



**SOLID STATE DEVICES, INC.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**Designer's Data Sheet**

**SDR1510JUF & S.5UF  
 SDR1512JUF & S.5UF**

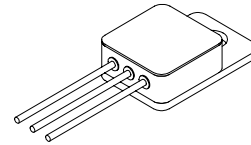
**15 AMPS  
 1000 - 1200 VOLTS  
 75 nsec  
 ULTRA FAST  
 RECTIFIER**

**FEATURES:**

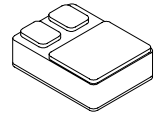
- Ultra Fast Recovery: 75nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Custom Lead Forming Available
- Eutectic Die Attach
- TX, TXV and Space Level Screening Available

**TO-257(J)**

**SMD.5(S.5)**



**Isolated**



**Hot Case**

**Available in Following Configurations:**

Rectifier: **SDR1510JUF, SDR1510JUFDB, SDR1510JUFUB, and SDR1510S.5UF  
 SDR1512JUF, SDR1512JUFDB, SDR1512JUFUB, and SDR1512S.5UF**

<b>Maximum Ratings</b>		<b>SYMBOL</b>	<b>VALUE</b>	<b>UNITS</b>
<b>Peak Repetitive Reverse and DC Blocking Voltage</b>	<b>SDR1510 SDR1512</b>	$V_{RRM}$ $V_{RWM}$ $V_R$	<b>1000 1200</b>	<b>Volts</b>
<b>Average Rectified Forward Current.</b> (Resistive load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$ )		<b><math>I_o</math></b>	<b>15</b>	<b>Amps</b>
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$ )		<b><math>I_{FSM}</math></b>	<b>150</b>	<b>Amps</b>
<b>Operating and Storage Temperature</b>		<b><math>T_{OP}</math> &amp; <math>T_{stg}</math></b>	<b>-65 TO +175</b>	<b><math>^\circ\text{C}</math></b>
<b>Maximum Thermal Resistance</b> Junction to Case	<b>TO-257 (J) SMD.5 (S.5)</b>	<b><math>R_{\theta JC}</math></b>	<b>1.4 0.8</b>	<b><math>^\circ\text{C/W}</math></b>

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

**DATA SHEET #: RC0065A**

**SDR1510JUF & S.5UF**  
**SDR1512JUF & S.5UF**

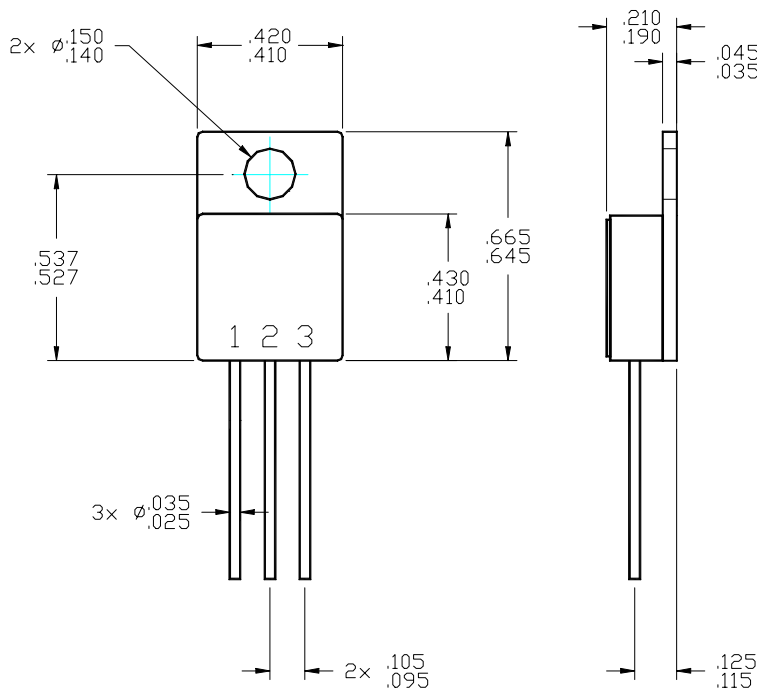


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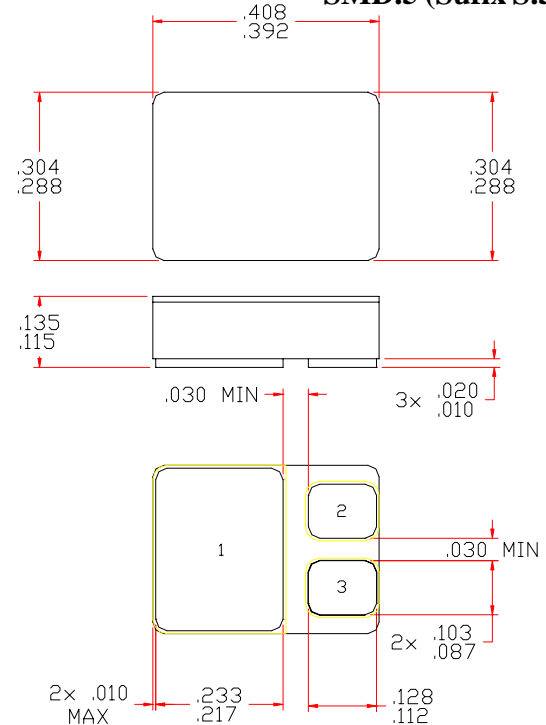
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Electrical Characteristics	SYMBOL	MINIMUM	MAXIMUM	UNITS
<b>Instantaneous Forward Voltage Drop</b> ( $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$I_F = 10\text{ A}$ $V_{F1}$	--	<b>1.50</b>	$V_{DC}$
	$I_F = 15\text{ A}$ $V_{F2}$	--	<b>1.60</b>	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{ A}$ , 300 $\mu\text{sec}$ pulse)	$T_A = 100^\circ\text{C}$ $V_{F3}$	--	<b>1.40</b>	$V_{DC}$
	$T_A = -55^\circ\text{C}$ $V_{F4}$	--	<b>1.60</b>	
<b>Reverse Leakage Current</b> (80% of Rated $V_R$ , 300 $\mu\text{s}$ pulse min.)	$T_A = 25^\circ\text{C}$ $I_{R1}$	--	<b>50</b>	$\mu\text{A}$
	$T_C = 100^\circ\text{C}$ $I_{R2}$	--	<b>750</b>	$\mu\text{A}$
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )	$C_J$	--	<b>70</b>	$\text{pF}$
<b>Reverse Recovery Time</b> ( $I_F = 500\text{mA}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{mA}$ , $T_A = 25^\circ\text{C}$ )	$t_{RR}$	--	<b>75</b>	$\text{nsec}$

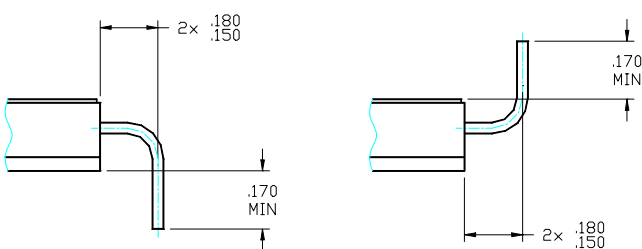
**CASE OUTLINE: TO-257 (Suffix J)**



**SMD.5 (Suffix S.5)**



**OPTIONAL LEAD BEND CONFIGURATION**



**SUFFIX JDB**

**SUFFIX JUB**

**PIN ASSIGNMENT**

CODE	FUNCTION	PIN 1	PIN 2	PIN 3
J	Rectifier	Cathode	Anode	Anode
S.5	Rectifier	Cathode	Anode	Anode