



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 ^{1/}
 SDR11

├── Screening ^{2/} ___ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

├── Pin Configuration ___ = Normal (Cathode to Stud)
 (See Table 1) R = Reverse (Anode to Stud)

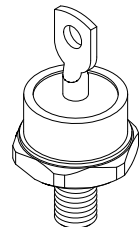
└── Family/Voltage

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 ^{2/}
- *Contact Factory

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

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

Table 1- PIN ASSIGNMENT

Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
R	Reverse	Cathode	Anode

