

## Silicon Standard Recovery Diode

$V_{RRM} = 100\text{ V} - 600\text{ V}$

$I_F = 12\text{ A}$

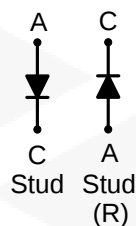
### Features

- High Surge Capability
- Types from 100 V to 600 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                                                 | S12B (R)   | S12D (R)   | S12G (R)   | S12J (R)   | Unit               |
|------------------------------------------------------|------------|------------------------------------------------------------|------------|------------|------------|------------|--------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |                                                            | 100        | 200        | 400        | 600        | V                  |
| RMS reverse voltage                                  | $V_{RMS}$  |                                                            | 70         | 140        | 280        | 420        | V                  |
| DC blocking voltage                                  | $V_{DC}$   |                                                            | 100        | 200        | 400        | 600        | V                  |
| Continuous forward current                           | $I_F$      | $T_C \leq 144\text{ }^{\circ}\text{C}$                     | 12         | 12         | 12         | 12         | A                  |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^{\circ}\text{C}$ , $t_p = 8.3\text{ ms}$ | 280        | 280        | 280        | 280        | 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                                                | S12B (R) | S12D (R) | S12G (R) | S12J (R) | Unit          |
|-----------------------|--------|-----------------------------------------------------------|----------|----------|----------|----------|---------------|
| Diode forward voltage | $V_F$  | $I_F = 12\text{ A}$ , $T_j = 25\text{ }^{\circ}\text{C}$  | 1.1      | 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       | 10       | $\mu\text{A}$ |
|                       |        | $V_R = 50\text{ V}$ , $T_j = 175\text{ }^{\circ}\text{C}$ | 12       | 12       | 12       | 12       | mA            |

### Thermal characteristics

|                                     |            |  |      |      |      |      |                      |
|-------------------------------------|------------|--|------|------|------|------|----------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 2.50 | 2.50 | 2.50 | 2.50 | $^{\circ}\text{C/W}$ |
|-------------------------------------|------------|--|------|------|------|------|----------------------|

Figure .1-Typical Forward Characteristics

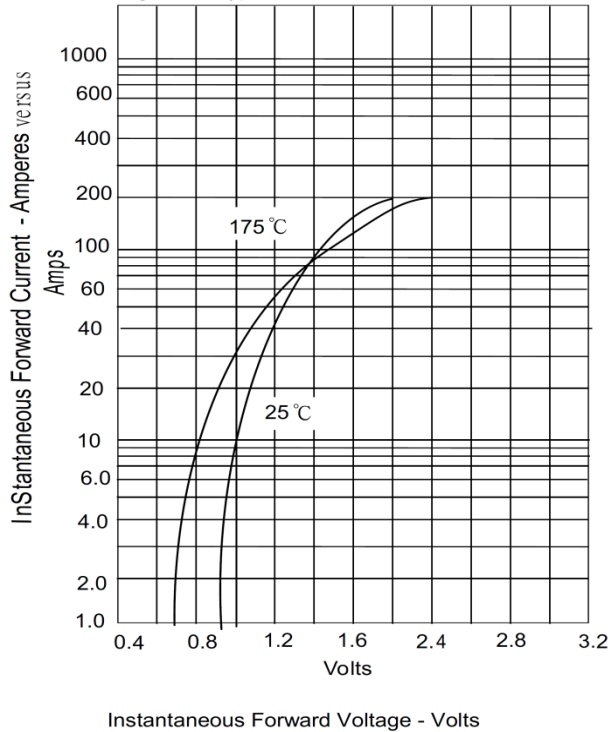


Figure .2-Forward Derating Curve

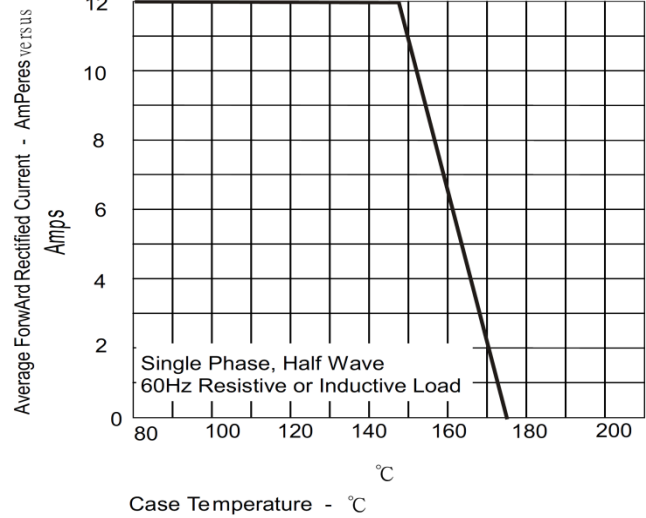


Figure .3-Peak Forward Surge Current

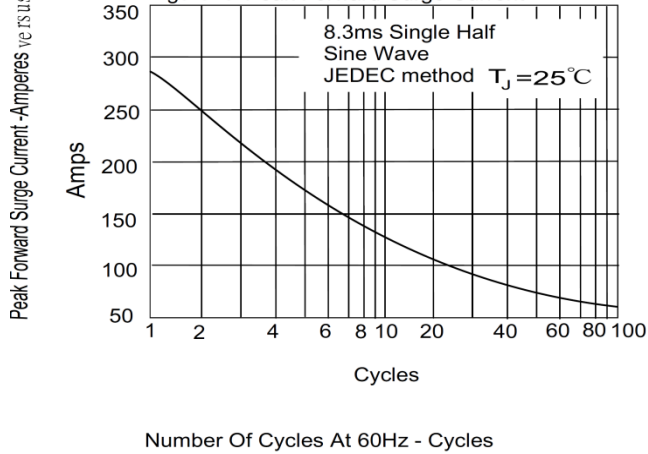
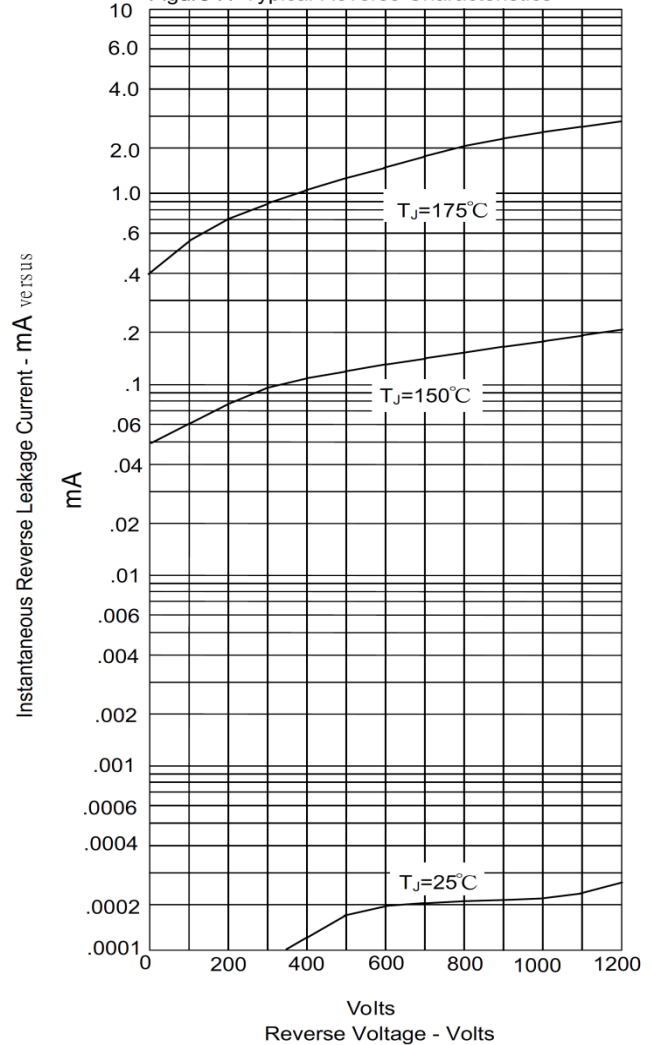
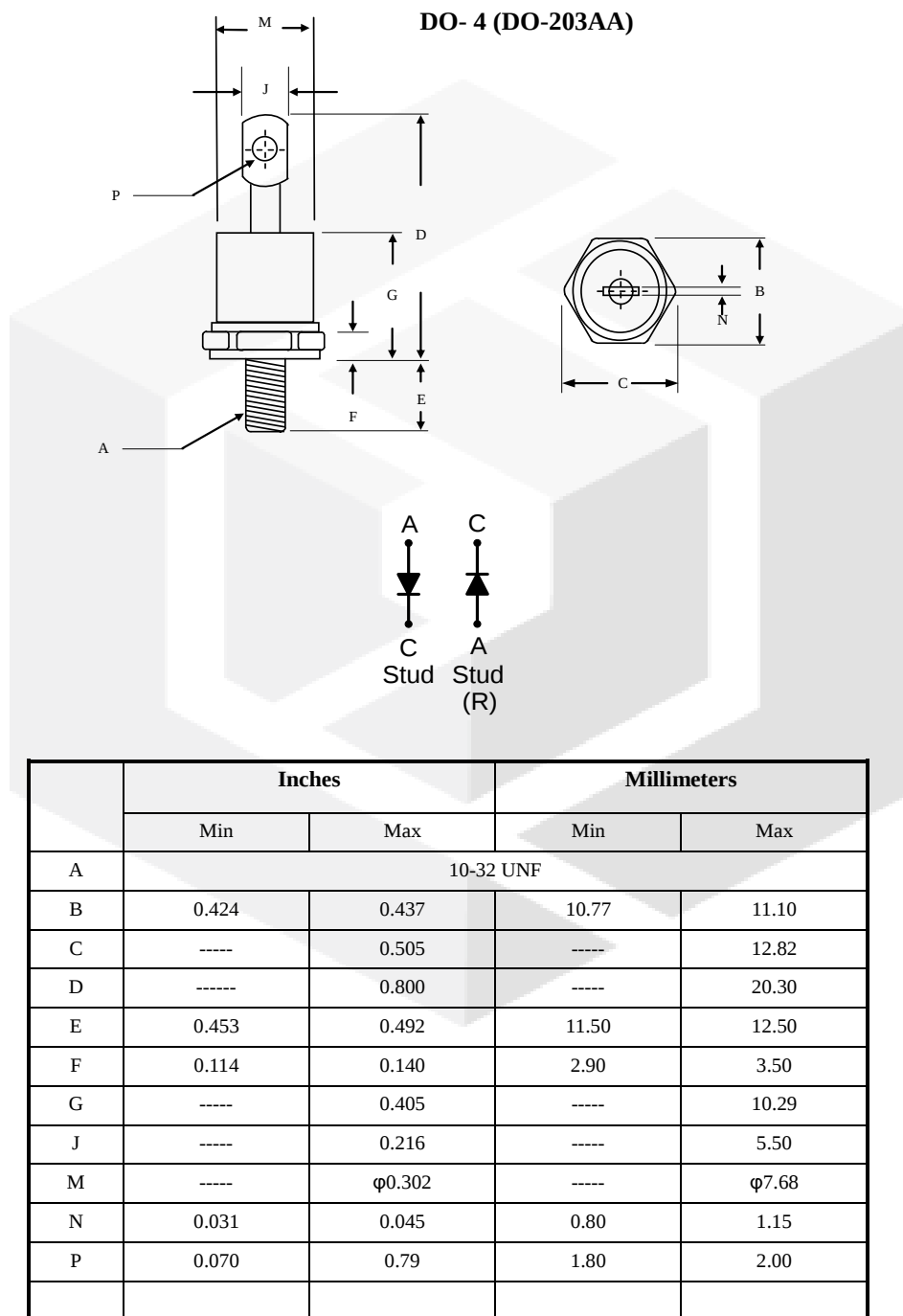


Figure .4-Typical Reverse Characteristics



## Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



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