

S1C8/S1C8R PIN Diode Switch

Single Pole, Single Throw
Absorptive/Reflective

COBHAM

Data Sheet Revision Date: 11/02/2015

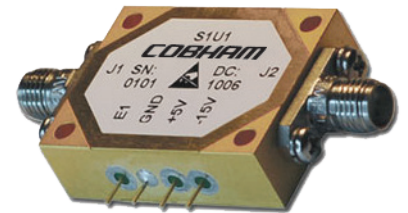
The most important thing we build is trust

DESCRIPTION:

The S1 series of single pole, single throw PIN diode switches span the frequency range of 10MHz to 18GHz and are available with absorptive or reflective inputs. The switches are available in a wide variety of standard frequency ranges from cost-effective narrowband to high-performance broadband.

Each switch incorporates a TTL-compatible driver for convenient system integration and operates from +5V and -12V to -18V DC power supplies. All switches incorporate DC blocks at the RF ports. Standard screened switches incorporate epoxy sealed lids and undergo a stringent yet cost effective screening cycle.

The switches are also available with hermetic seal and high-rel screening for military and aerospace applications.

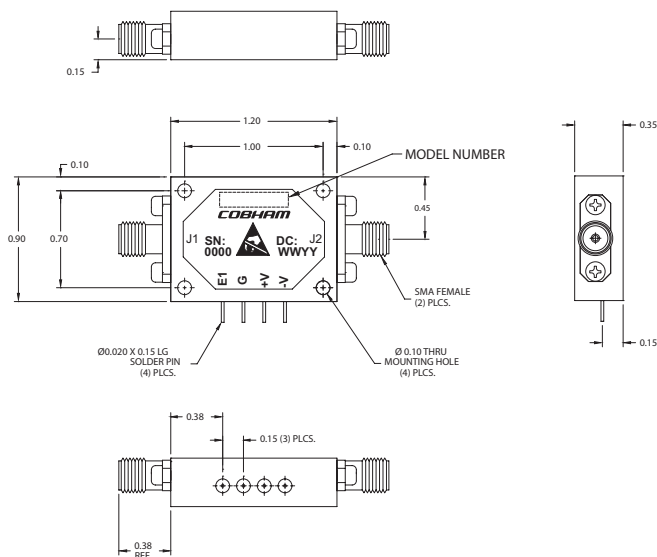


SPECIFICATIONS:

Parameter	Absorptive	Reflective	Unit of Measure
Frequency Range	6 – 18	6 – 18	GHz
Insertion Loss (max)	2.8	2.0	dB
VSWR (max) (50 ohms)	2.0	2.0	ratio
Isolation (min)	65	60	dB
Switching Speed (max)	100	100	nsec
CW RF Power, Survival	30	30	dBm
P1dB*	27	27	dBm

*Standard bias configuration

OUTLINE DRAWING:



OUTLINE CASE STYLE S1

FEATURES:

- TTL-compatible drivers for convenient system integration
- Operates on +5V or +15V and -5V or -15V DC power supplies (see ordering information)
- DC blocks at all RF ports
- Ruggedized construction
- Hermetic versions available
- All parts receive internal visual (per MIL-STD-883) and temp cycle (-40 °C to 100 °C, 10 cycles)
- Hi-Rel screening available upon request
- 30-day lead time on some configurations (contact factory for details)

S1C8/S1C8R PIN Diode Switch

Single Pole, Single Throw, Absorptive/Reflective

NOTES:

DC Bias: (Standard)	+5 V +/- 0.5 V @ 50 mA max -15 V +/- 3 V @ 50 mA max
DC Bias: (-5 option)	+5 V +/- 0.5 V @ 60 mA max -5 V +/- 0.5 V @ 60 mA max
DC Bias: (-12 option)	+15 V +/- 3 V @ 50 mA max -15 V +/- 3 V @ 50 mA max
Control:	TTL 0 = Low Loss TTL 1 = Isolation

Absorptive Switch: 50 ohm termination present at both RF ports (in isolation mode).

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

Finish: Gold Plate per MIL-G-45204

Weight: 20g (max)

ENVIRONMENTAL SPECIFICATIONS*:

MIL-E-5400, MIL-STD-202, MIL-E-16400	
Operating Temp:	-40 °C to +71 °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

* Compliant by design, verification optional

PART NUMBER ORDERING INFORMATION:

Add "-RC" suffix: RoHS-compliant

Add "-H" suffix: Hermetic seal

Add "-5" suffix: +/-5 V DC supplies

Add "-5-RC" suffix: +/-5 V DC supplies, RoHS-compliant

Add "-5-H" suffix: +/-5 V DC supplies, Hermetic seal

Add "-12" suffix: +/-15 V DC supplies

Add "-12-RC" suffix: +/-15 V DC supplies, RoHS-compliant

Add "-12-H" suffix: +/-15 V DC supplies, Hermetic seal

ISO 9001:2008 and AS9100 certified

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