Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR1183 Thru SDR1190

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 (See Table 1) __ = Normal (Cathode to Stud)
R = Reverse (Anode to Stud)

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

35 Amp
50-600 Volt
5 μsec
STANDARD RECOVERY RECTIFIER

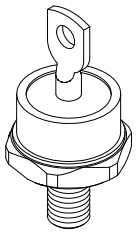
Features:

- **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**	V_{RRM} V_{RWM} V_R	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)	**Io**	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	**ºC**
Maximum Total Thermal Resistance Junction to Case	$R_{\theta JC}$	1.0	**ºC/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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SDR1183 Thru SDR1190

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

Table 1- PIN ASSIGNMENT

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

DO-5 Outline (Normal Pin Configuration Shown):

