America Semiconductor

# Silicon Standard Recovery Diode

**1N2133A thru 1N2138AR**

**$V_{RRM}$ = 50 V - 600 V**

**$I_F$ =60 A**

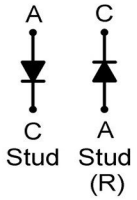
### Features

- High Surge Capability
- Types up to 600 V $V_{RRM}$

**DO-5 Package**

**Note:**

1. Standard polarity: Stud is cathode.
2. Reverse polarity (R): Stud is anode.
3. Stud is base.




### Maximum ratings, at $T_j$ = 25 °C, unless otherwise specified

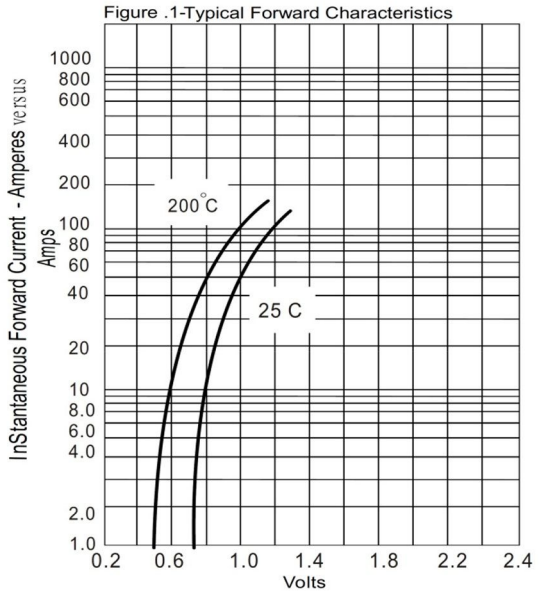
| Parameter | Symbol | Conditions | 1N2133A(R) | 1N2135A(R) | 1N2137A(R) | 1N2138A(R) | Unit |
|---|---|---|---|---|---|---|---|
| Repetitive peak reverse voltage | $V_{RRM}$ | | 300 | 400 | 500 | 600 | V |
| RMS reverse voltage | $V_{RMS}$ | | 210 | 280 | 350 | 420 | V |
| DC blocking voltage | $V_{DC}$ | | 50 | 100 | 150 | 200 | V |
| Continuous forward current | $I_F$ | $T_C \leq 150$ °C | 60 | 60 | 60 | 60 | A |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C$ = 25 °C, $t_p$ = 8.3 ms | 1050 | 1050 | 1050 | 1050 | A |
| Operating temperature | $T_j$ | | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | °C |
| Storage temperature | $T_{stg}$ | | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | °C |

### Electrical characteristics, at Tj = 25 °C, unless otherwise specified

| Parameter | Symbol | Conditions | 1N2133A(R) | 1N2135A(R) | 1N2137A(R) | 1N2138A(R) | Unit |
|---|---|---|---|---|---|---|---|
| Diode forward voltage | $V_F$ | $I_F$ = 60 A, $T_j$ = 25 °C | 1.1 | 1.1 | 1.1 | 1.1 | V |
| Reverse current | $I_R$ | $V_R$ = 50 V, $T_j$ = 25 °C | 10 | 10 | 10 | 10 | µA |
| | | $V_R$ = 50 V, $T_j$ = 150 °C | 15 | 15 | 15 | 15 | mA |
| **Thermal characteristics** | | | | | | | |
| Thermal resistance, junction - case | $R_{thJC}$ | | 0.65 | 0.65 | 0.65 | 0.65 | °C/W |

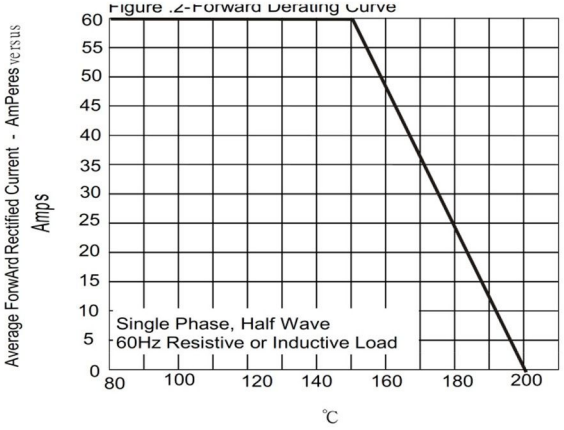
RoHS Compliant

Figure .1-Typical Forward Characteristics



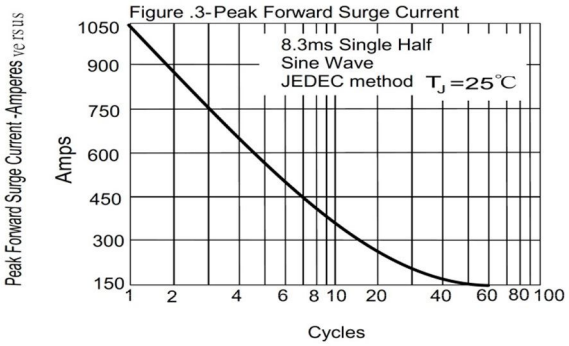

Instantaneous Forward Voltage - Volts

Figure .2-Forward Derating Curve



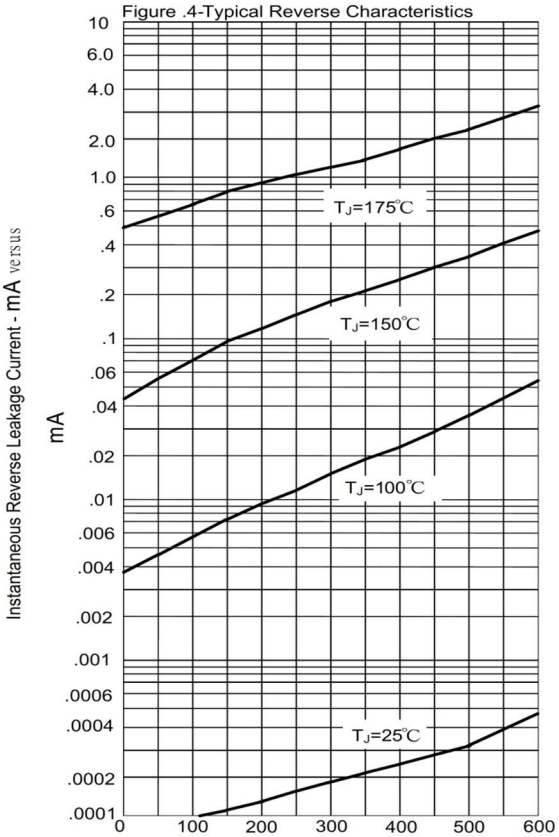

Case Temperature - °C

Figure .3-Peak Forward Surge Current




Number Of Cycles At 60Hz - Cycles

Figure .4-Typical Reverse Characteristics




Reverse Voltage - Volts