

**Silicon Standard
Recovery Diode**
 $V_{RRM} = 50\text{ V} - 1000\text{ V}$
 $I_F = 12\text{ A}$
Features

- High Surge Capability
- Types up to 1000 V V_{RRM}

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

| Parameter | Symbol | Conditions | 1N1199A(R) | 1N1200A(R) | 1N1202A(R) | 1N1204A(R) | 1N1206A(R) | Unit |
|--|-----------|--|------------|------------|------------|------------|------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 50 | 100 | 200 | 400 | 600 | V |
| RMS reverse voltage | V_{RRM} | | 35 | 70 | 140 | 280 | 420 | V |
| DC blocking voltage | V_{DC} | | 50 | 100 | 200 | 400 | 600 | V |
| Continuous forward current | I_F | $T_C \leq 150\text{ }^\circ\text{C}$ | 12 | 12 | 12 | 12 | 12 | A |
| Surge non-repetitive forward current, Half Sine Wave | I_{FSM} | $T_C = 25\text{ }^\circ\text{C}$, $t_b = 8.3\text{ ms}$ | 240 | 240 | 240 | 240 | 240 | A |
| Operating temperature | T_j | | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | $^\circ\text{C}$ |

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

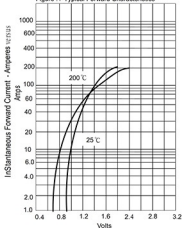
| Parameter | Symbol | Conditions | 1N1199A(R) | 1N1200A(R) | 1N1202A(R) | 1N1204A(R) | 1N1206A(R) | Unit |
|-----------------------|--------|---|------------|------------|------------|------------|------------|---------------|
| Diode forward voltage | V_f | $I_F = 12\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | V |
| | | $V_R = 50\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ | 10 | 10 | 10 | 10 | 10 | μA |
| Reverse current | I_R | $V_R = 50\text{ V}$, $T_j = 175\text{ }^\circ\text{C}$ | 15 | 15 | 15 | 15 | 15 | mA |

Thermal characteristics

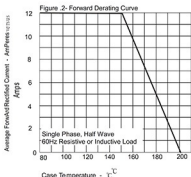
| | | | | | | | | |
|-------------------------------------|-----------------|--|------|------|------|------|------|--------------------|
| Thermal resistance, junction - case | $R_{\theta JC}$ | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | $^\circ\text{C/W}$ |
|-------------------------------------|-----------------|--|------|------|------|------|------|--------------------|



Figure 1-Typical Forward Characteristics

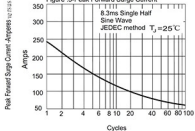


Instantaneous Forward Voltage - Volts



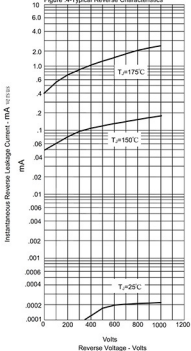
Case Temperature - °C

Figure 3-Peak Forward Surge Current



Number Of Cycles At 60Hz - Cycles

Figure 4-Typical Reverse Characteristics



Volts
Reverse Voltage - Volts