

SR120 THRU SR1200

1.0A Axial Leaded Schottky Barrier Rectifiers - 20V-200V

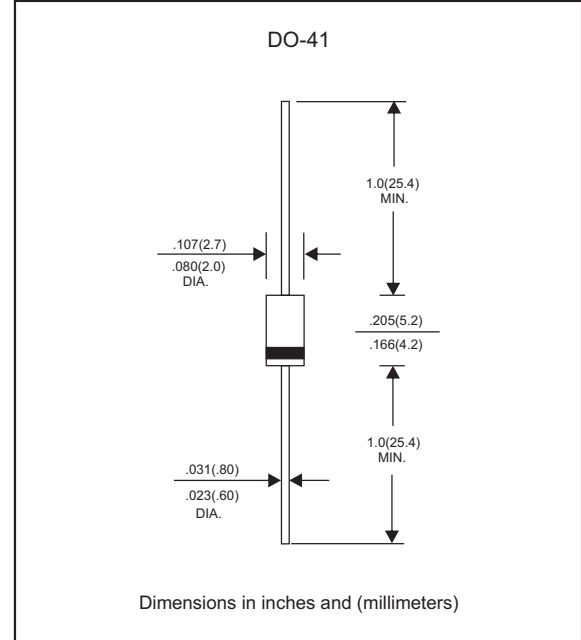
Features

- Axial lead type devices for through hole design.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen free parts, ex. SR120-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-41
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 0.33 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|---|-----------------|------|------|------|-----------------------------|
| Forward rectified current | See Fig.1 | I_o | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave (JEDEC methode) | I_{FSM} | | | 30 | A |
| Reverse current | $V_R = V_{RRM} \quad T_J = 25^{\circ}\text{C}$ | I_R | | | 0.5 | mA |
| | $V_R = V_{RRM} \quad T_J = 100^{\circ}\text{C}$ | | | | 10 | |
| Thermal resistance | Junction to ambient (Note 1) | $R_{\theta JA}$ | | 50 | | $^{\circ}\text{C}/\text{W}$ |
| | Junction to lead (Note 1) | $R_{\theta JL}$ | | 15 | | |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 110 | | pF |
| Storage temperature | | T_{STG} | -65 | | +175 | $^{\circ}\text{C}$ |

| SYMBOLS | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | Operating temperature $T_J, (^{\circ}\text{C})$ |
|---------|-----------------------|-----------------------|-------------------|-------------------|--|
| SR120 | 20 | 14 | 20 | 0.55 | -55 to +125 |
| SR130 | 30 | 21 | 30 | | |
| SR140 | 40 | 28 | 40 | | |
| SR150 | 50 | 35 | 50 | 0.70 | -55 to +150 |
| SR160 | 60 | 42 | 60 | | |
| SR180 | 80 | 56 | 80 | 0.85 | |
| SR1100 | 100 | 70 | 100 | | |
| SR1150 | 150 | 105 | 150 | | |
| SR1200 | 200 | 140 | 200 | 0.95 | |

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=1.0\text{A}$

Note 1:Thermal resistance Vertical P.C.B. mounted , with 1.5 X1.5"(38X38mm)copper pads

Rating and characteristic curves (SR120 THRU SR1200)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

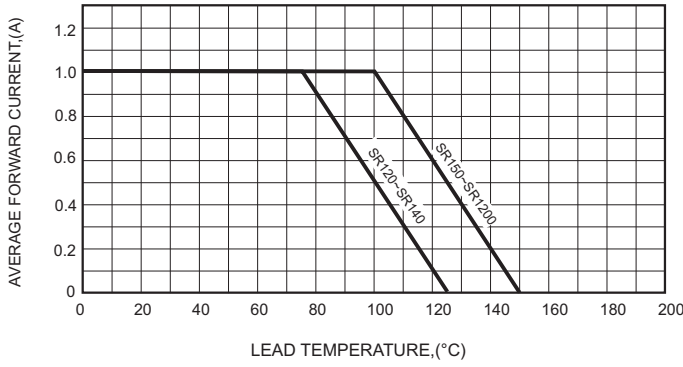


FIG.2-TYPICAL FORWARD CHARACTERISTICS

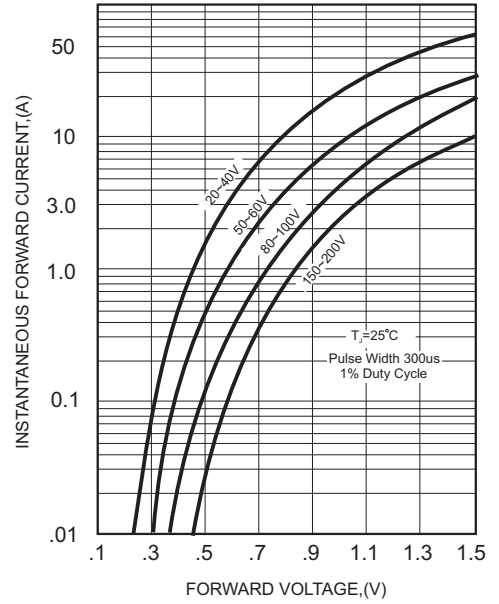


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

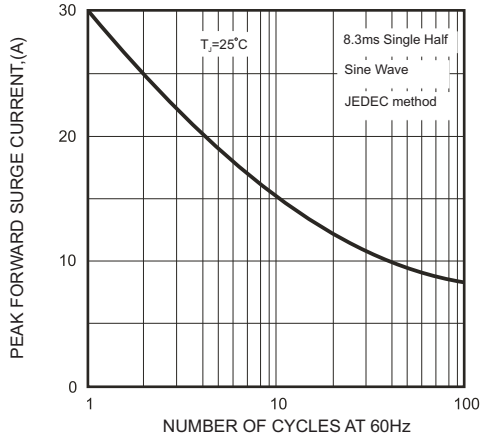


FIG.4-TYPICAL JUNCTION CAPACITANCE

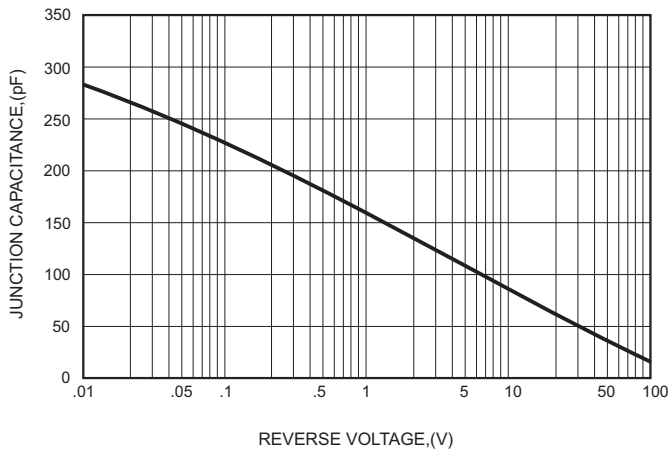
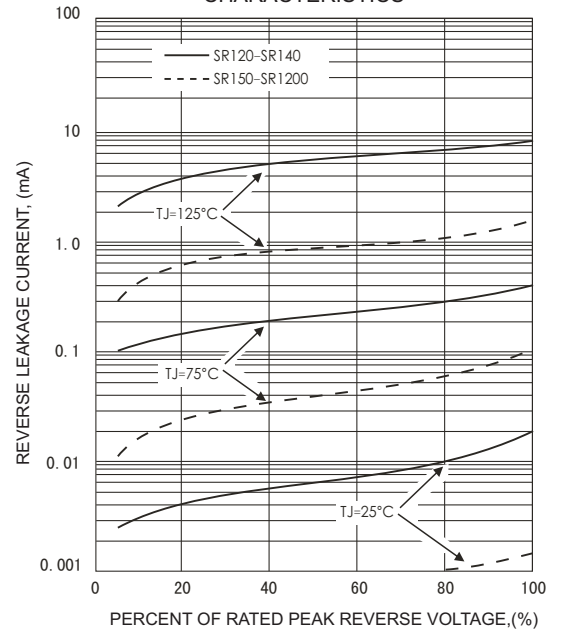


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



SR120 THRU SR1200

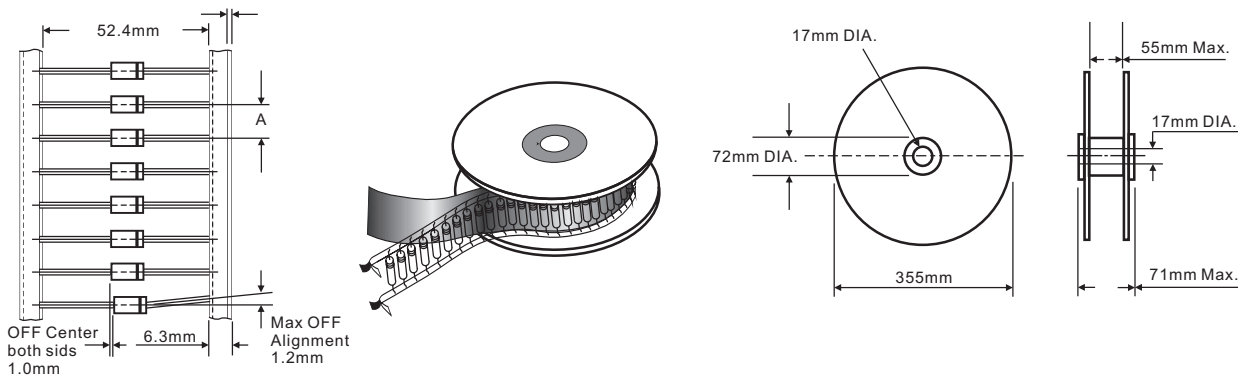
Pinning information

| Pin | Simplified outline | Symbol |
|----------------------------|--------------------|--------|
| Pin1 cathode Pin2 anode | | |

Marking

| Type number | Marking code |
|-------------|--------------|
| SR120 | SR120 |
| SR130 | SR130 |
| SR140 | SR140 |
| SR150 | SR150 |
| SR160 | SR160 |
| SR180 | SR180 |
| SR1100 | SR1100 |
| SR1150 | SR1150 |
| SR1200 | SR1200 |

Taping & bulk specifications for AXIAL devices



REEL PACKING

| DEVICE CASE TYPE | Q'TY 1 (PCS / REEL) | COMPONENT SPACING "A" in FIG. A | CARTON SIZE (m/m) | Q'TY 2 (PCS / CARTON) | APPROX. CROSS WEIGHT(kg) |
|------------------|---------------------|---------------------------------|-------------------|-----------------------|--------------------------|
| DO-41 | 5,000 | 5 mm | 360 * 340 * 370 | 20,000 | 10.8 |

AMMO PACKING

| DEVICE CASE TYPE | Q'TY 1 (PCS / BOX) | INNER BOX SIZE (m/m) | CARTON SIZE (m/m) | Q'TY 2 (PCS / CARTON) | APPROX. CROSS WEIGHT(kg) |
|------------------|--------------------|----------------------|-------------------|-----------------------|--------------------------|
| DO-41 | 5,000 | 260 * 83 * 160 | 440 * 270 * 340 | 50,000 | 20.0 |