

# S2X3R Pin Diode Switch

## Single Pole, Two Throw

## Reflective



### Features:

- Incorporated TTL-compatible driver for convenient system integration and operates from +5V and -15V DC power supplies.
- DC blocks at all RF ports.
- Ruggedized construction.
- RoHS-compliant versions available.
- Hermetic versions available.

### Specifications:

Parameter	Specification	Units
Frequency Range	8 – 18	GHz
Insertion Loss (max)	2.8	dB
VSWR (max) 50 ohms	2.0	ratio
Isolation (min)	60	dB
Switching Speed (max)	100	nsec
CW RF Power, Operating (max)	0.5	W

### Notes:

- DC Bias: +5V +/-0.5V @ 80 mA max  
(Standard) -15V +/-3V @ 50 mA max
- DC Bias: +5V +/-0.5V @ 100 mA max  
(-5 option) -5V +/-0.5V @ 60 mA max
- DC Bias: +15V +/-3V @ 80 mA max  
(-12 option) -15V +/-3V @ 50 mA max
- Control: TTL 0 = Low Loss E1 controls J2 – J1  
TTL 1 = Isolation E2 controls J3 – J1
- Single Bit Control: E1=0: J2 – J1 Low Loss,  
(-1 option) J3 – J1 Isolation  
E1=1: J3 – J1 Low Loss,  
J2 – J1 Isolation

Switching speed is defined as 50% TTL to 90% RF (t-on) and 50% TTL to 10% RF (t-off).

### Environmental Specifications:

- MIL-E-5400, MIL-STD-202, MIL-E-16400
- Operating Temp: -55 °C to +85 °C
- Storage Temp: -65 °C to +125 °C
- Humidity: MIL-STD-202F, M103, Cond B
- Shock: MIL-STD-202F, M213, Cond B
- Altitude: MIL-STD-202F, M105, Cond B
- Vibration: MIL-STD-202F, M204, Cond B
- Thermal Shock: MIL-STD-202F, M107, Cond A
- Temperature Cycle: MIL-STD-202F, M105C, Cond D

### Mechanical Specifications:

- Case Styles: S2 Outline (Two bit control)  
S2-1 Outline (Single bit control)
- Finish: Gold Plate per MIL-G-45204  
Chem film per MIL-C-5541
- Bias & Control Pins: ø0.02" x 0.15" long
- Weight: 20 g max
- Mounting: ø0.10" through holes  
(4) places

### Screening:

- Internal Visual per MIL-STD-883, Method 2017
- Temperature Cycle: -65 °C to +100 °C, 10 cycles
- Hermetically-sealed switches are fine and gross leak checked per MIL-STD-883, Method 1014.
- Optional High-Rel screening available upon request. Contact the factory to discuss your screening requirements.

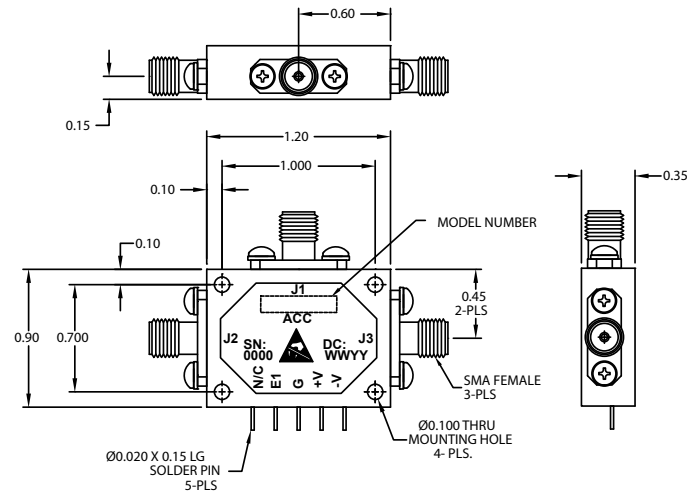


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## Outline Drawing:



OUTLINE CASE STYLE S2



OUTLINE CASE STYLE S2-1

## Part Number Ordering Information:

- Add "-RC" suffix: RoHS-compliant
- Add "-H" suffix: Hermetic seal
- Add "-5" suffix: +/-5V DC supplies
- Add "-5-RC" suffix: +/-5V DC supplies, RoHS-compliant
- Add "-5-H" suffix: +/-5V DC supplies, Hermetic seal
- Add "-12" suffix: +/-15V DC supplies
- Add "-12-RC" suffix: +/-15V DC supplies, RoHS-compliant
- Add "-12-H" suffix: +/-15V DC supplies, Hermetic seal
- Add "-1": Single bit logic control
- Add "-1-RC" suffix: Single bit logic control, RoHS-compliant
- Add "-1-H" suffix: Single bit logic control, Hermetic seal
- Add "-1-5" suffix: Single bit logic control, +/-5V DC supplies
- Add "-1-5-RC" suffix: Single bit logic control, +/-5V DC supplies, RoHS-compliant
- Add "-1-5-H" suffix: Single bit logic control, +/-5V DC supplies, Hermetic seal
- Add "-1-12" suffix: Single bit logic control, +/-15V DC supplies
- Add "-1-12-RC" suffix: Single bit logic control, +/-15V DC supplies, RoHS-compliant
- Add "-1-12-H" suffix: Single bit logic control, +/-15V DC supplies, Hermetic seal

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