



PRELIMINARY

SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

Designer's Data Sheet

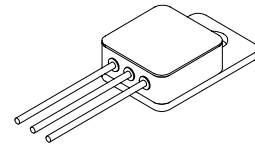
FEATURES:

- Ultra Fast Recovery: 70 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach Available
- Ultrasonic Aluminum Wire Bonds
- 175 °C Operating Junction Temperature
- Also available in following configurations:
 Rectifier: SDR1210J & SDR1212J
 Doubler: SDR1210DJ & SDR1212DJ
 Doubler Reverse: SDR1210DRJ & SDR1212DRJ
 Common Anode: SDR1210CAJ & SDR1212CAJ
- TX, TXV and Space Level Screening Available

**SDR1210CTJ
SDR1212CTJ**

**12AMPS
1000 - 1200 VOLTS
70 nsec
ULTRA FAST
CENTERTAP RECTIFIER**

TO-257(J)



| Maximum Ratings | | SYMBOL | VALUE | UNITS |
|--|--------------------------|---------------------------------|--------------|-------|
| Peak Repetitive Reverse and DC Blocking Voltage | SDR1210CTJ SDR1212CTJ | V_{RRM} V_{RWM} V_R | 1000 1200 | Volts |
| Average Rectified Forward Current. (Resistive load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$) <u>1/</u> | | I_o | 12 | Amps |
| Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$) <u>1/</u> | | I_{FSM} | 50 | Amps |
| Operating and Storage Temperature | | T_{OP} & T_{stg} | -65 TO +175 | °C |
| Maximum Thermal Resistance Junction to Case, <u>2/</u> Junction to Case, <u>1/</u> | | $R_{\theta JC}$ | 1.2 2.4 | °C/W |

NOTE:

- 1/ Per Leg.
- 2/ Both Legs Tied Together

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RC0048A

**SDR1210CTJ
SDR1212CTJ**

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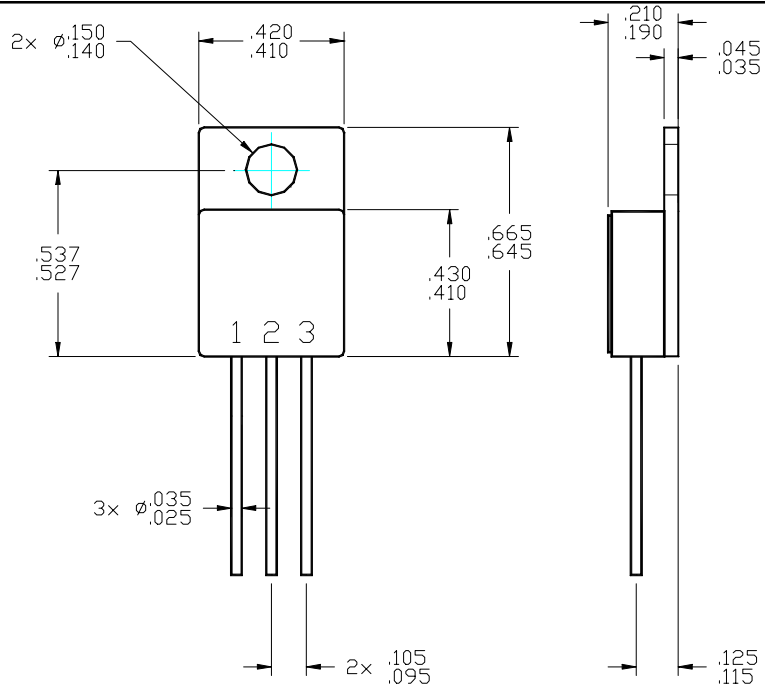


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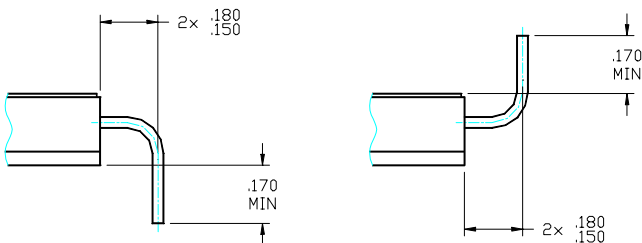
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| Electrical Characteristics (Per Leg) | SYMBOL | MINIMUM | MAXIMUM | UNITS |
|---|---------------------------------------|---------|-------------|---------------|
| Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 μsec Pulse) | $I_F = 1 \text{ A}$ V_{F1} | -- | 1.10 | V_{DC} |
| | $I_F = 8 \text{ A}$ V_{F2} | -- | 1.60 | |
| | $I_F = 12 \text{ A}$ V_{F2} | -- | 1.80 | |
| Instantaneous Forward Voltage Drop ($I_F = 8 \text{ A}$, 300 μsec pulse) | $T_A = 100^\circ\text{C}$ V_{F4} | -- | 1.45 | V_{DC} |
| | $T_A = -55^\circ\text{C}$ V_{F5} | -- | 1.85 | |
| Reverse Leakage Current (80% of Rated V_R , 300 μs pulse min.) | $T_A = 25^\circ\text{C}$ I_{R1} | -- | 20 | μA |
| | $T_C = 100^\circ\text{C}$ I_{R2} | -- | 1.5 | mA |
| Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$) | C_J | -- | 400 | pF |
| Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1.0\text{A}$, $I_{RR} = 250 \text{ mA}$, $T_A = 25^\circ\text{C}$) | t_{RR} | -- | 70 | nsec |

CASE OUTLINE: TO-257 (Suffix J)



OPTIONAL LEAD BEND CONFIGURATION



SUFFIX JDB

SUFFIX JUB

PIN ASSIGNMENT

| CODE | FUNCTION | PIN 1 | PIN 2 | PIN 3 |
|------|------------------|---------|---------|---------|
| -- | Rectifier | Cathode | Anode | Anode |
| CT | Common Cathode | Anode | Cathode | Anode |
| CA | Common Anode | Cathode | Anode | Cathode |
| D | Doubler | Cathode | Common | Anode |
| DR | Doubler, Reverse | Anode | Common | Cathode |