

Silicon Standard Recovery Diode

$V_{RRM} = 600\text{ V} - 1200\text{ V}$
 $I_F = 150\text{ A}$

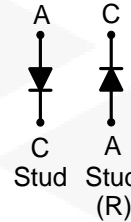
Features

- High Surge Capability
- Types from 600 V to 1200 V V_{RRM}
- Not ESD Sensitive

Note:

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.

DO-8 Package



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

| Parameter | Symbol | Conditions | S150J (R) | S150K (R) | S150M (R) | S150Q (R) | Unit |
|--|------------|--|------------|------------|------------|------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 600 | 800 | 1000 | 1200 | V |
| RMS reverse voltage | V_{RMS} | | 420 | 560 | 700 | 840 | V |
| DC blocking voltage | V_{DC} | | 600 | 800 | 1000 | 1200 | V |
| Continuous forward current | I_F | $T_C \leq 180\text{ }^\circ\text{C}$ | 150 | 150 | 150 | 150 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$ | 3140 | 3140 | 3140 | 3140 | A |
| Operating temperature | T_j | | -55 to 150 | -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 | -55 to 150 | $^\circ\text{C}$ |

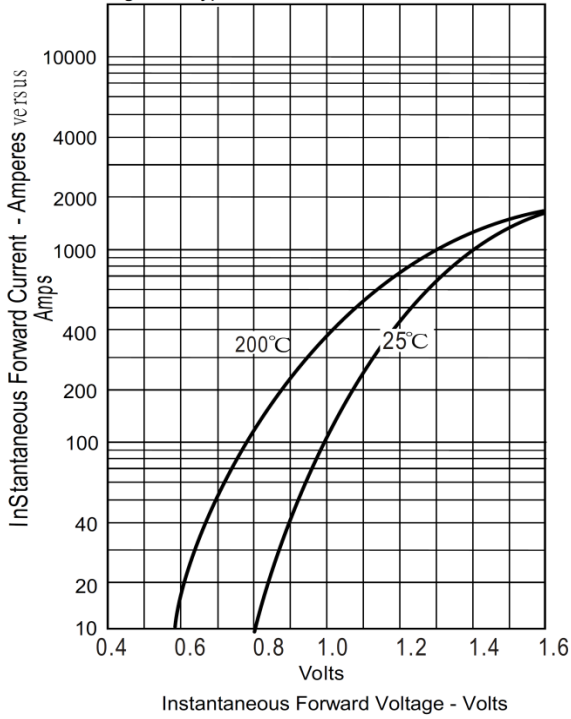
Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Conditions | S150J (R) | S150K (R) | S150M (R) | S150Q (R) | Unit |
|-----------------------|--------|--|-----------|-----------|-----------|-----------|---------------|
| Diode forward voltage | V_F | $I_F = 150\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 1.2 | 1.2 | 1.2 | 1.2 | V |
| Reverse current | I_R | $V_R = 600\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ | 10 | 10 | 10 | 10 | μA |
| | | $V_R = 600\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$ | 15 | 15 | 15 | 9 | mA |

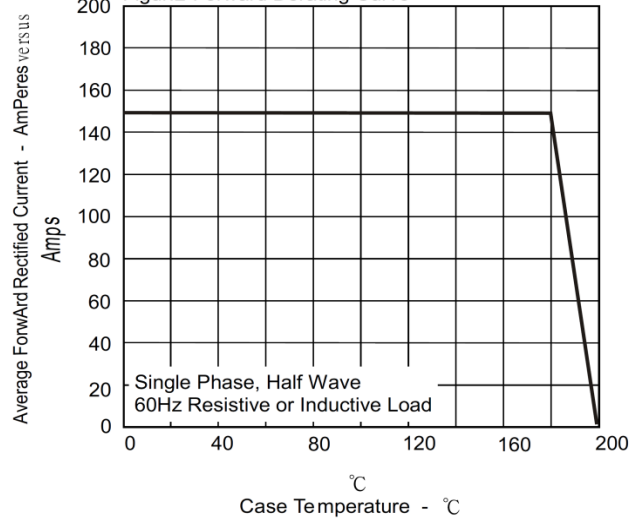
Thermal characteristics

| | | | | | | | |
|-------------------------------------|------------|--|------|------|------|------|--------------------|
| Thermal resistance, junction - case | R_{thJC} | | 0.35 | 0.35 | 0.35 | 0.35 | $^\circ\text{C/W}$ |
|-------------------------------------|------------|--|------|------|------|------|--------------------|

Figure.1-Typical Forward Characteristics



Figur.2-Forward Derating Curve



Figur.4-Typical Reverse Characteristics

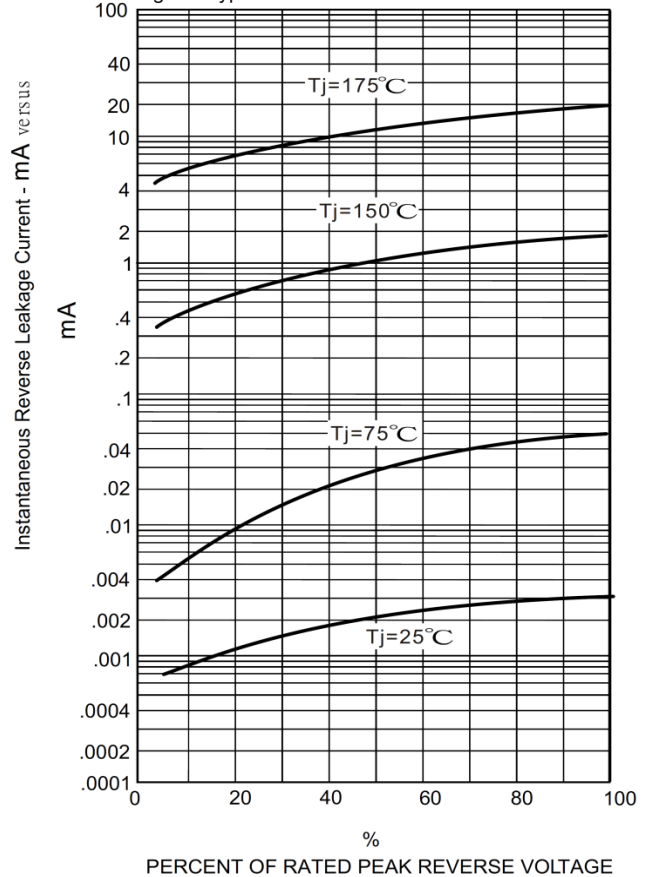
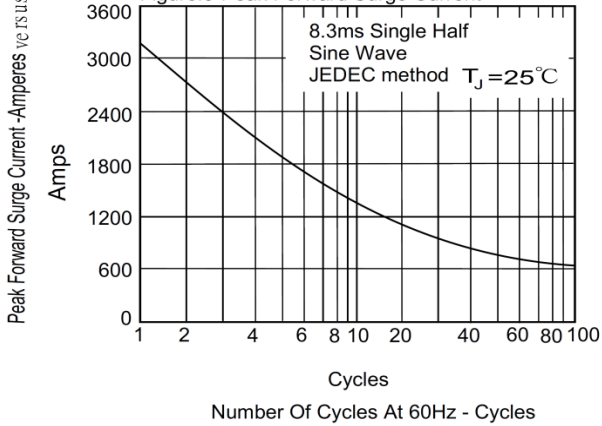
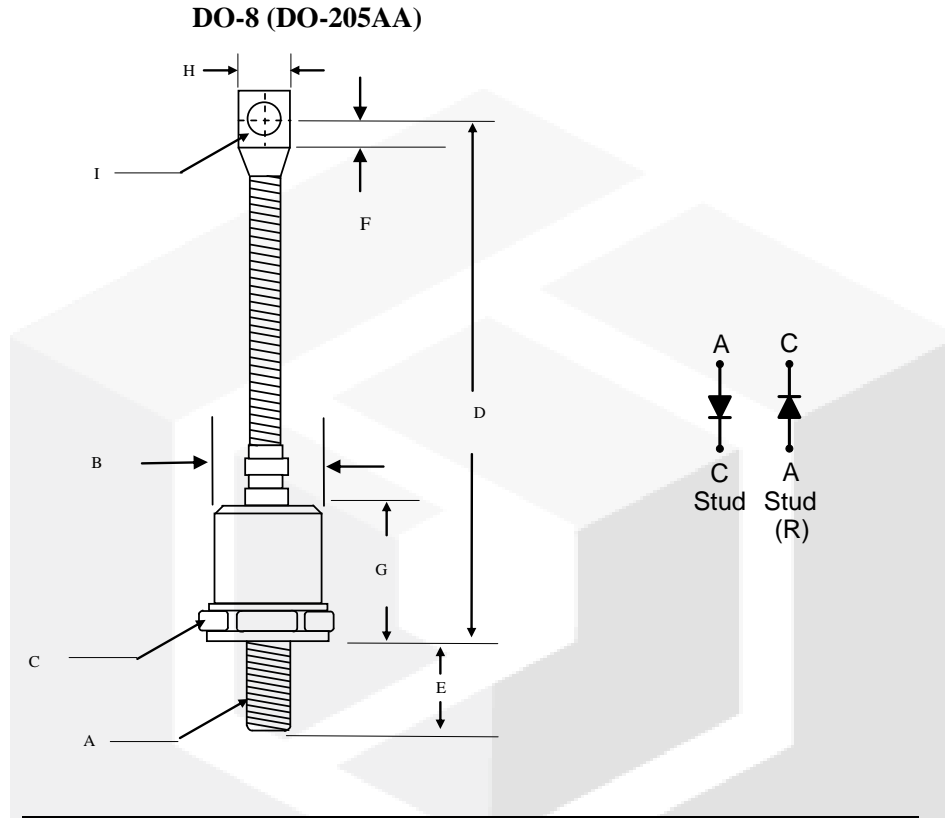


Figure.3-Peak Forward Surge Current



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



| | Inches | | Millimeters | |
|---|------------|--------|-------------|--------|
| | Min | Max | Min | Max |
| A | 3/8-24 UNF | | | |
| B | ----- | φ0.930 | ----- | φ23.5 |
| C | 1.050 | 1.060 | 26.67 | 26.92 |
| D | 4.300 | 4.700 | 109.22 | 119.38 |
| E | ----- | 0.690 | ----- | 17.00 |
| F | 0.260 | ----- | 6.50 | ----- |
| G | ----- | 0.940 | ----- | 24.00 |
| H | ----- | 0.600 | ----- | 15.23 |
| I | 0.276 | 0.286 | 7.010 | 7.260 |

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