

## Silicon Standard Recovery Diode

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

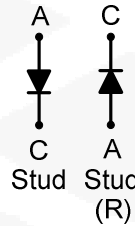
### Features

- 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 | $^\circ\text{C}$ |

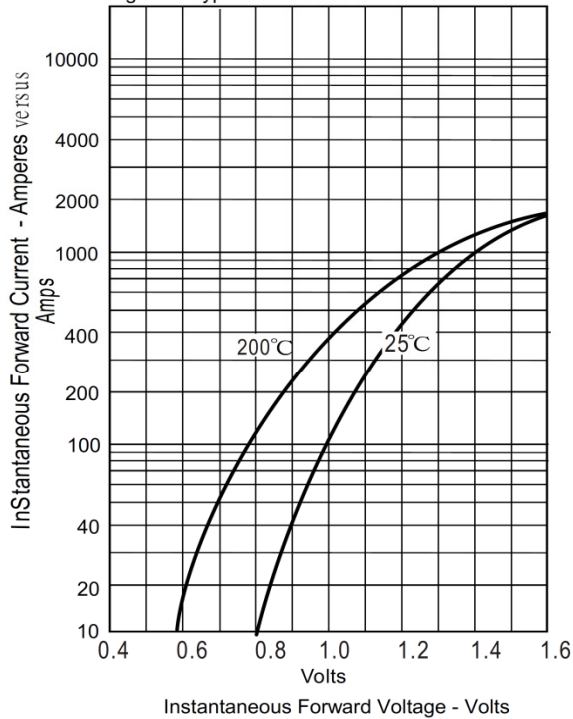
### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

| 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        | $\mu\text{A}$ |
|                       |        | $V_R = 600\text{ V}$ , $T_j = 150\text{ }^\circ\text{C}$ | 15        | 15        | 15        | 9         | mA            |

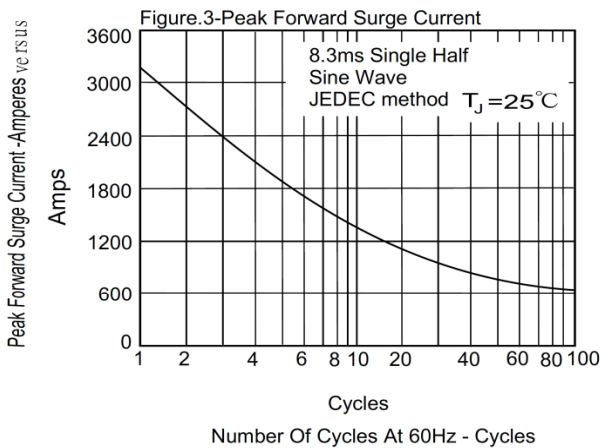
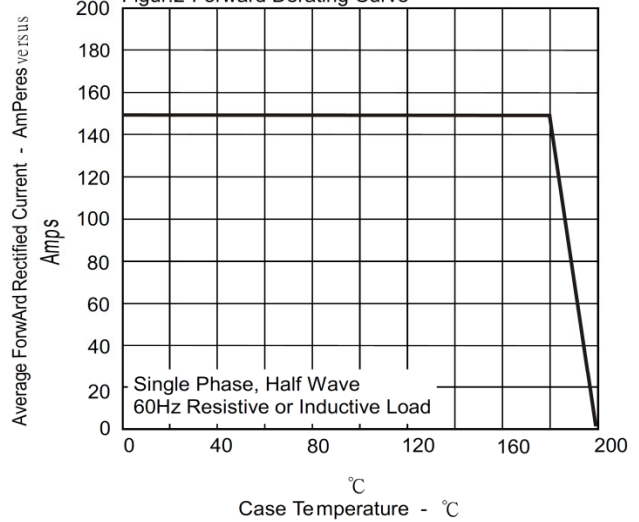
### Thermal characteristics

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

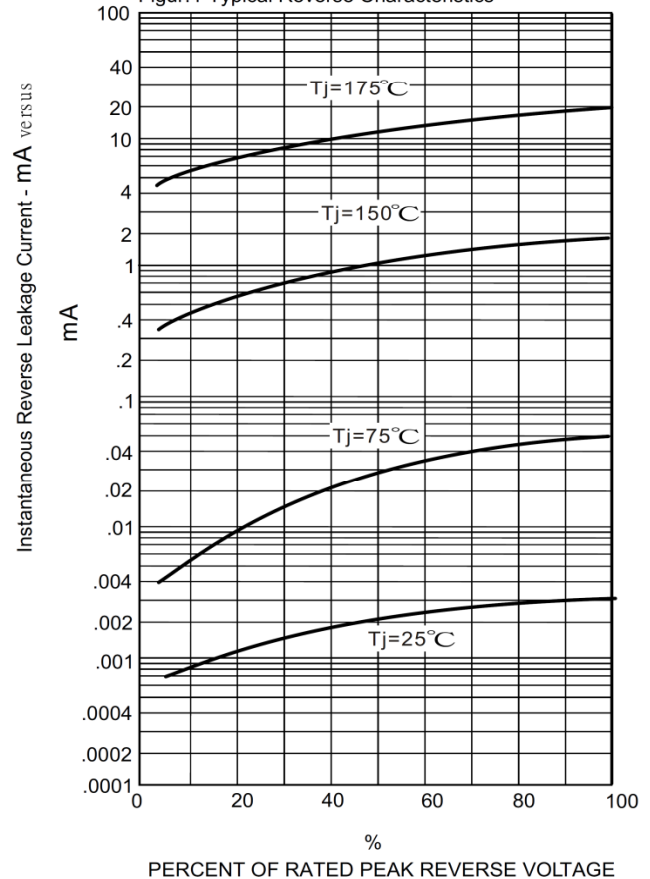
Figure.1-Typeical Forward Characteristics



Figur.2-Forward Derating Curve

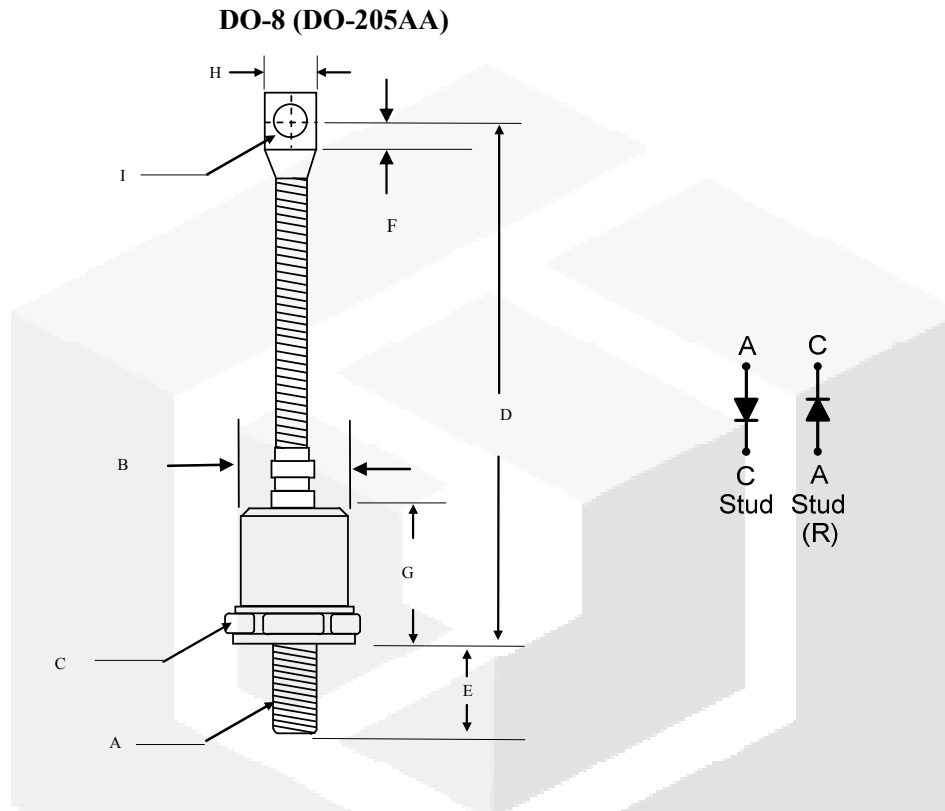


Figur.4-Typical Reverse Characteristics



## 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 | ----       | $\phi 0.930$ | ----        | $\phi 23.5$ |
| 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       |