

## Silicon Standard Recovery Diode

$V_{RRM} = 800\text{ V} - 1200\text{ V}$

$I_F = 16\text{ A}$

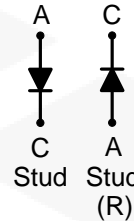
### Features

- High Surge Capability
- Types from 800 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-4 Package



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

| Parameter  | Symbol     | Conditions   | S16K (R)   | S16M (R)   | S16Q (R)   | Unit             |
|--|------------|--|------------|------------|------------|------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |  | 800        | 1000       | 1200       | V                |
| RMS reverse voltage                                  | $V_{RMS}$  |  | 560        | 700        | 840        | V                |
| DC blocking voltage                                  | $V_{DC}$   |  | 800        | 1000       | 1200       | V                |
| Continuous forward current                           | $I_F$      | $T_C \leq 140\text{ }^\circ\text{C}$                     | 16         | 16         | 16         | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$ | 370        | 370        | 370        | A                |
| 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  | S16K (R) | S16M (R) | S16Q (R) | Unit          |
|-----------------------|--------|---|----------|----------|----------|---------------|
| Diode forward voltage | $V_F$  | $I_F = 16\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$  | 1.1      | 1.1      | 1.1      | V             |
| Reverse current       | $I_R$  | $V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$  | 10       | 10       | 10       | $\mu\text{A}$ |
|                       |        | $V_R = 50\text{ V}$ , $T_j = 175\text{ }^\circ\text{C}$ | 12       | 12       | 12       | mA            |

### Thermal characteristics

| Parameter                           | Symbol     | Conditions | S16K (R) | S16M (R) | S16Q (R) | Unit               |
|-------------------------------------|------------|------------|----------|----------|----------|--------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |            | 2.50     | 2.50     | 2.50     | $^\circ\text{C/W}$ |

Figure .1-Typical Forward Characteristics

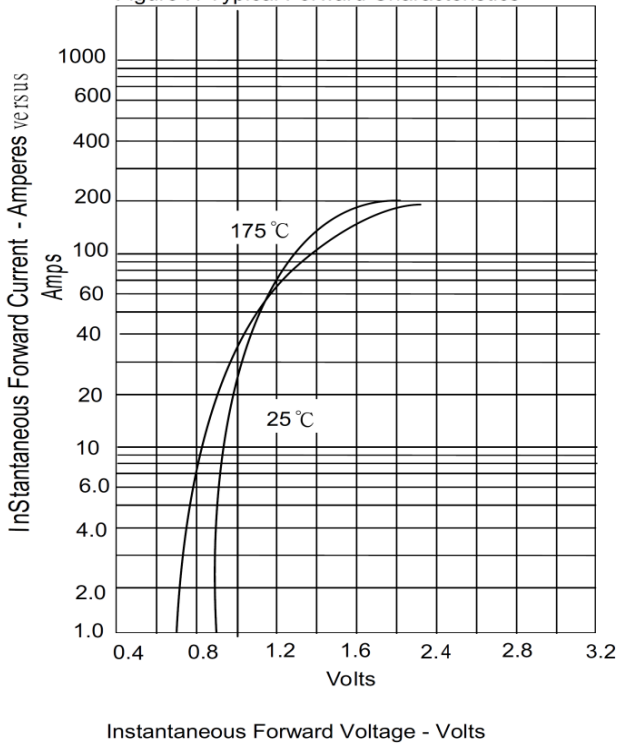


Figure .2-Forward Derating Curve

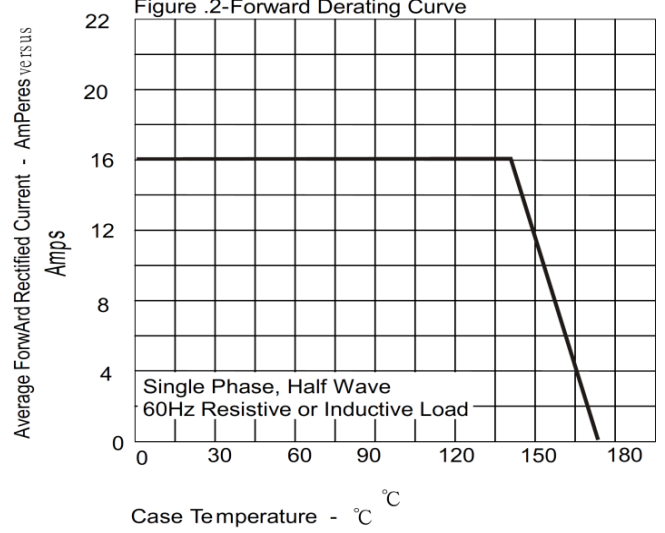


Figure .4-Typical Reverse Characteristics

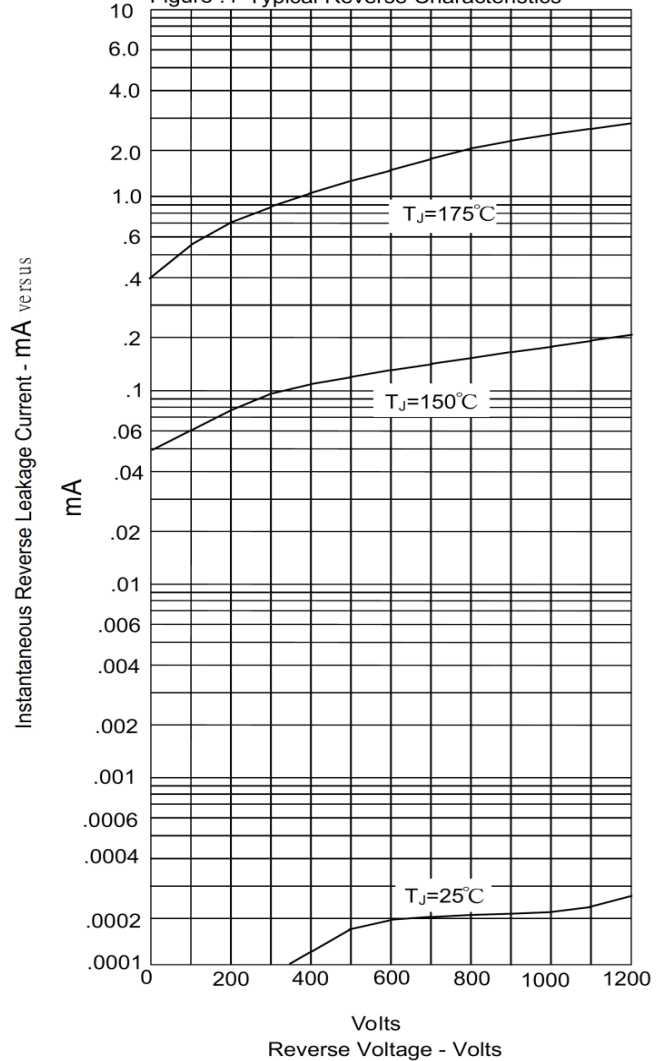
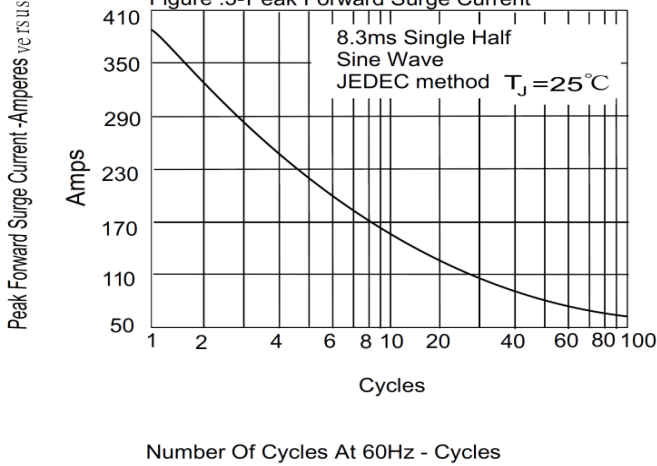
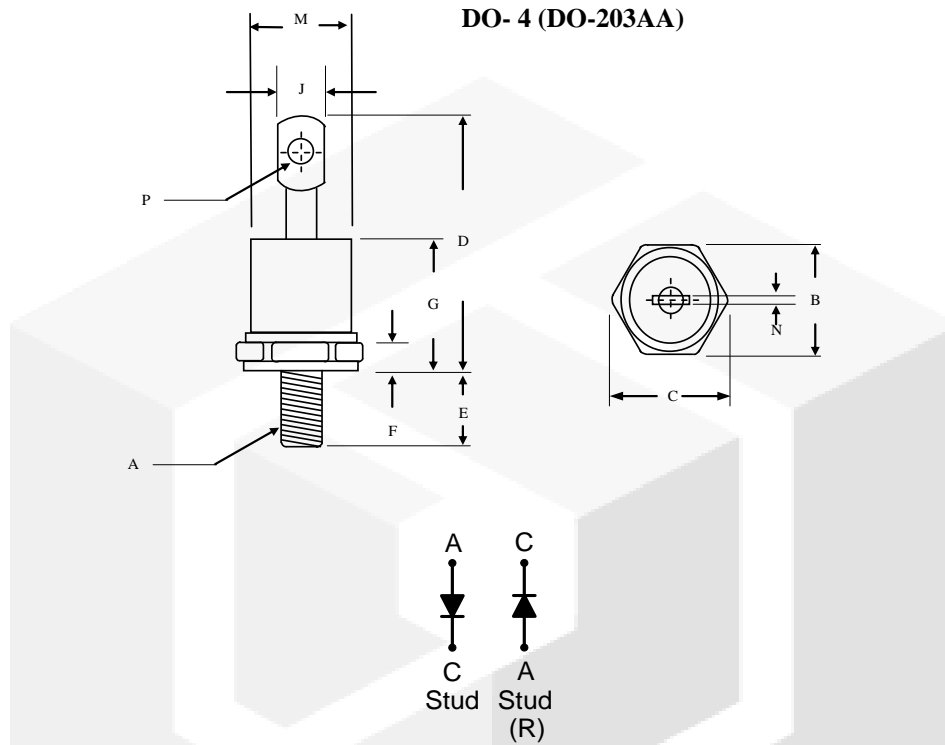


Figure .3-Peak Forward Surge Current



**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.



|   | Inches    |        | Millimeters |       |
|---|-----------|--------|-------------|-------|
|   | Min       | Max    | Min         | Max   |
| A | 10-32 UNF |        |             |       |
| B | 0.424     | 0.437  | 10.77       | 11.10 |
| C | ----      | 0.505  | ----        | 12.82 |
| D | -----     | 0.800  | ----        | 20.30 |
| E | 0.453     | 0.492  | 11.50       | 12.50 |
| F | 0.114     | 0.140  | 2.90        | 3.50  |
| G | ----      | 0.405  | ----        | 10.29 |
| J | ----      | 0.216  | ----        | 5.50  |
| M | ----      | φ0.302 | ----        | φ7.68 |
| N | 0.031     | 0.045  | 0.80        | 1.15  |
| P | 0.070     | 0.79   | 1.80        | 2.00  |
|   |           |        |             |       |

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