

Silicon Standard Recovery Diode

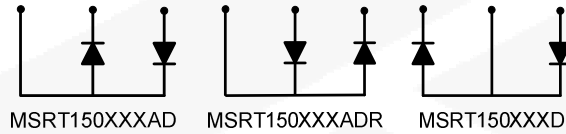
$V_{RRM} = 1200\text{ V} - 1600\text{ V}$

$I_{F(AV)} = 150\text{ A}$

Features

- High Surge Capability
- Types from 1200 V to 1600 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

| Parameter | Symbol | Conditions | MSRT150120(A)D | MSRT150140(A)D | MSRT150160(A)D | Unit |
|---------------------------------|-----------|------------|----------------|----------------|----------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 1200 | 1400 | 1600 | V |
| RMS reverse voltage | V_{RMS} | | 848 | 990 | 1131 | V |
| DC blocking voltage | V_{DC} | | 1200 | 1400 | 1600 | V |
| Operating temperature | T_j | | -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 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | MSRT150120(A)D | MSRT150140(A)D | MSRT150160(A)D | Unit |
|--|-------------|--|----------------|----------------|----------------|---------------|
| Average forward current (per leg) | $I_{F(AV)}$ | $T_C = 140\text{ }^\circ\text{C}$ | 150 | 150 | 150 | A |
| Peak forward surge current (per leg) | I_{FSM} | $t_p = 8.3\text{ ms}$, half sine | 2250 | 2250 | 2250 | A |
| Maximum instantaneous forward voltage (per leg) | V_F | $I_{FM} = 150\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 1.1 | 1.1 | 1.1 | V |
| Maximum instantaneous reverse current at rated DC blocking voltage (per leg) | I_R | $T_j = 25\text{ }^\circ\text{C}$ | 10 | 10 | 10 | μA |
| | | $T_j = 150\text{ }^\circ\text{C}$ | 5 | 5 | 5 | mA |

Thermal characteristics

| | | | | | | |
|---|-----------------|--|------|------|------|--------------------|
| Maximum thermal resistance, junction - case (per leg) | $R_{\theta jc}$ | | 0.40 | 0.40 | 0.40 | $^\circ\text{C/W}$ |
|---|-----------------|--|------|------|------|--------------------|

Figure .1- Typical Forward Characteristics

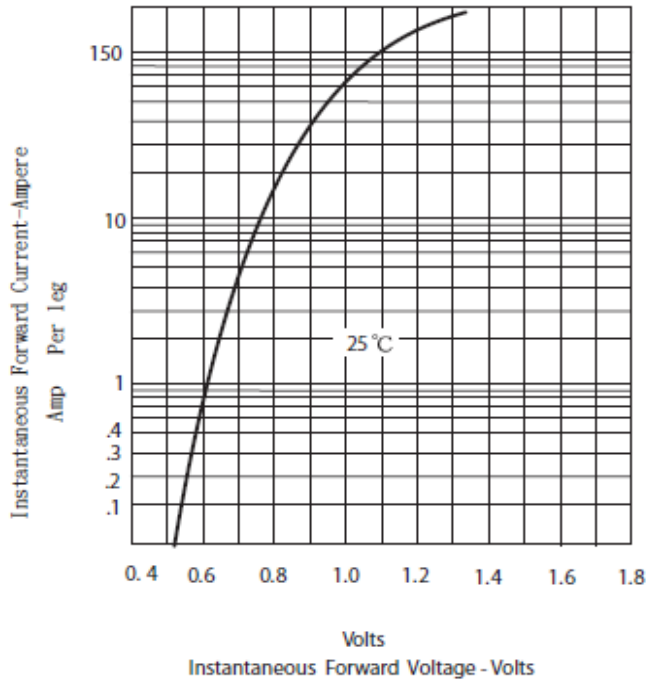


Figure.2 Forward Derating Curve

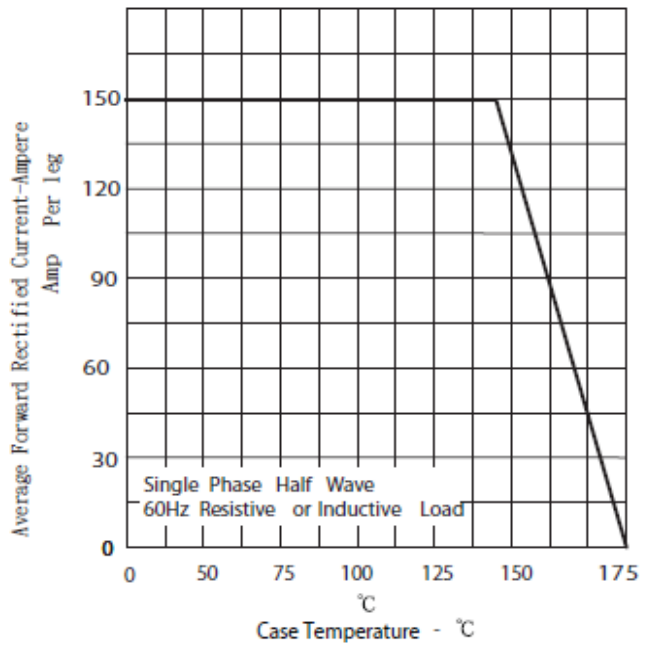


Figure .4 Typical Reverse Characteristics

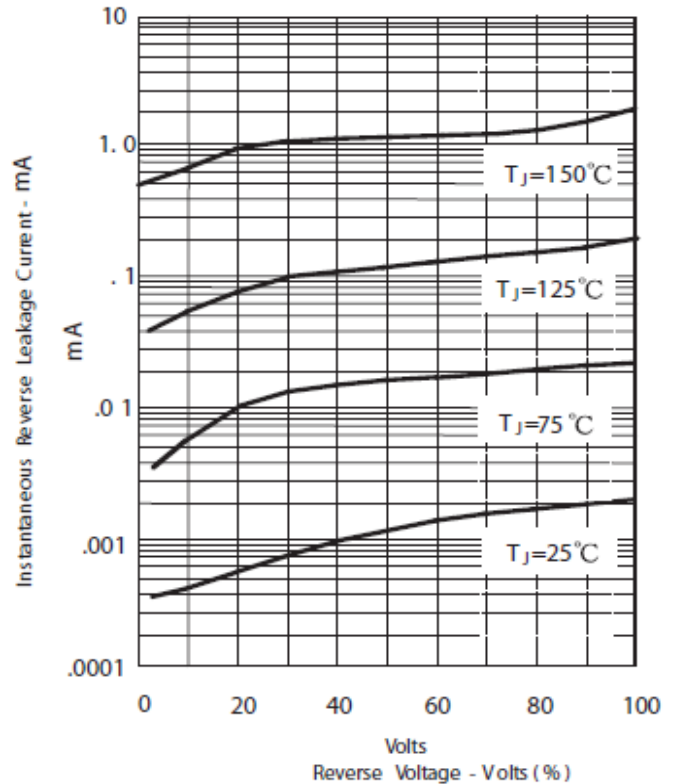
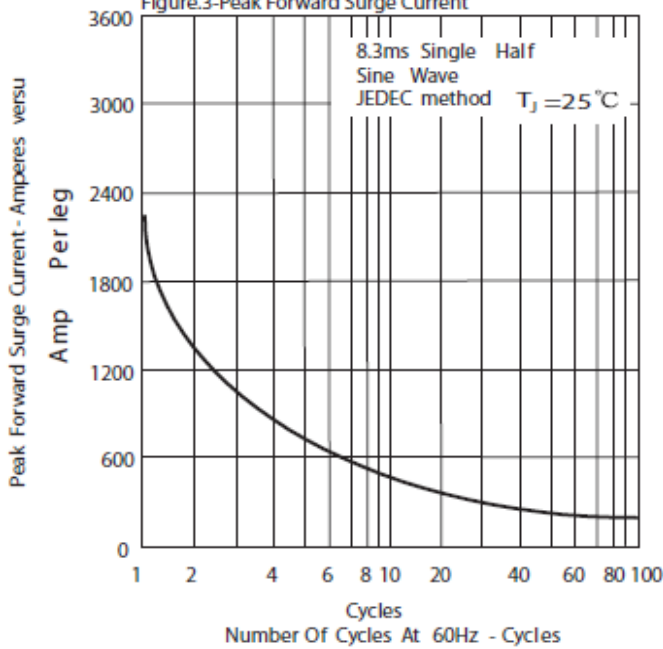
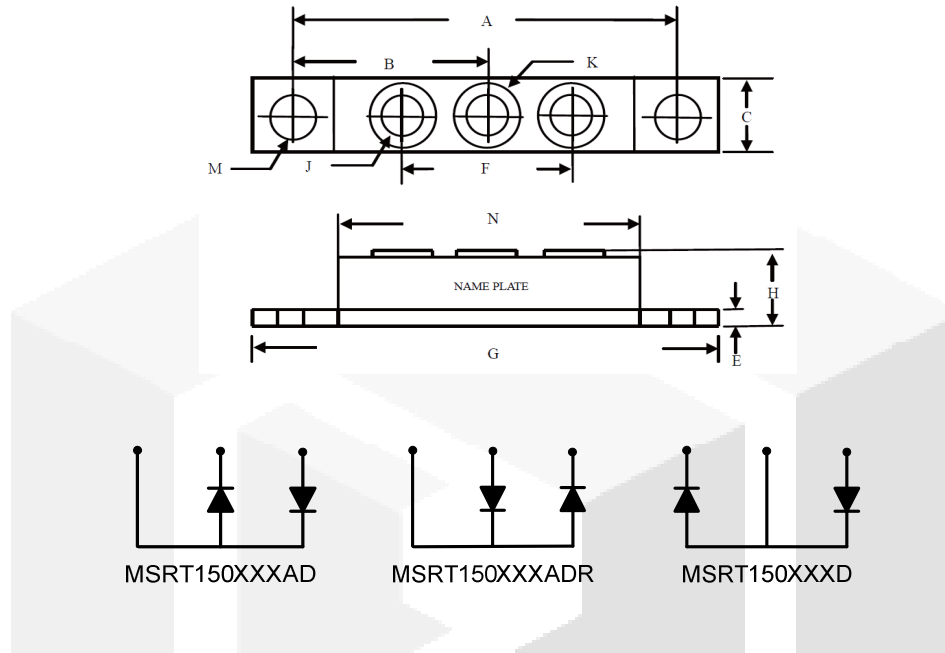


Figure.3-Peak Forward Surge Current



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 | 0.700 | 0.800 | 17.78 | 20.32 |
| E | 0.119 | 0.132 | 3.02 | 3.35 |
| F | 1.327 | ---- | 33.72 | ---- |
| G | 3.550 | 3.650 | 90.17 | 92.71 |
| H | 0.677 | 0.720 | 17.20 | 18.30 |
| J | 1/4 -20 UNC FULL | | | |
| K | 0.472 | 0.511 | 12 | 13 |
| M | 0.275 | 0.295 | 6.99 | 7.49 |
| N | 2.380 | 2.460 | 60.5 | 62.5 |