

SPDT Latching DC to 18 GHz Terminated Electro-Mechanical Relay Switch, TTL, up to 240W, 28V, SMA

The SEMS-4061-SPDT-SMA is a Terminated SPDT Electromechanical Relay Switch that operates over a wide frequency band from DC to 18GHz with up to 240 Watts of input power (CW) handling capability. Rated for 2M life cycles for high reliability operation, this design uses a Latching Actuator with a break before make configuration, terminations and TTL logic. The switch exhibits exceptional electrical performance specified from 0.2 dB max for insertion loss and from 80 dB min for isolation, and guaranteed over -40°C to +85°C. The assembly requires an operating voltage of +28Vdc and is certified as RoHS and REACH compliant. External connectors include solder terminals and SMA female connectors.

Electrical Specifications

Switch Type	SPDT, Terminated
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	TTL Logic
Polarity	Negative Common
TTL Control	on: 2.2 to 5.5 Volts off: 0 to 0.8 Volts
TTL Control Current	0.8 mA at 5.5 Volts 0.02 mA at 0.8 Volts

Description	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	24	28	30	Volts
Actuating Set Current @ 28 Volts		160		mA
VSWR			1.5:1	
Insertion Loss			0.5	dB
Isolation	60			dB
Input Power (CW)			100	Watts
Switching Time			10	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 3	3 - 8	8 - 12.4	12.4 - 18		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1		
Insertion Loss, Max	0.2	0.3	0.4	0.5		dB
Isolation, Min	80	70	60	60		dB
Power In, Max (CW)	240	150	120	100		Watts

Electrical Specification Notes:
Average Power and Actuating Current values at 25°C.



Features:

- Single Pole Double Throw Terminated Relay Switch
- DC to 18 GHz Frequency Range
- 2M Cycle Operating Life Min
- 100 Watt Avg Power Max
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 0.5 dB Max
- VSWR 1.5:1 Max

Applications:

- General Purpose High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

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Mechanical Specifications

Size

Length	2.19 in [55.63 mm]
Width/Diameter	1.87 in [47.5 mm]
Height	0.56 in [14.22 mm]
Weight	0.22 lbs [99.79 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	SMA Female
RF Connector Specification	MIL C 39012
Control Connector	Solder Pin

Mechanical Specification Notes:
Solder Pins: 250°C max/30sec.

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +85 deg C

Construction	Splashproof
Shock	MIL-STD-202, Method 213B, Cond.C
Vibration	MIL-STD-202, Method 204D, Cond.D
ESD Sensitivity	ESD Sensitive Material. Transport material in approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:
Environmental specifications are guaranteed but not tested.

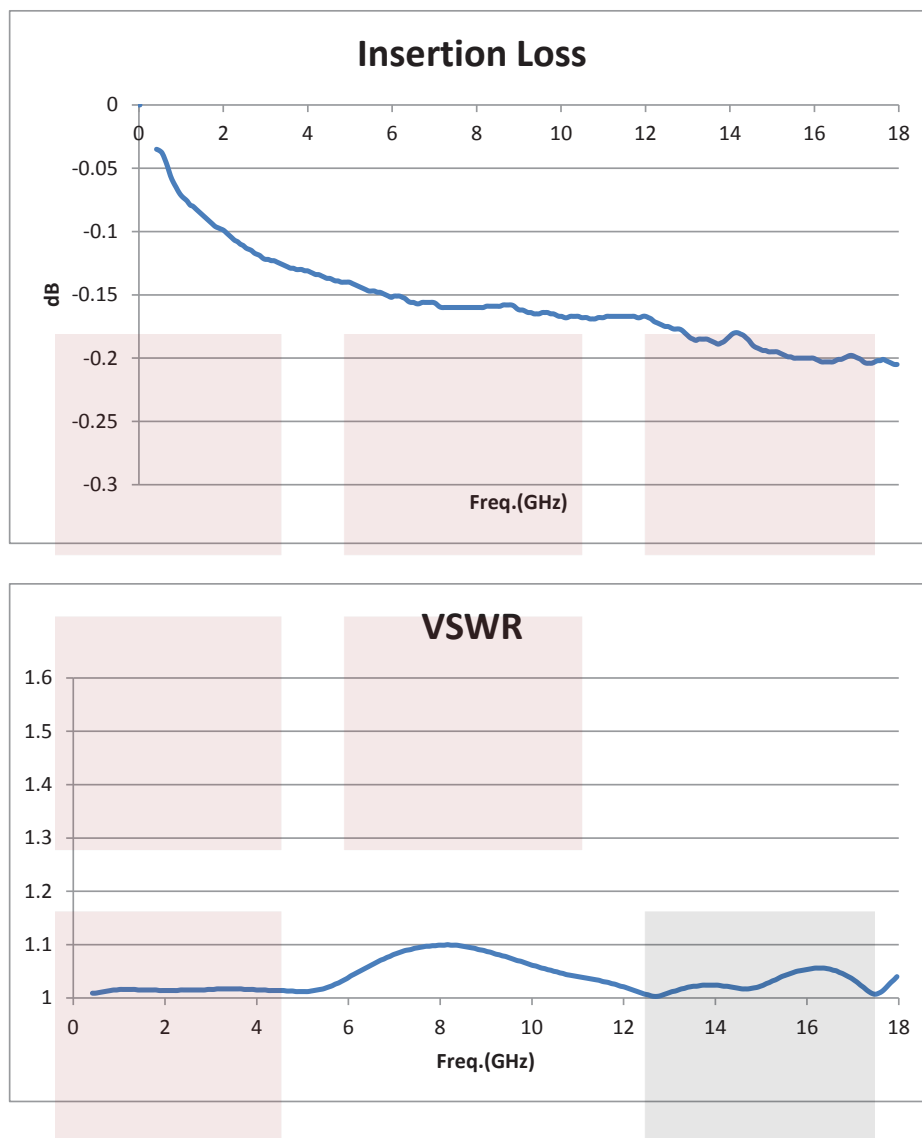
Compliance Certifications (see [product page](#) for current document)

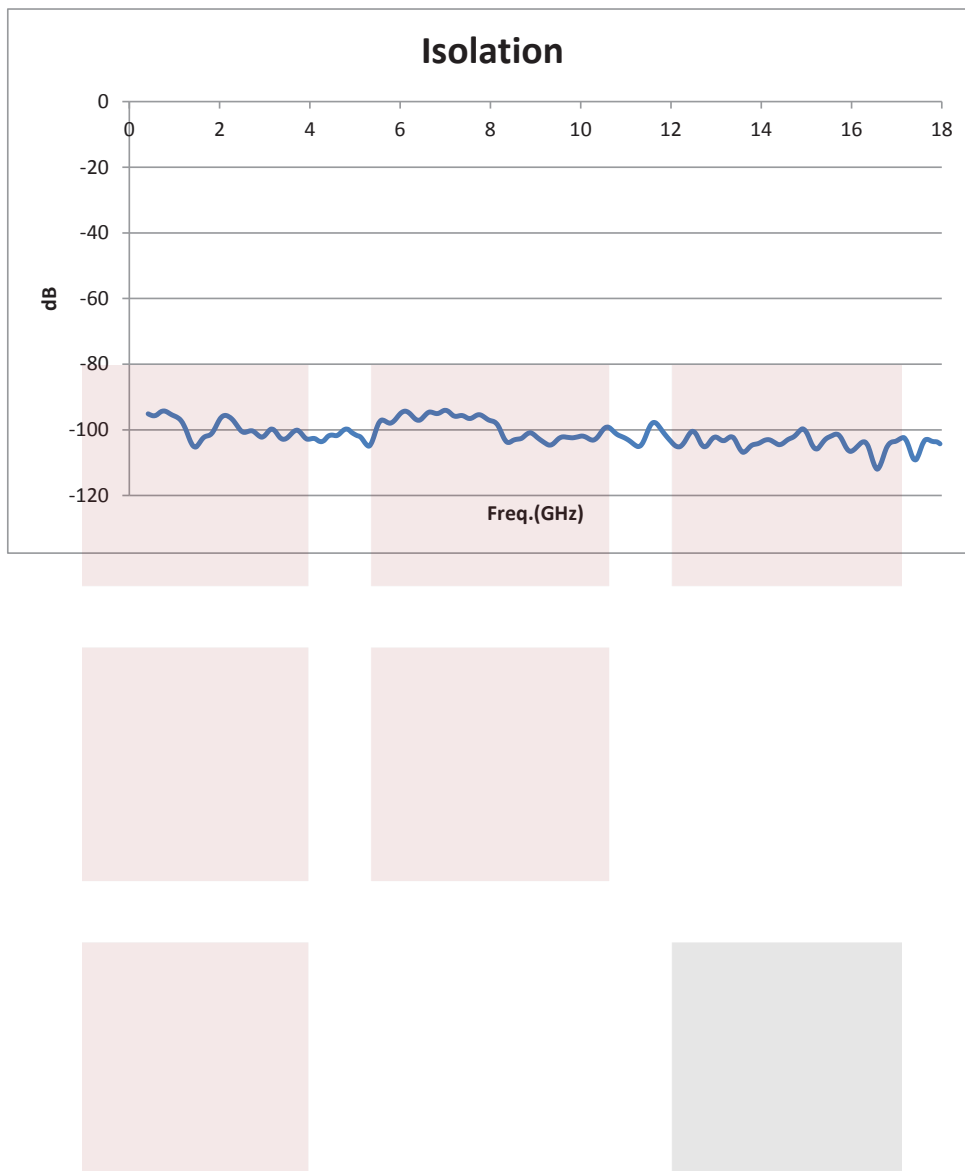
Plotted and Other Data

Notes:

- Values shown are typical at 25°C.

Typical Performance Data



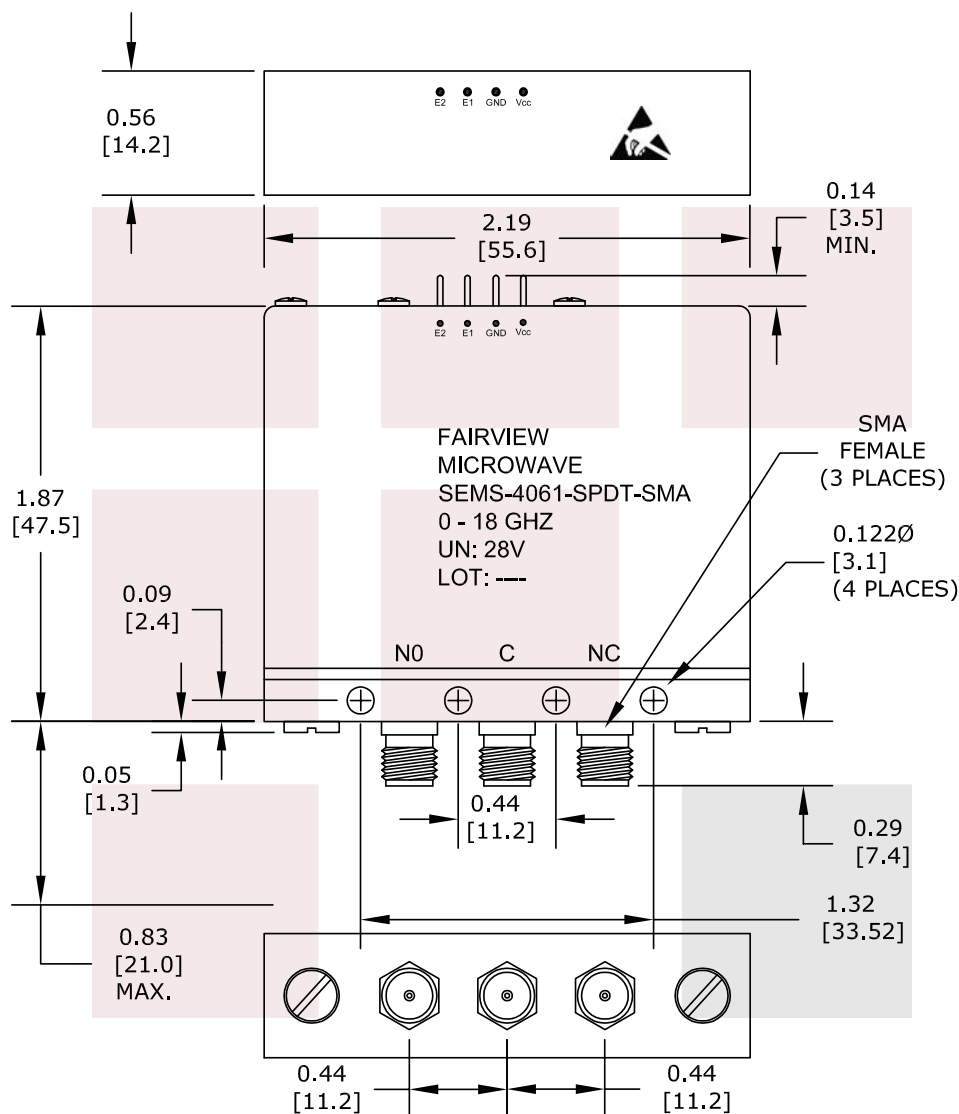


SPDT Latching DC to 18 GHz Terminated Electro-Mechanical Relay Switch, TTL, up to 240W, 28V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

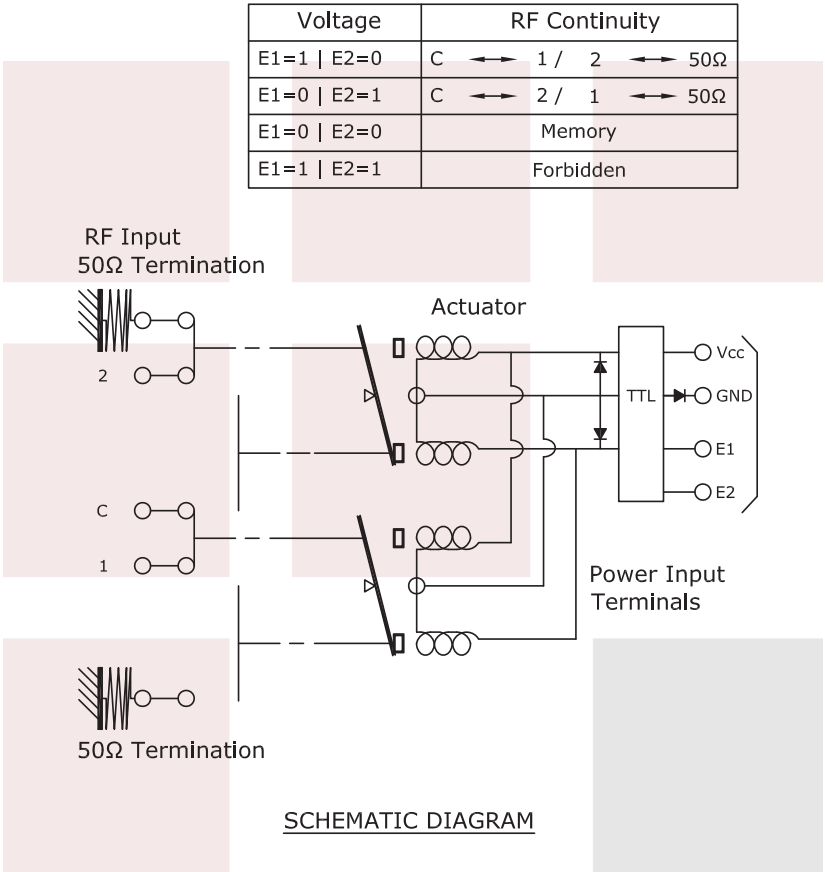
For additional information on this product, please click the following link: [SPDT Latching DC to 18 GHz Terminated Electro-Mechanical Relay Switch, TTL, up to 240W, 28V, SMA SEMS-4061-SPDT-SMA](https://www.fairviewmicrowave.com/spdt-latching-electro-mechanical-relay-switch-ttl-sems-4061-spdt-sma-p.aspx)

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CAD FILE	082815	SHEET	SCALE	N/A	SIZE A 150



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