

# S4U2 Pin Diode Switch

## Single Pole, Four 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 – 2	GHz
Insertion Loss (max)	1.7	dB
VSWR (max) 50 ohms	1.6	ratio
Isolation (min)	80	dB
Switching Speed (max)	100	nsec
CW RF Power, Operating (max)	1	W

#### Notes:

DC Bias: +5V +/-0.5V @ 160 mA max  
(Standard) -15V +/-3V @ 50 mA max

DC Bias: +5V +/-0.5V @ 200 mA max  
(-5 option) -5V +/-0.5V @ 60 mA max

DC Bias: +15V +/-3V @ 160 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  
E3 controls J4 – J1  
E4 controls J5 – J1

Absorptive Switch: 50 ohm termination present at J2, J3, J4 and J5 (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: S4 Outline (Four bit control)  
S4-2 Outline (Two 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: 60 g max

Mounting: ø0.10" through holes  
(2) places

Two Bit Control: E2 E1 Low Loss Path  
(-2 option) 0 0 J2 - J1  
0 1 J3 - J1  
1 0 J4 - J1  
1 1 J5 - J1

#### Screening:

Internal Visual per MIL-STD-883, Method 2017

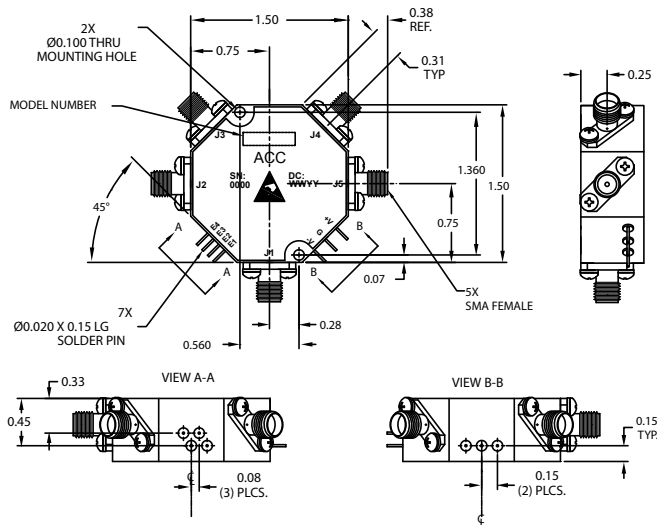
Temperature Cycle: -65 °C to +100 °C, 10 cycles

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.



40 Industrial Way East, Eatontown, NJ 07724 [USA]  
Phone: (732) 460-0212, Fax: (732) 460-0214  
www.aeroflex.com/acc, email: acc-sales@eroflex.com



OUTLINE CASE STYLE S4



OUTLINE CASE STYLE S4-2

## 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 "-2" suffix: Two bit logic control
- Add "-2-RC" suffix: Two bit logic control, RoHS-compliant
- Add "-2-H" suffix: Two bit logic control, Hermetic seal
- Add "-2-5" suffix: Two bit logic control, +/-5V DC supplies
- Add "-2-5-RC" suffix: Two bit logic control, +/-5V DC supplies, RoHS-compliant
- Add "-2-5-H" suffix: Two bit logic control, +/-5V DC supplies, Hermetic seal
- Add "-2-12" suffix: Two bit logic control, +/-15V DC supplies
- Add "-2-12-RC" suffix: Two bit logic control, +/-15V DC supplies, RoHS-compliant
- Add "-2-12-H" suffix: Two bit logic control, +/-15V DC supplies, Hermetic seal

**Aeroflex Control Components**  
Aeroflex Microelectronic Solutions  
40 Industrial Way East  
Eatontown, NJ 07724 [USA]  
Fax: (732) 460-0214

Sales  
Phone: (732) 460-0212  
ACC-sales@aeroflex.com

[www.aeroflex.com/Microwave](http://www.aeroflex.com/Microwave) [www.aeroflex.com/ACC](http://www.aeroflex.com/ACC)

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ISO 9001:2008 certified



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.