

**SPDT Latching Electro-Mechanical Relay
Switch From DC to 40 GHz, 10 Watts
with Indicators, TTL, Self Cut Off, 2.92mm**

The SEMS-4062-SPDT-K is an SPDT Terminated Electromechanical Relay Switch that operates over a wide frequency band from DC to 40GHz with up to 80 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, position indicators, TTL logic, and self cut off circuitry. The switch exhibits exceptional electrical performance specified from 0.3 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	SPDT, Absorptive
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators, TTL Logic, Self Cut Off
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
Indicator Rating	1 Watts / 30 Volts / 100 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		160		mA
VSWR			1.9:1	
Insertion Loss			0.8	dB
Isolation	50			dB
Input Power (CW)			10	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	1.9:1	
Insertion Loss, Max	0.3	0.4	0.5	0.7	0.8	dB
Isolation, Min	70	60	60	55	50	dB
Power In, Max (CW)	80	60	50	20	10	Watts

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



Features:

- Single Pole Double Throw Relay Switch
- DC to 40 GHz Frequency Range
- 2M Cycle Operating Life Min
- 10 Watt Avg Power Max
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 0.8 dB Max
- VSWR 1.9:1 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 Module
 Operating Life 2,000,000 Cycles
 Switching Time 10 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
 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.

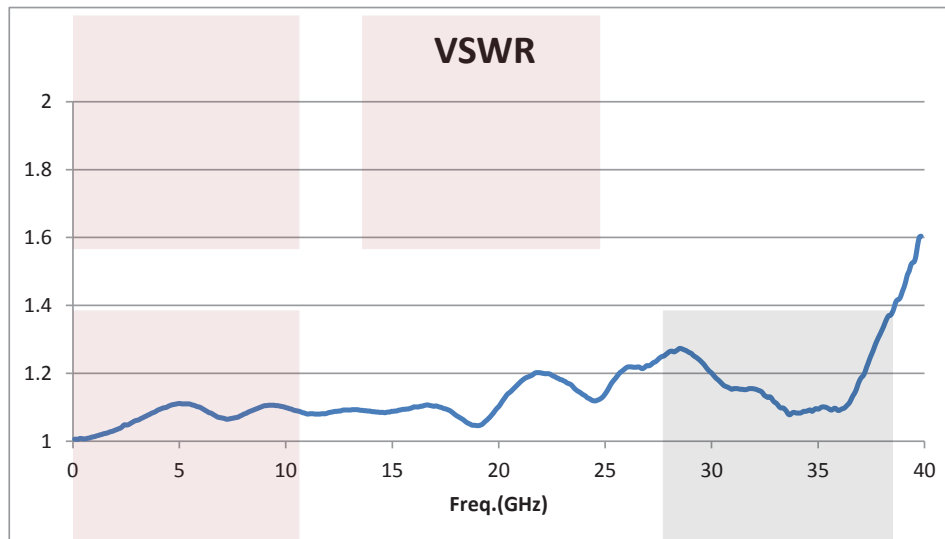
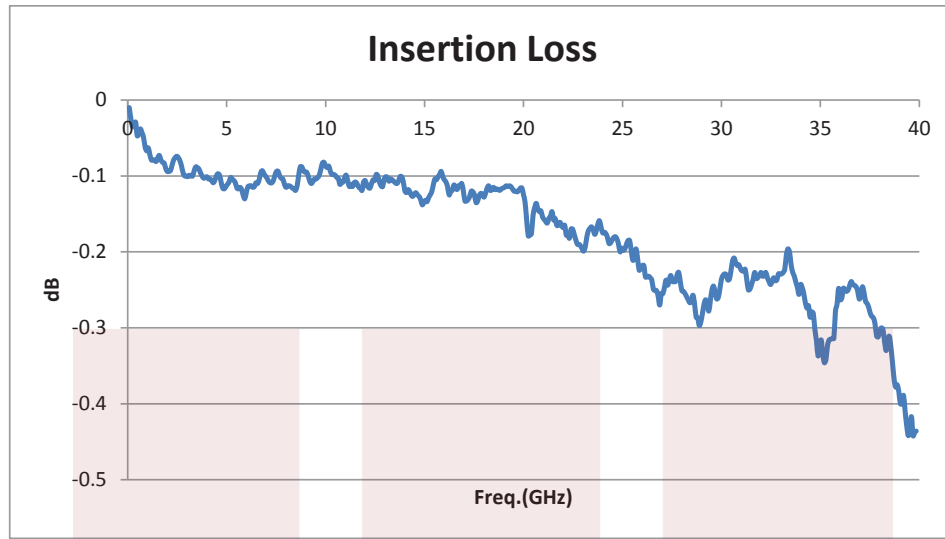
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

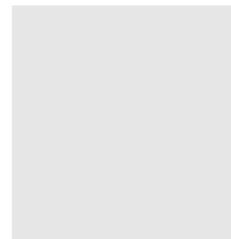
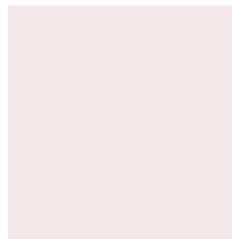
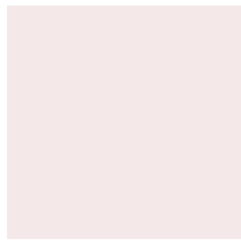
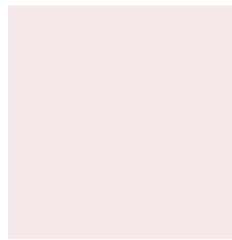
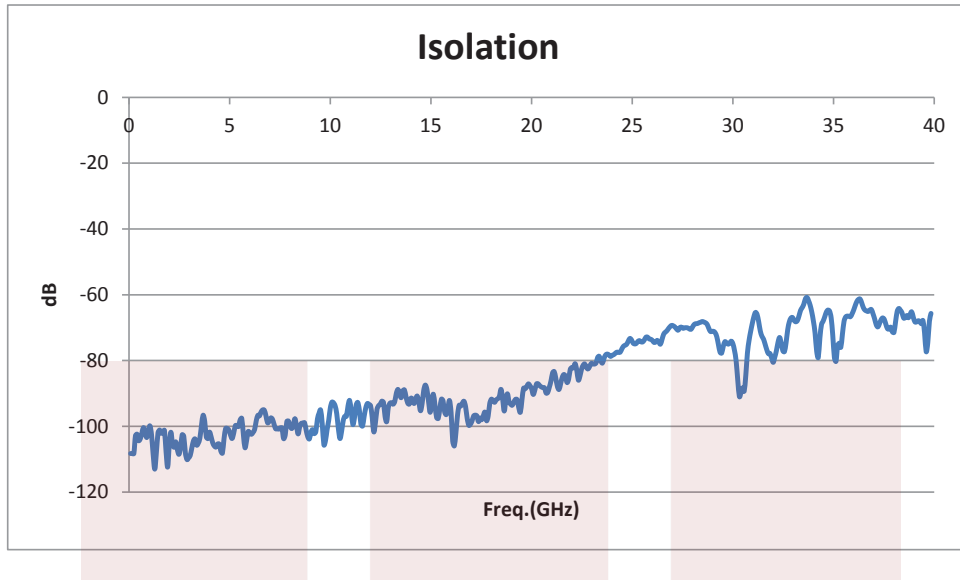
RoHS Compliant
 REACH Compliant 12/17/2014

Plotted and Other Data

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

Typical Performance Data





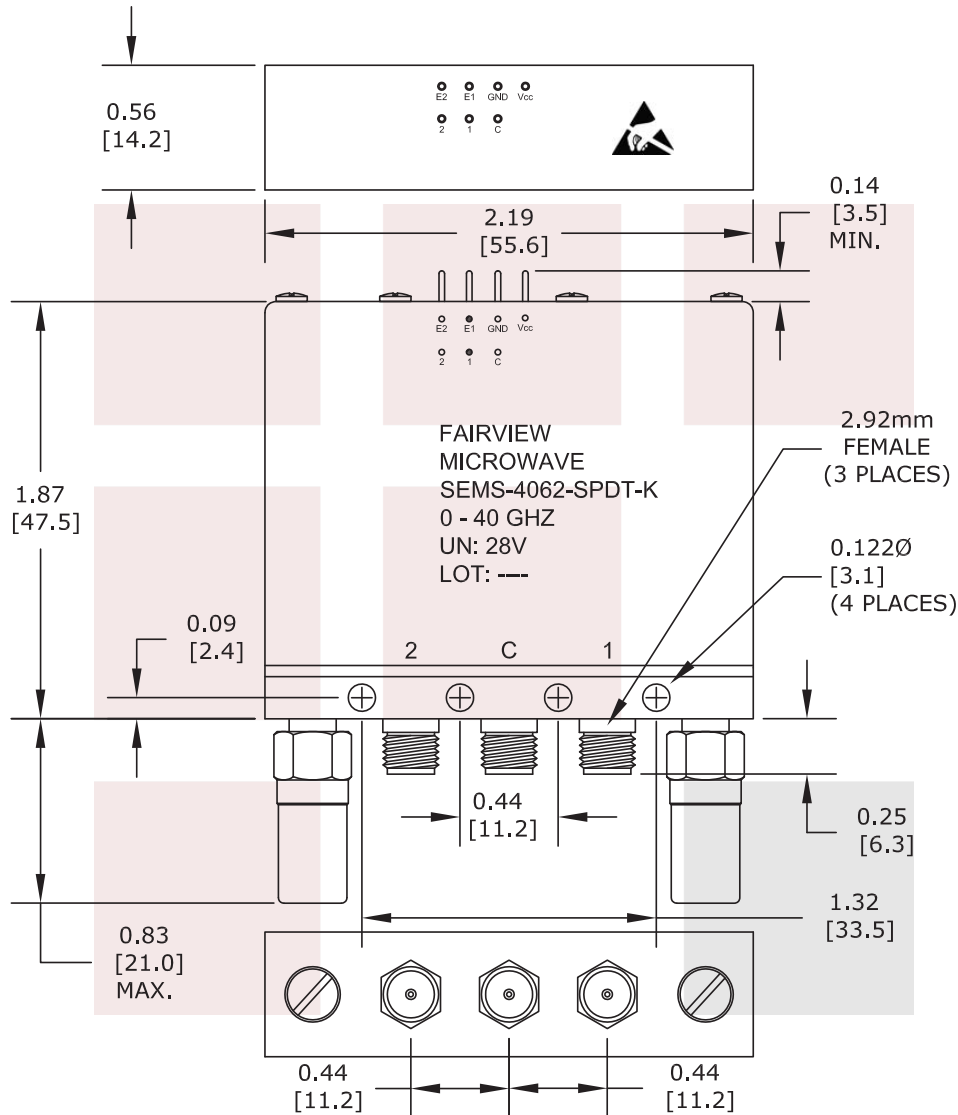
SPDT Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 10 Watts with Indicators, TTL, Self Cut Off, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 10 Watts with Indicators, TTL, Self Cut Off, 2.92mm SEMS-4062-SPDT-K](#)

URL: <http://www.fairviewmicrowave.com/spdt-latching-electro-mechanical-relay-switch-indicators-ttl-sems-4062-spdt-k-p.aspx>

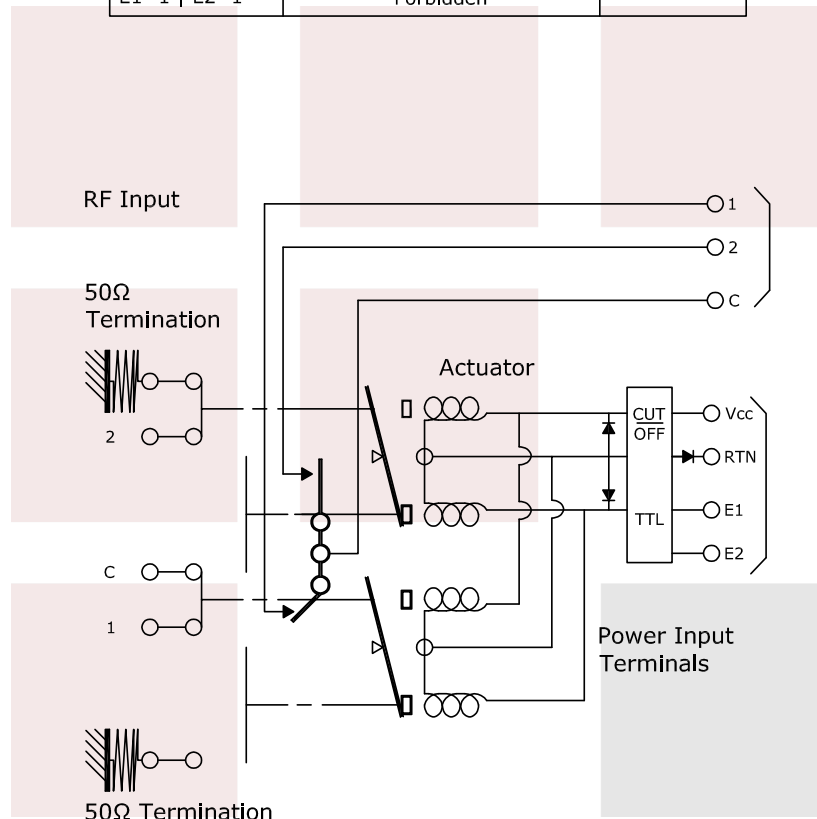
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TITLE SPDT Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 10 Watts with Indicators, TTL, Self Cut Off, 2.92mm		DWG NO SEMS-4062-SPDT-K		CAGE CODE 3FKR5	
CAD FILE 092914 SHEET		SCALE N/A		SIZE A 150	

Voltage	RF Continuity	Voltage
E1=1 E2=0	C ↔ 1 / 2 ↔ 50Ω	C. 1
E1=0 E2=1	C ↔ 2 / 1 ↔ 50Ω	C. 2
E1=0 E2=0	Memory	---
E1=1 E2=1	Forbidden	---



SCHEMATIC DIAGRAM

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
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CAD FILE	092914	SHEET	SCALE	N/A	SIZE A 150