

SP6T Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 5 Watts with Self Cut Off, Reset, Diodes, 2.92mm

The SEMS-4076-SP6T-K is an SP6T Electromechanical Relay Switch that operates over a wide frequency band from DC to 40GHz with up to 40 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, diodes, self cut off, and reset circuitry. The switch exhibits exceptional electrical performance specified from 0.2 dB max for insertion loss and from 70 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 2.92mm female connectors.

Electrical Specifications

Switch Type	SP6T, Reflective
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Self Cut Off, Reset, Diodes
Polarity	Negative Common
Reset Current	750 mA
Self Cut-Off Time	40 ms < CT < 120 ms

Description	Min	Typ	Max	Units
Frequency Range	DC		40	GHz
Impedance		50		Ohms
Operating Voltage	24	28	30	Volts
Actuating Current @ 28 Volts		125		mA
VSWR			2.2:1	
Insertion Loss			1.1	dB
Isolation	50			dB
Input Power (CW)			5	Watts

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12.4	12.4 - 18	18 - 26.5	26.5 - 40	GHz
VSWR, Max	1.3:1	1.4:1	1.5:1	1.7:1	2.2:1	
Insertion Loss, Max	0.2	0.4	0.5	0.7	1.1	dB
Isolation, Min	70	60	60	55	50	dB
Power In, Max (CW)	40	30	25	15	5	Watts

Electrical Specification Notes:

Average Power and Actuating Current values at 25°C.
Reset: supply voltage time 1 sec max./10% duty cycle.



Features:

- Single Pole Six Throw Relay Switch
- DC to 40 GHz Frequency Range
- 2M Cycle Operating Life Min
- 5 Watt Avg Power Max
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 1.1 dB Max
- VSWR 2.2:1 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	2.25 in [57.15 mm]
Height	2.25 in [57.15 mm]
Weight	0.49 lbs [222.26 g]
Package Type	Connectorized Module
Operating Life	2,000,000 Cycles
Switching Time	15 ms Max

Connectors

RF Connector Type	2.92mm Female
RF Connector Specification	MIL C 39012
Control Connector	Solder Pins

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
Humidity	MIL-DTE-3928E, Cond.B
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.

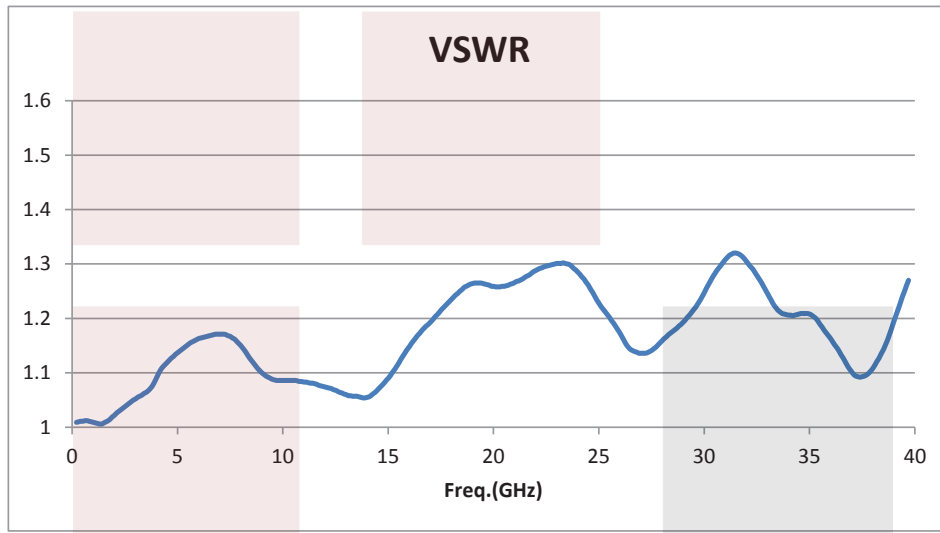
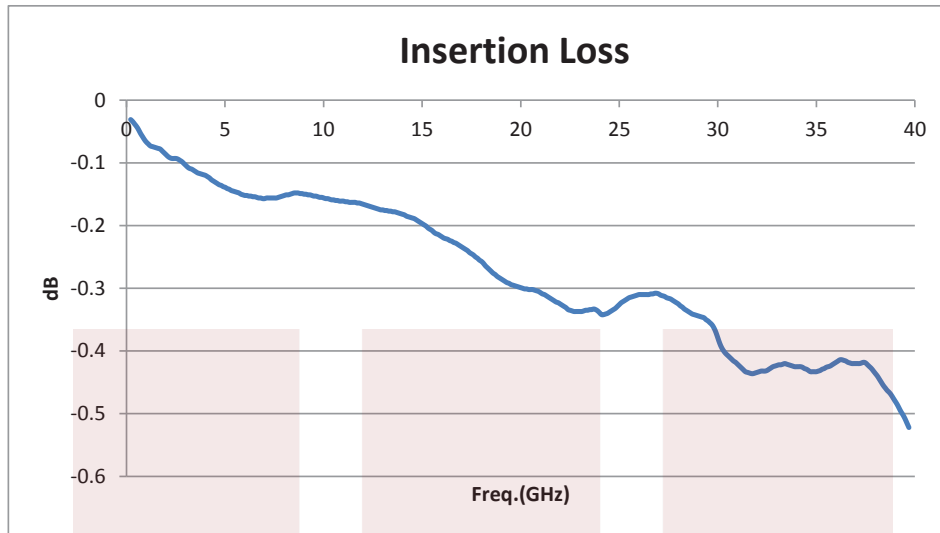
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

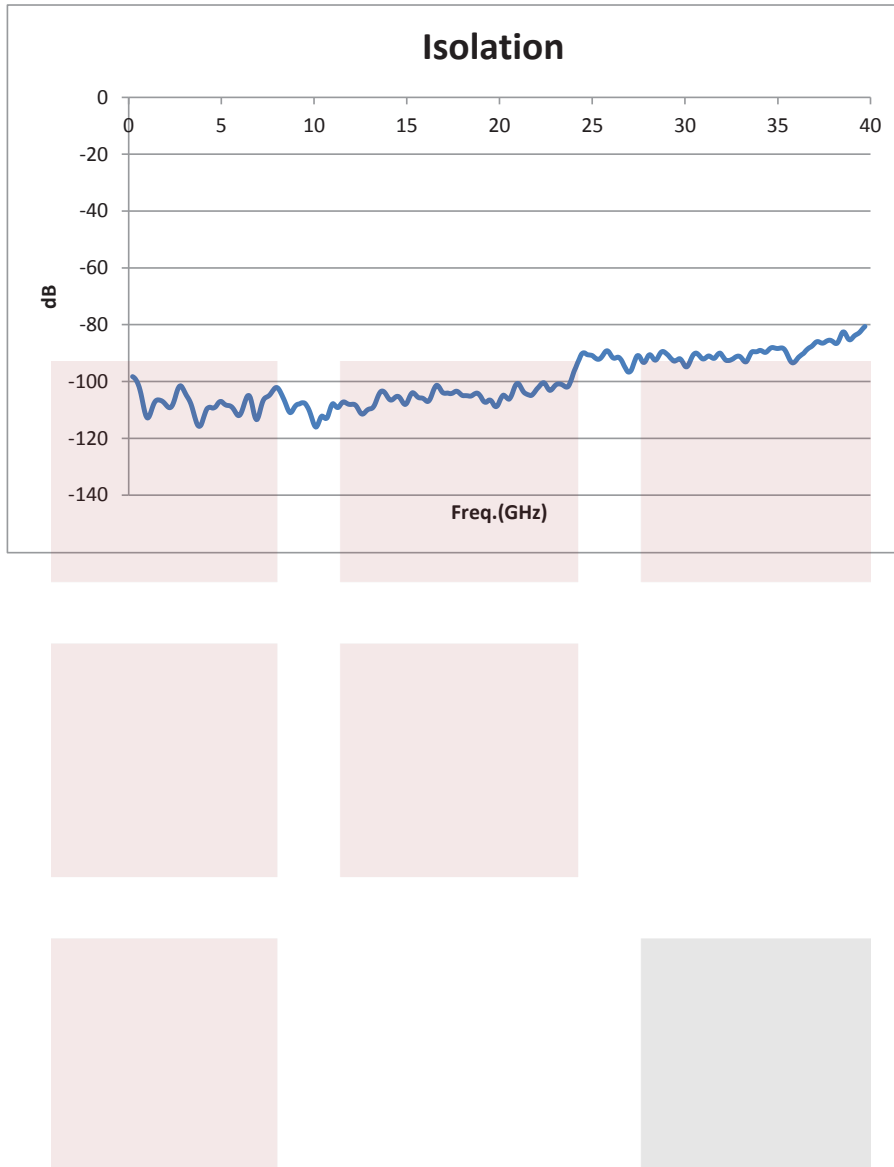
RoHS Compliant	
REACH Compliant	12/17/2014

Plotted and Other Data

- Notes:
- Values shown are typical at 25°C.

Typical Performance Data



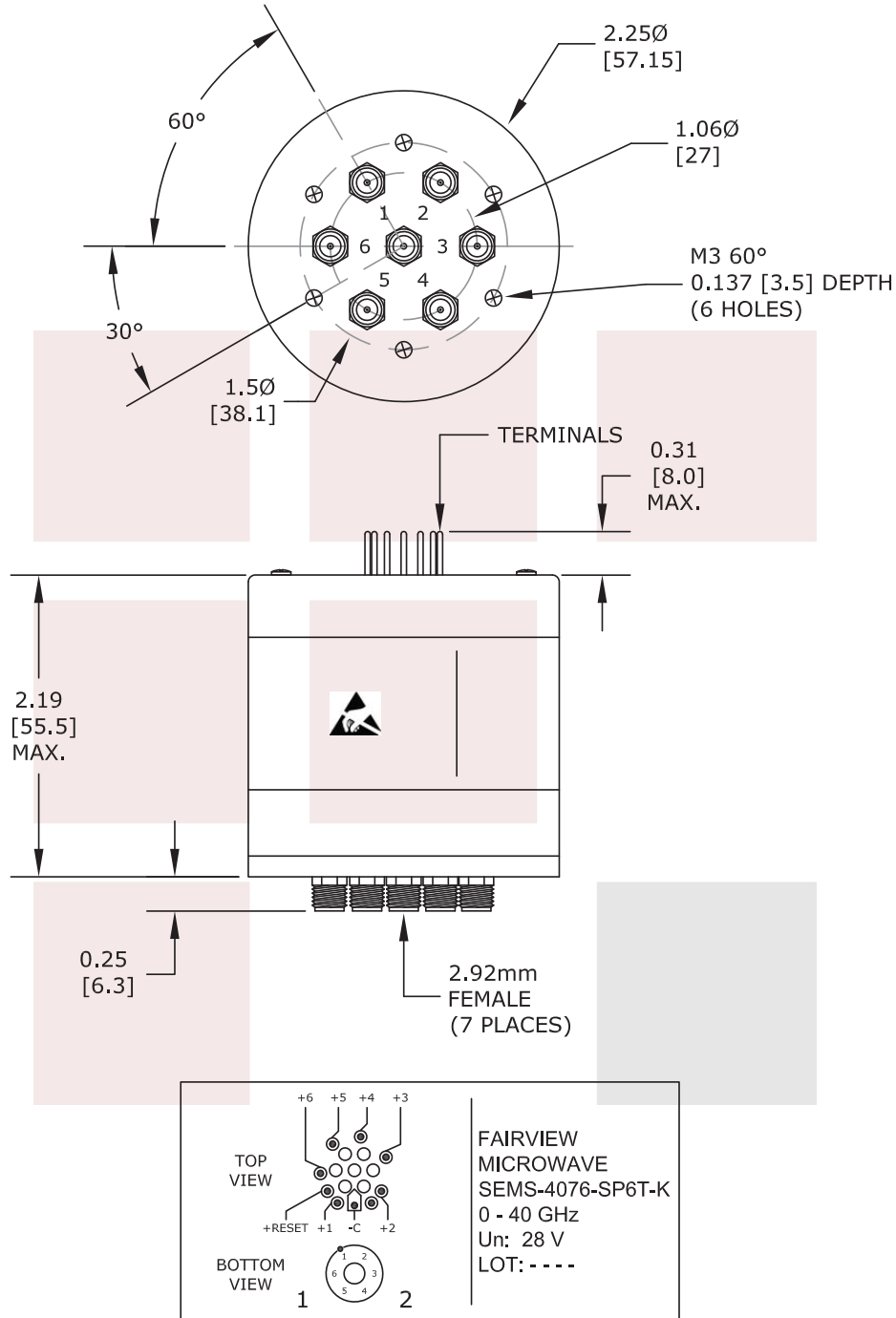


SP6T Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 5 Watts with Self Cut Off, Reset, Diodes, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP6T Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 5 Watts with Self Cut Off, Reset, Diodes, 2.92mm SEMS-4076-SP6T-K](#)

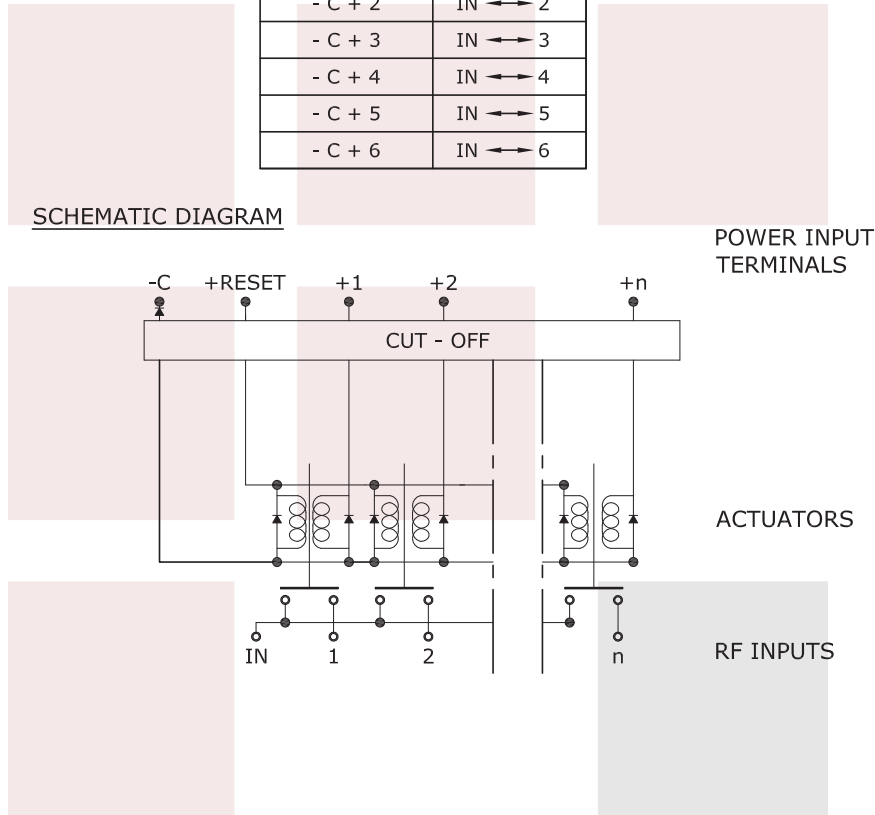
URL: <http://www.fairviewmicrowave.com/sp6t-latching-electro-mechanical-relay-switch-reset-sems-4076-sp6t-k-p.aspx>

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TITLE SP6T Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 5 Watts with Self Cut Off, Reset, Diodes, 2.92mm	DWG NO	SEMS-4076-SP6T-K		CAGE CODE 3FKR5	
	CAD FILE	040315	SHEET	SCALE	N/A SIZE A 2233

Voltage	RF Continuity
- C + RESET	ALL PORTS OPEN
- C + 1	IN ↔ 1
- C + 2	IN ↔ 2
- C + 3	IN ↔ 3
- C + 4	IN ↔ 4
- C + 5	IN ↔ 5
- C + 6	IN ↔ 6



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