

Silicon Standard Recovery Diode

$V_{RRM} = 200\text{ V} - 800\text{ V}$

$I_F = 100\text{ A}$

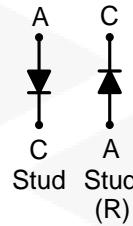
Features

- High Surge Capability
- Types from 200 V to 800 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 $T_j = 25\text{ °C}$, unless otherwise specified ("R" devices have leads reversed)

| Parameter | Symbol | Conditions | 1N3289A(R) | 1N3291A(R) | 1N3293A(R) | 1N3294A(R) | Unit |
|--|------------|--|------------|------------|------------|------------|--------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 200 | 400 | 600 | 800 | V |
| DC blocking voltage | V_{DC} | | 200 | 400 | 600 | 800 | V |
| Continuous forward current | I_F | $T_C \leq 130\text{ °C}$ | 100 | 100 | 100 | 100 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$ | 2300 | 2300 | 2300 | 2300 | A |
| I_2t for fusing | I_2t | 60 Hz Half wave | 22000 | 22000 | 22000 | 22000 | A ² sec |
| Operating temperature | T_j | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | °C |
| Storage temperature | T_{stg} | | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | °C |

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

| Parameter | Symbol | Conditions | 1N3289A(R) | 1N3291A(R) | 1N3293A(R) | 1N3294A(R) | Unit |
|-----------------------|--------|--|------------|------------|------------|------------|------|
| Diode forward voltage | V_F | $I_F = 100\text{ A}$, $T_j = 130\text{ °C}$ | 1.5 | 1.5 | 1.5 | 1.5 | V |
| Reverse current | I_R | $V_R = V_{RRM}$, $T_j = 130\text{ °C}$ | 24 | 24 | 17 | 13 | mA |

Thermal characteristics

| Parameter | Symbol | Conditions | 1N3289A(R) | 1N3291A(R) | 1N3293A(R) | 1N3294A(R) | Unit |
|-------------------------------------|------------|------------|------------|------------|------------|------------|------|
| Thermal resistance, junction - case | R_{thJC} | | 0.40 | 0.40 | 0.40 | 0.40 | °C/W |

Electrical Characteristics

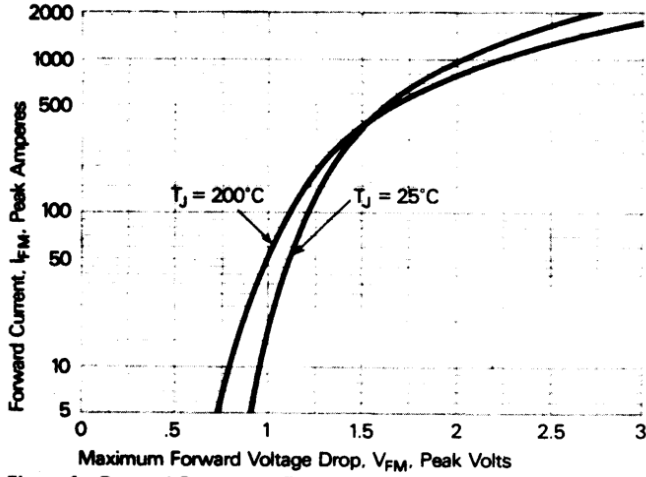


Figure 1. Forward Current vs. Forward Voltage.

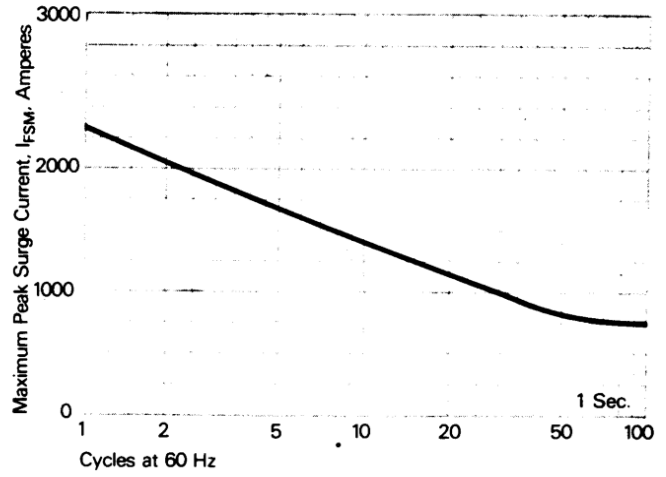


Figure 2. Maximum allowable surge current at rated load conditions.

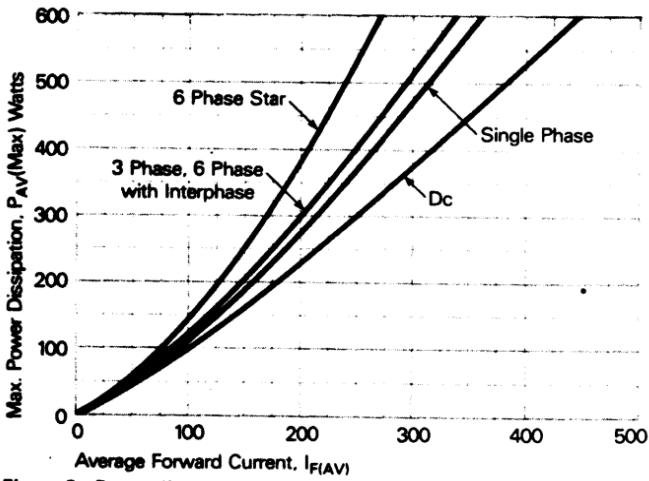


Figure 3. Power dissipation vs. Average forward current.

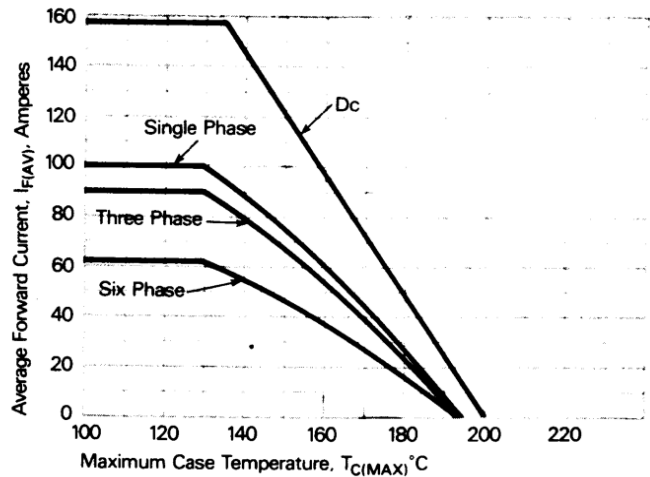
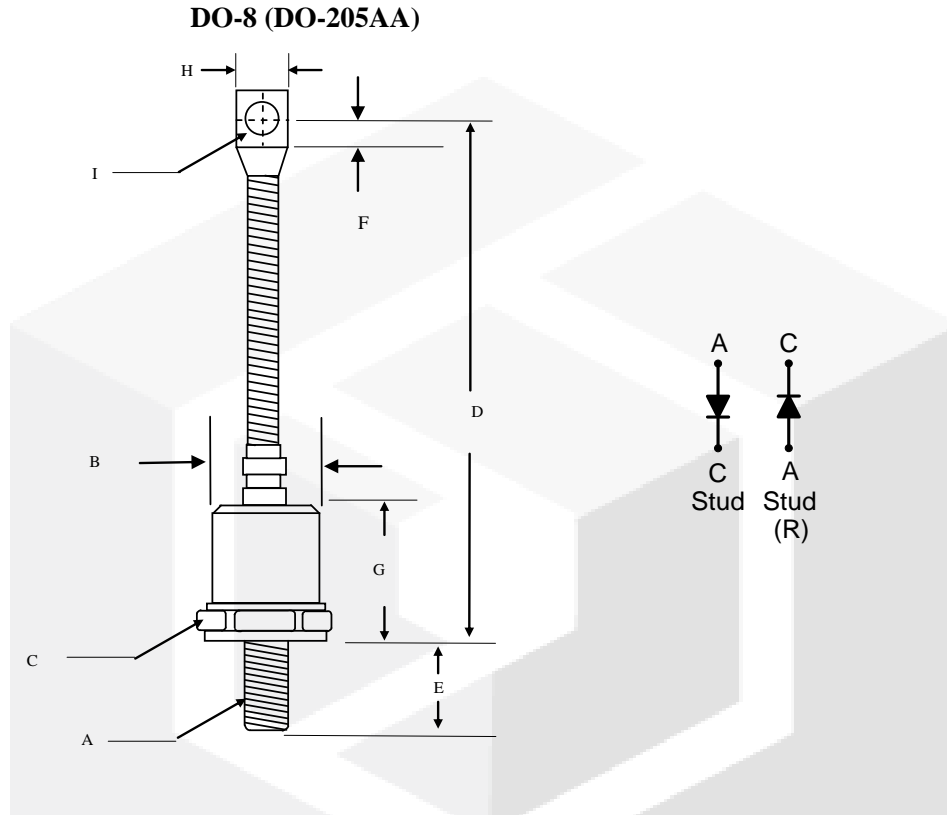


Figure 4. Forward Current vs. Case Temperature.



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 |