

# S2U1 Pin Diode Switch

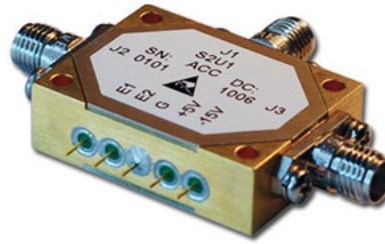
## Single Pole, Two Throw

## Absorptive



### 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              | 0.5 – 1       | GHz   |
| Insertion Loss (max)         | 1.1           | dB    |
| VSWR (max) 50 ohms           | 1.5           | ratio |
| Isolation (min)              | 80            | dB    |
| Switching Speed (max)        | 100           | nsec  |
| CW RF Power, Operating (max) | 1             | W     |

### Notes:

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

Absorptive Switch: 50 ohm termination present at J2 and J3 (in isolation mode).

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

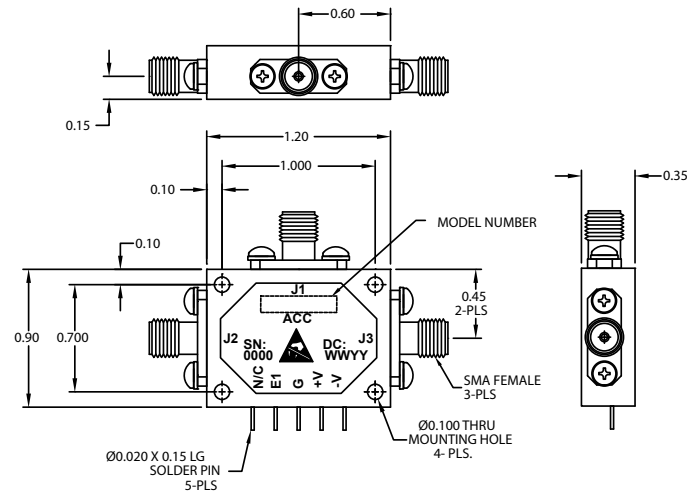


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## Outline Drawing:



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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