

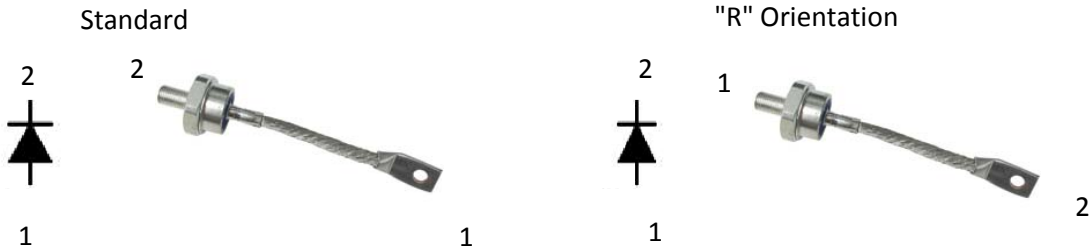
Silicon Standard Recovery Diode

$V_{RRM} = 200\text{ V} - 1400\text{ V}$
 $I_F = 150\text{ A}$

Features

- High Surge Capability
- Types up to 1400 V V_{RRM}

DO-8 Package



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

| Parameter | Symbol | Conditions | 1N4594(R) | 1N4595(R) | 1N4596(R) | Unit |
|--|------------|--|------------|------------|------------|--------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 1000 | 1200 | 1400 | V |
| DC blocking voltage | V_{DC} | | 1000 | 1200 | 1400 | V |
| Continuous forward current | I_F | $T_C \leq 110\text{ }^\circ\text{C}$ | 150 | 150 | 150 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$, $t_p = 8.3\text{ ms}$ | 3000 | 3000 | 3000 | A |
| I_2t for fusing | I_2t | 60 Hz Half wave | 37200 | 37200 | 37200 | A ² sec |
| Operating temperature | T_j | | -60 to 200 | -60 to 200 | -60 to 200 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -60 to 200 | -60 to 200 | -60 to 200 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | 1N4594(R) | 1N4595(R) | 1N4596(R) | Unit |
|-----------------------|--------|--|-----------|-----------|-----------|------|
| Diode forward voltage | V_F | $I_F = 150\text{ A}$, $T_j = 110\text{ }^\circ\text{C}$ | 1.5 | 1.5 | 1.5 | V |
| Reverse current | I_R | $V_R = V_{RRM}$, $T_j = 110\text{ }^\circ\text{C}$ | 4.5 | 4 | 3.5 | mA |

Thermal characteristics

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

Electrical Characteristics

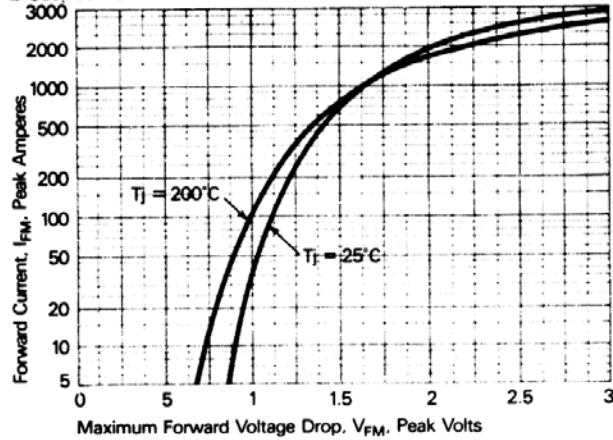


Figure 1. Forward current vs. Forward voltage.

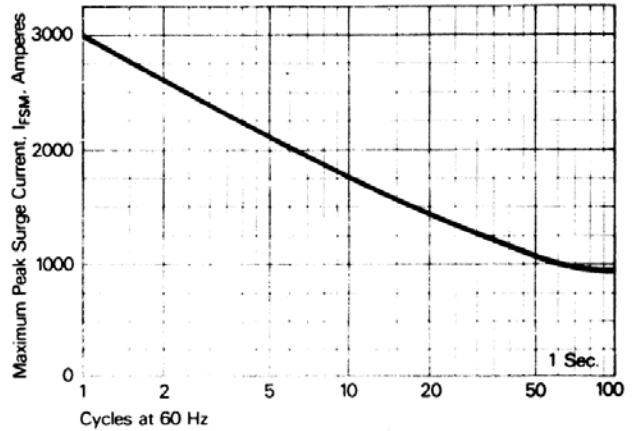


Figure 2. Maximum allowable surge current at rated load conditions.

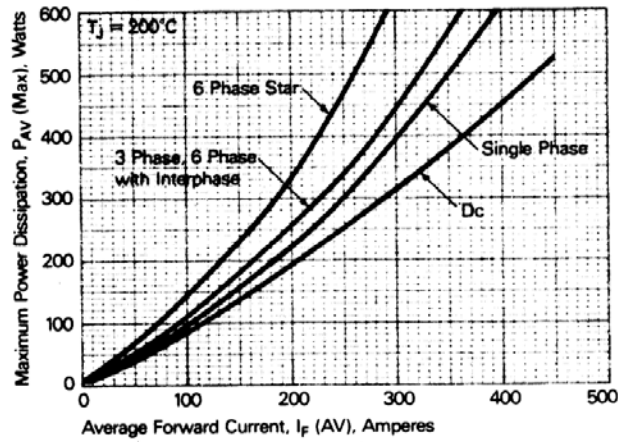


Figure 3. Power dissipation vs. Average forward current.

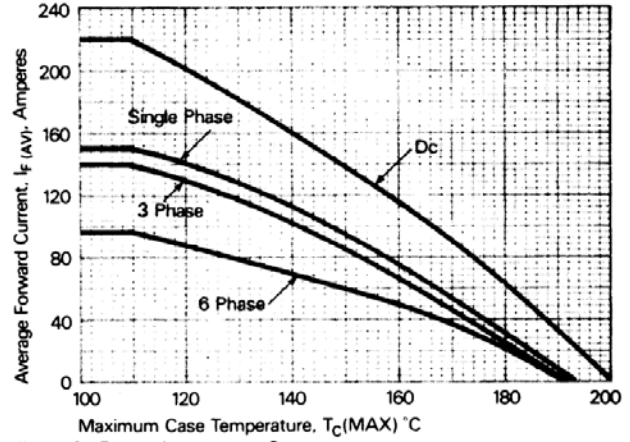


Figure 4. Forward current vs. Case temperature.