

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

4R8S thru 15R8S

**100 Amp
 Ultra Fast Rectifier
 40-150 VOLTS*
 50 nsec**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

R8S 

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

Family/Voltage

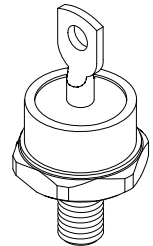
4 = 40V	10 = 100V
5 = 50V	12 = 125V
7 = 70V	15 = 150V

- Features:**
- **Ultra Fast Recovery: 50 nsec Maximum**
 - **Reverse Voltage to 150 Volts**
 * Higher Voltages Available – Consult Factory
 - **Very Low Forward Voltage Drop**
 - **Low Reverse Leakage Single Chip Construction**
 - **Hermetically Sealed**
 - **TX, TXV, and S-Level Screening Available ^{2/}**

Maximum Ratings ^{3/}	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	4R8S	40	Volts
	5R8S	50	
	7R8S	70	
	10R8S	100	
	12R8S	125	
	15R8S	150	
Half Wave Rectified Forward Current Averaged Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, T _A = 55 °C)	I_o	100	Amps
Peak Repetitive Forward Current (T _C = 55°C, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	I_{FSM}	400	Amps
Peak Surge Current (T _C = 55°C, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	I_{FSM}	1000	Amps
Operating & Storage Temperature	T_{OP} & T_{STG}	-65 to +175	°C
Thermal Resistance (Junction to Case)	R_{θJC}	0.65	°C/W

Notes:

- 1/ For ordering information, price, operating curves, and availability- Contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Unless otherwise specified, all maximum ratings/electrical characteristics @ 25°C.





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Electrical Characteristics ^{3/}	Symbol	Value	Units
Maximum Instantaneous Forward Voltage Drop ($I_F = 100\text{Adc}$, $T_C = 25\text{ }^\circ\text{C}$, 300-500 μs Pulse)	V_F	1.00	V_{DC}
Maximum Instantaneous Forward Voltage Drop ($I_F = 100\text{Adc}$, $T_A = -55\text{ }^\circ\text{C}$, 300-500 μs Pulse)	V_F	1.10	V_{DC}
Maximum Reverse Leakage Current (Rated V_R , $T_C = 25\text{ }^\circ\text{C}$)	I_R	25	μA
Maximum Reverse Leakage Current (Rated V_R , $T_C = 100\text{ }^\circ\text{C}$)	I_R	2	mA
Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$)	t_{RR}	50	nsec
Maximum Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$)	C_J	400	pF

Table 1- PIN ASSIGNMENT			
Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
R	Reverse	Cathode	Anode

DO-5 Outline (Normal Pin Configuration Shown):

