | MURH10060(R) | Unit          |
|------------------------------------------------------|-------------|---------------------------------------------------------------------------|--------------|--------------|---------------|
| Average forward current (per pkg)                    | $I_{F(AV)}$ | $T_C = 140\text{ °C}$                                                     | 100          | 100          | A             |
| Peak forward surge current                           | $I_{FSM}$   | $t_p = 8.3\text{ ms}$ , half sine                                         | 2000         | 2000         | A             |
| Maximum instantaneous forward voltage                | $V_F$       | $I_{FM} = 100\text{ A}$ , $T_j = 25\text{ °C}$                            | 1.30         | 1.70         | V             |
| Maximum reverse current at rated DC blocking voltage | $I_R$       | $T_j = 25\text{ °C}$                                                      | 25           | 25           | $\mu\text{A}$ |
|                                                      |             | $T_j = 125\text{ °C}$                                                     | 3            | 3            | mA            |
| Maximum reverse recovery time                        | $T_{rr}$    | $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ ,<br>$I_{RR} = 0.25\text{ A}$ | 90           | 110          | nS            |

### Thermal characteristics

|                                             |                 |      |      |      |
|---------------------------------------------|-----------------|------|------|------|
| Maximum thermal resistance, junction - case | $R_{\theta JC}$ | 0.45 | 0.45 | °C/W |
|---------------------------------------------|-----------------|------|------|------|

Figure .1- Typical Forward Characteristics

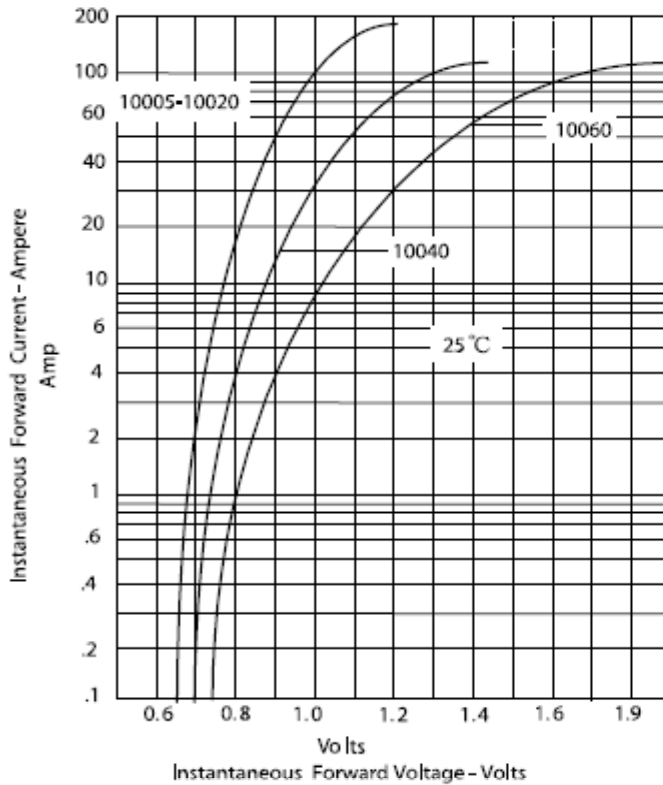


Figure .2- Forward Derating Curve

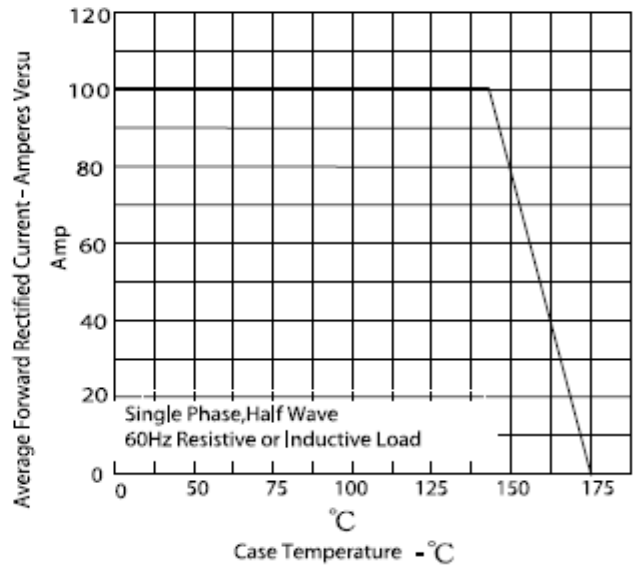


Figure .4- Typical Reverse Characteristics

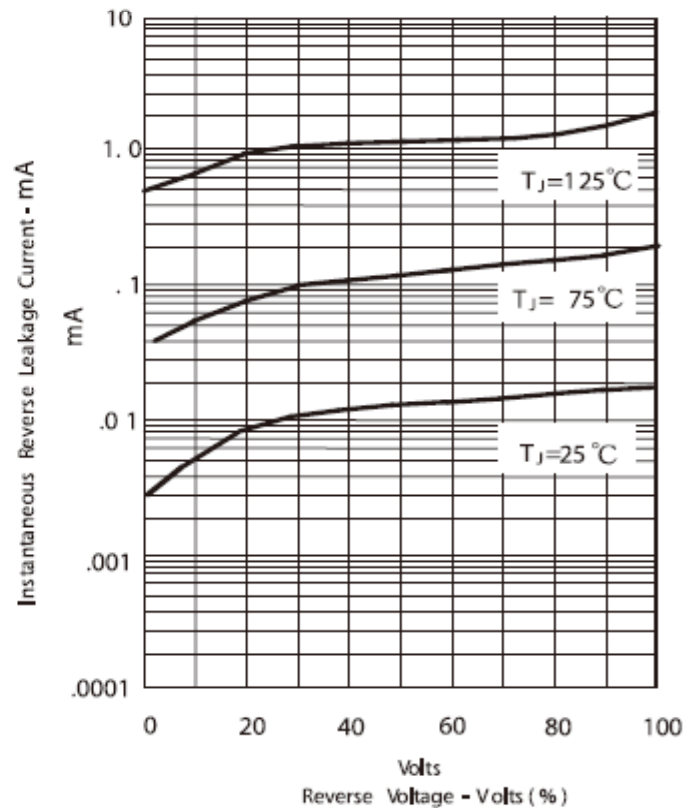
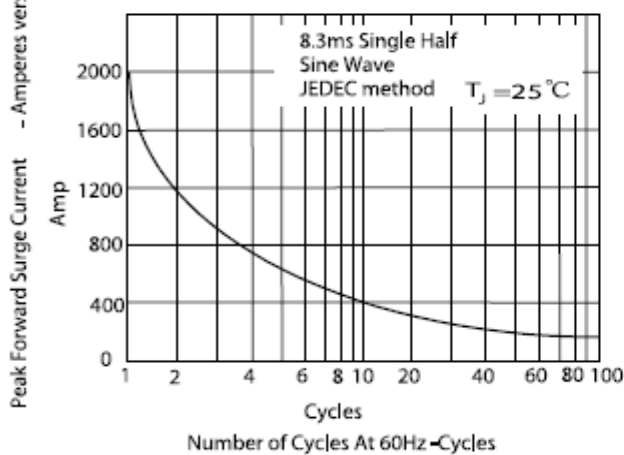
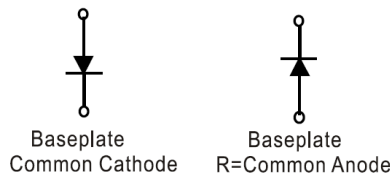
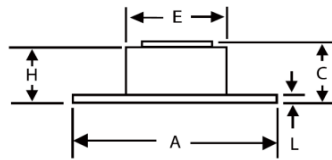
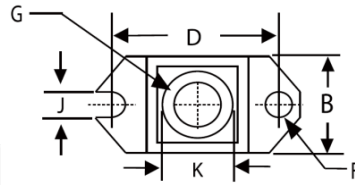


Figure.3- Peak Forward Surge Current



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| DIMENSIONS |              |       |       |       |      |
|------------|--------------|-------|-------|-------|------|
| DIM        | INCHES       |       | MM    |       | NOTE |
|            | MIN          | MAX   | MIN   | MAX   |      |
| A          | 1.515        | 1.560 | 38.48 | 39.62 |      |
| B          | .725         | .775  | 18.42 | 19.69 |      |
| C          | .595         | .625  | 15.11 | 15.88 |      |
| D          | 1.182        | 1.192 | 30.02 | 30.28 |      |
| E          | .736         | .744  | 18.70 | 18.90 |      |
| F          | .152         | .160  | 3.86  | 4.061 | Ø    |
| G          | 1/4 - 20 UNC |       |       |       |      |
| H          | .540         | .580  | 13.72 | 14.73 |      |
| J          | .156         | .160  | 3.96  | 4.06  |      |
| K          | .480         | .492  | 12.20 | 12.50 | Ø    |
| L          | .120         | .130  | 3.05  | 3.30  |      |