



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

SSR4010S1 SSR4015S1

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SSR4010
SSR4015

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

Package

S1 = SMD1
S1L = SMD1 with leads

40 AMP

100 - 150 VOLTS

**ULTRA LOW LEAKAGE
SCHOTTKY RECTIFIER**

FEATURES:

- PIV: 100 - 150 Volts
- Low Forward Voltage Drop
- Very Low Reverse Leakage
- Hermetically Sealed Power Surface Mount Package
- Ribbon Leads Option Available – Reduces Risk of Vibration Stress and Thermal Fatigue
- 175°C Operating Junction Temperature
- Higher Voltages Available – Contact Factory
- Replacement for Ultrafast and Hyperfast Rectifiers
- TX, TXV, or Space Level Screening Available

MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage SSR4010 SSR4015	V_{RRM} V_{RWM} V_R	100 150	V
Average Rectified Output Current^{3/} (Resistive load, 60 Hz, sine wave, $T_A = 25^\circ\text{C}$)	I_O	40	A
Peak Surge Current^{3/} (8.3 ms pulse, half sine wave superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)	I_{FSM}	350	A
Operating and Storage Temperature	$T_{OP} \text{ \& } T_{STG}$	-55 to +175	°C
Maximum Thermal Resistance^{3/} Junction to Case	$R_{\theta JC}$	0.85	°C/W

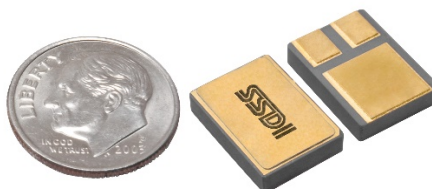
NOTES:

^{1/} For ordering information, price, and availability, contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} Both legs tied together.

SMD1 (S1)



*Dime used for size reference

SMD1 with leads (S1L)



**Customizable ribbon leads option available (reduces risk of vibration stress and thermal fatigue)

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

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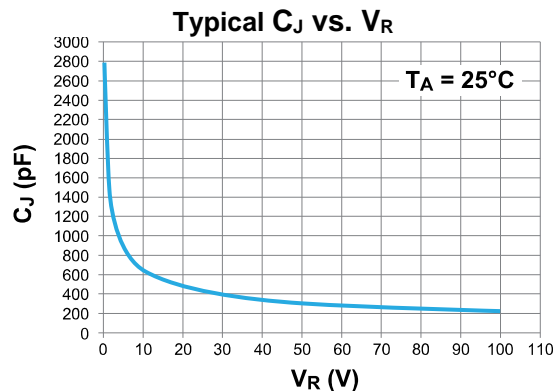
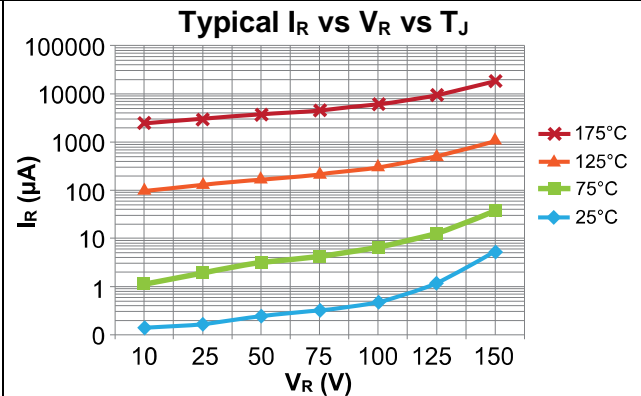
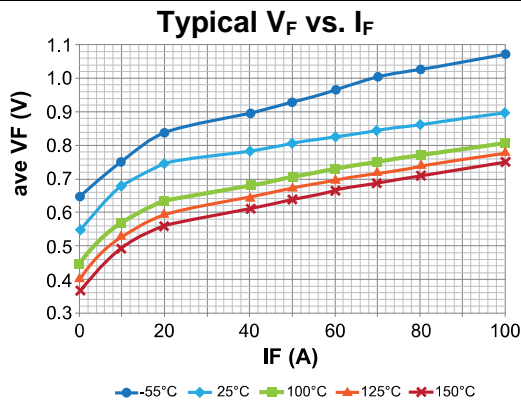
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SSR4010S1

SSR4015S1

ELECTRICAL CHARACTERISTICS		SYMBOL	TYPICAL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 2 A_{DC}$, pulse)	$T_A = -55^\circ C$	V_{F1}	0.65	-	V_{DC}
	$T_A = 25^\circ C$	V_{F2}	0.55	0.60	
	$T_A = 125^\circ C$	V_{F3}	0.41	0.46	
Instantaneous Forward Voltage Drop ($I_F = 10 A_{DC}$, pulse)	$T_A = -55^\circ C$	V_{F4}	0.76	-	V_{DC}
	$T_A = 25^\circ C$	V_{F5}	0.68	0.75	
	$T_A = 125^\circ C$	V_{F6}	0.53	0.60	
Instantaneous Forward Voltage Drop ($I_F = 20 A_{DC}$, pulse)	$T_A = -55^\circ C$	V_{F7}	0.85	-	V_{DC}
	$T_A = 25^\circ C$	V_{F8}	0.75	0.82	
	$T_A = 125^\circ C$	V_{F9}	0.60	0.67	
Instantaneous Forward Voltage Drop ($I_F = 40 A_{DC}$, pulse)	$T_A = -55^\circ C$	V_{F10}	0.91	-	V_{DC}
	$T_A = 25^\circ C$	V_{F11}	0.79	0.87	
	$T_A = 125^\circ C$	V_{F12}	0.65	0.73	
Reverse Leakage Current ($T_A = 25^\circ C$, pulse)	$V_R = 100 V$	I_{R1}	0.4	10	μA
	$V_R = 150 V$	I_{R2}	10	100	
Reverse Leakage Current ($T_A = +125^\circ C$, pulse)	$V_R = 100 V$	I_{R3}	300	1500	μA
	$V_R = 150 V$	I_{R4}	1000	5000	
Reverse Leakage Current ($T_A = +150^\circ C$, pulse)	$V_R = 100 V$	I_{R5}	1.5	-	mA
	$V_R = 150 V$	I_{R6}	5.0	-	
Junction Capacitance ($f = 1 MHz$, $T_A = 25^\circ C$)	$V_R = 5 V$	C_J	920	-	pF
	$V_R = 10 V$		670	800	



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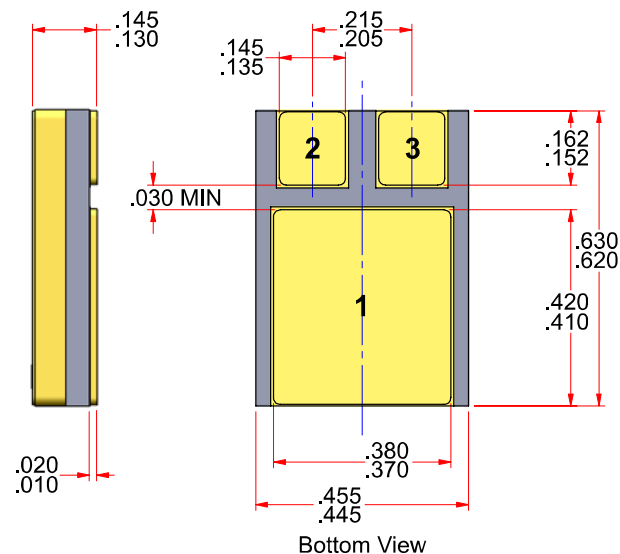
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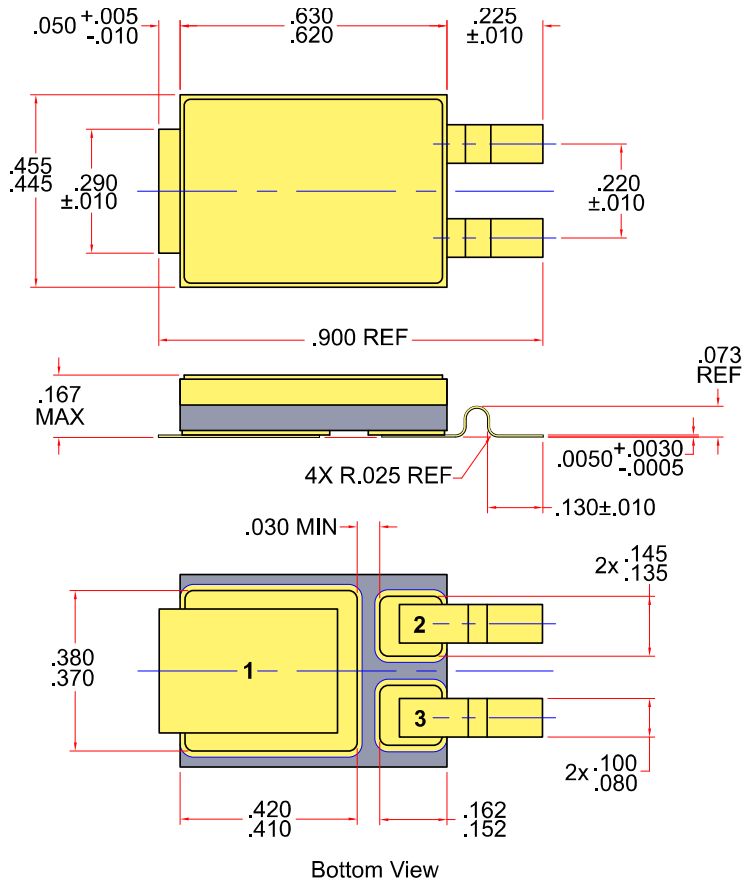
PACKAGE OUTLINE: SMD1 (S1)



Pin Assignment:

Package	Pin 1	Pin 2	Pin 3
SMD1 (S1)	Cathode	Anode	Anode
SMD1 with Leads (S1L)	Cathode	Anode	Anode

PACKAGE OUTLINE: SMD1 with Leads (S1L)



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