

# S3H1 Pin Diode Switch

## Single Pole, Three 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	0.01 – 0.1	GHz
Insertion Loss (max)	1.0	dB
VSWR (max) 50 ohms	1.5	ratio
Isolation (min)	80	dB
Switching Speed (max)	250	nsec
CW RF Power, Operating (max)	1	W

### Notes:

DC Bias: (Standard)	+5V +/-0.5V @ 120 mA max -15V +/-3V @ 50 mA max
DC Bias: (-5 option)	+5V +/-0.5V @ 150 mA max -5V +/-0.5V @ 60 mA max
DC Bias: (-12 option)	+15V +/-3V @ 120 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

Absorptive Switch: 50 ohm termination present at J2, J3 and J4 (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 Style:	S3 Outline
Finish:	Gold Plate per MIL-G-45204 Chem film per MIL-C-5541
Bias & Control Pins:	ø0.02" x 0.15" long
Weight:	35 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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## 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

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