



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**SDR1183  
Thru  
SDR1190**

**35 Amp  
50-600 Volt  
5 μsec  
STANDARD RECOVERY  
RECTIFIER**

**Designer's Data Sheet**

**Part Number/Ordering Information <sup>1/</sup>**

SDR11

├── Screening <sup>2/</sup>    \_\_\_ = Not Screened  
                           TX    = TX Level  
                           TXV = TXV Level  
                           S    = S Level

└── Pin Configuration    \_\_\_ = Normal (Cathode to Stud)  
                                   R = Reverse (Anode to Stud)  
                                   (See Table 1)

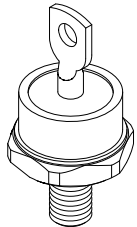
└── Family/Voltage

83 = 50V
84 = 100V
85 = 150V
86 = 200V
87 = 300V
88 = 400V
89 = 500V
90 = 600V

- Features:**
- Low Reverse Leakage Current
  - Single Chip Construction
  - PIV to 600V
  - Hermetically Sealed
  - Low Thermal Resistance
  - Higher Voltage Devices Up to 1400V Available\*
  - Fast and Ultra Fast Recovery Versions Available\*
  - For Reverse Polarity Add Suffix "R"
  - Replacement for 1N1183, 1N1184, 1N1185, 1N1186, 1N1187, 1N1188, 1N1189, and 1N1190
  - TX, TXV, and S-Level Screening Available <sup>2/</sup>
- \*Contact Factory

Maximum Ratings	Symbol	Value	Units
<b>Peak Repetitive Reverse and DC Blocking Voltage</b>	SDR1183	50	<b>Volts</b>
	SDR1184	100	
	SDR1185	150	
	SDR1186	200	
	SDR1187	300	
	SDR1188	400	
	SDR1189	500	
	SDR1190	600	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz Sine Wave, T <sub>A</sub> = 25 °C)	<b>I<sub>o</sub></b>	35	<b>Amps</b>
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25 °C)	<b>I<sub>FSM</sub></b>	500	<b>Amps</b>
<b>Operating &amp; Storage Temperature</b>	<b>T<sub>OP</sub> &amp; T<sub>STG</sub></b>	-65 to +150	<b>°C</b>
<b>Maximum Total Thermal Resistance</b> Junction to Case	<b>R<sub>θJC</sub></b>	1.0	<b>°C/W</b>

DO-5:



**Notes:**  
 1/ For ordering information, price, operating curves, and availability- contact factory.  
 2/ Screening based on MIL-PRF-19500. Screening flows available on request.



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**SDR1183  
 Thru  
 SDR1190**

Electrical Characteristics	Symbol	Max	Units
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 35 \text{ A dc}$ , $T_A = 25 \text{ }^\circ\text{C}$ , 300 $\mu\text{s}$ pulse)	$V_F$	1.4	$V_{DC}$
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 35 \text{ A dc}$ , $T_A = -55 \text{ }^\circ\text{C}$ , 300 $\mu\text{s}$ pulse)	$V_F$	1.6	$V_{DC}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25 \text{ }^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)	$I_R$	20	$\mu\text{A}$
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100 \text{ }^\circ\text{C}$ , 300 $\mu\text{s}$ pulse minimum)	$I_R$	2	<b>mA</b>
<b>Reverse Recovery Time</b> ( $I_F = 500 \text{ mA}$ , $I_R = 1 \text{ Amp}$ , $I_{RR} = 250 \text{ mA}$ , $T_A = 25 \text{ }^\circ\text{C}$ )	$t_{RR}$	5	$\mu\text{sec}$
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )	$C_J$	250	<b>pF</b>

**Table 1- PIN ASSIGNMENT**

Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
<b>R</b>	Reverse	Cathode	Anode

**DO-5 Outline (Normal Pin Configuration Shown):**

