

S6X3 Pin Diode Switch

Single Pole, Six 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 | 8 – 18 | GHz |
| Insertion Loss (max) | 3.9 | dB |
| VSWR (max) 50 ohms | 2.0 | ratio |
| Isolation (min) | 65 | dB |
| Switching Speed (max) | 100 | nsec |
| CW RF Power, Operating (max) | 0.5 | W |

Notes:

| | |
|-----------------------|---|
| DC Bias: (Standard) | +5V +/-0.5V @ 240 mA max -15V +/-3V @ 50 mA max |
| DC Bias: (-5 option) | +5V +/-0.5V @ 300 mA max -5V +/-0.5V @ 60 mA max |
| DC Bias: (-12 option) | +15V +/-3V @ 240 mA max -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 E5 controls J6 – J1 E6 controls J7 – J1 |

Absorptive Switch: 50 ohm termination present at J2, J3, J4, J5, J6 and J7 (in isolation mode).

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

Mechanical Specifications:

| | |
|----------------------|--|
| Case Styles: | S6 Outline (Six bit control) S6-3 Outline (Three bit control) |
| Finish: | Gold Plate per MIL-G-45204 |
| Bias & Control Pins: | ø0.02" x 0.15" long |
| Weight: | 65 g max |
| Mounting: | ø0.10" through holes (2) places |

| | | | | |
|--------------------------------|----|----|----|---------------|
| Three Bit Control: (-3 option) | E3 | E2 | E1 | Low Loss Path |
| | 0 | 0 | 0 | J2 - J1 |
| | 0 | 0 | 1 | J3 - J1 |
| | 0 | 1 | 0 | J4 - J1 |
| | 0 | 1 | 1 | J5 - J1 |
| | 1 | 0 | 0 | J6 - J1 |
| | 1 | 0 | 1 | J7 - J1 |
| | 1 | 1 | 0 | ALL OFF |
| | 1 | 1 | 1 | ALL 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 |

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 CASE STYLE S6



OUTLINE CASE STYLE S6-3

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 "-3" suffix: Three bit logic control
- Add "-3-RC" suffix: Three bit logic control, RoHS-compliant
- Add "-3-H" suffix: Three bit logic control, Hermetic seal
- Add "-3-5" suffix: Three bit logic control, +/-5V DC supplies
- Add "-3-5-RC" suffix: Three bit logic control, +/-5V DC supplies, RoHS-compliant
- Add "-3-5-H" suffix: Three bit logic control, +/-5V DC supplies, Hermetic seal
- Add "-3-12" suffix: Three bit logic control, +/-15V DC supplies
- Add "-3-12-RC" suffix: Three bit logic control, +/-15V DC supplies, RoHS-compliant
- Add "-3-12-H" suffix: Three bit logic control, +/-15V DC supplies, Hermetic seal

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