

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

The SEMS-4069-DPDT-K is a Transfer 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 2.5M life cycles for high reliability operation, this design uses a Latching Actuator with a break before make configuration, position indicators, 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	Transfer, Reflective
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators, Self Cut Off
Polarity	Negative Common
Indicator Rating	1 Watts / 30 Volts / 100 mA
Self Cut-Off Time	40 ms < CT < 120 ms

Features:

- Transfer Relay Switch
- DC to 40 GHz Frequency Range
- 2.5M 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

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			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.

Fairview Microwave
 1130 Junction Dr. #100
 Allen, TX 75013
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Mechanical Specifications

Size

Length 1.53 in [38.86 mm]
 Width/Diameter 1.27 in [32.26 mm]
 Height 1.33 in [33.78 mm]
 Weight 0.19 lbs [86.18 g]
 Package Type Connectorized Module
 Operating Life 2,500,000 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
 Shock MIL-STD-202, Method 213B, Cond.G
 Vibration MIL-STD-202, Method 204D, Cond.C
 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.

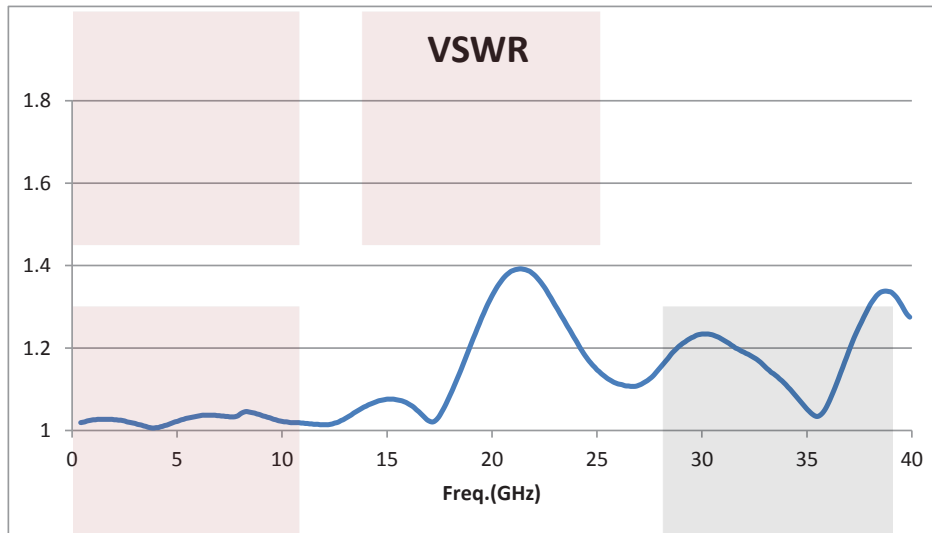
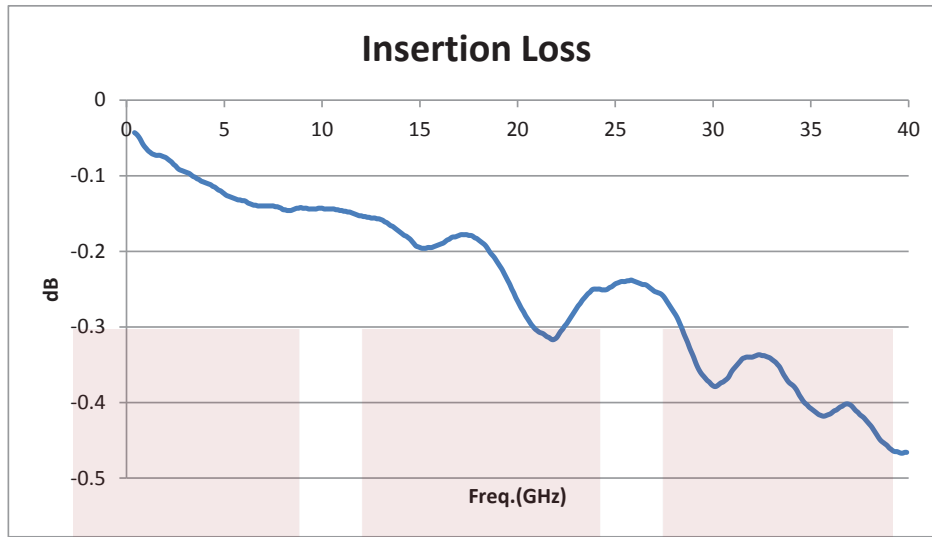
Compliance Certifications (visit www.FairviewMicrowave.com for current document)

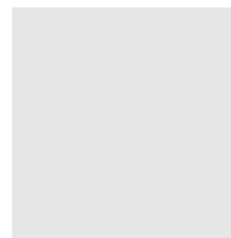
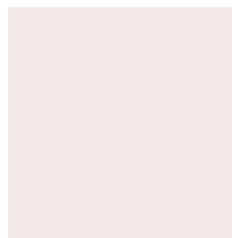
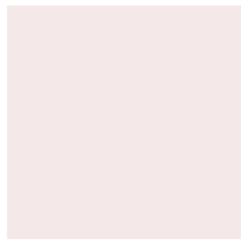
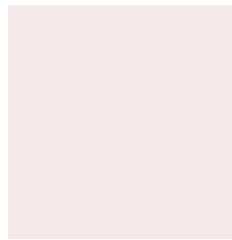
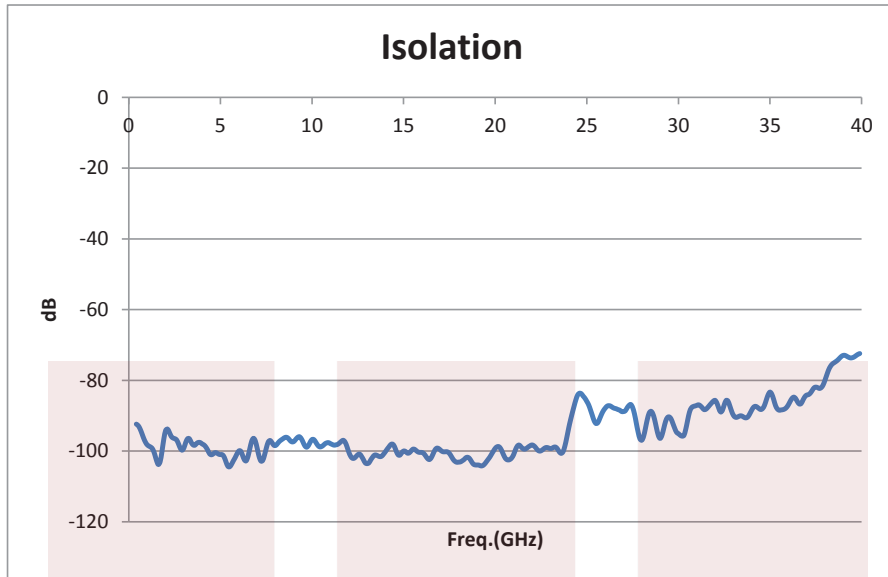
RoHS Compliant
 REACH Compliant 12/17/2014

Plotted and Other Data

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

Typical Performance Data





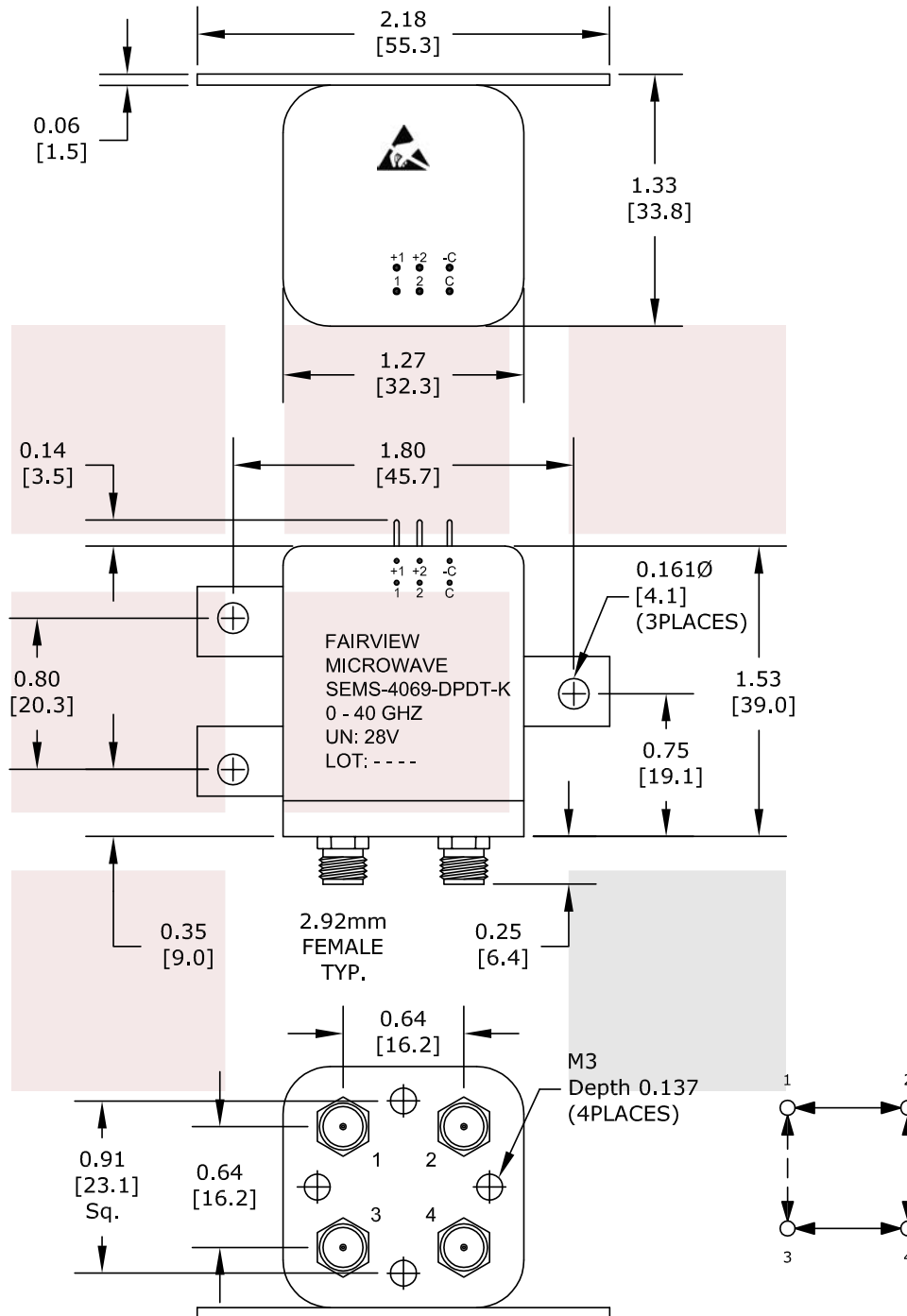
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For additional information on this product, please click the following link: [Transfer Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 10 Watts with Indicators, Self Cut Off, 2.92mm SEMS-4069-DPDT-K](#)

URL: <http://www.fairviewmicrowave.com/transfer-latching-electro-mechanical-relay-switch-indicators-sems-4069-dpdt-k-p.aspx>

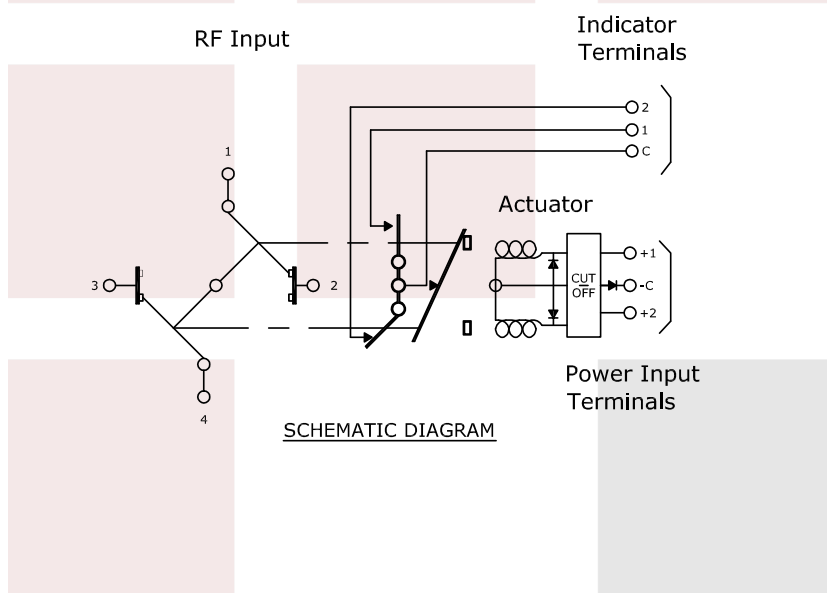
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TITLE Transfer Latching Electro-Mechanical Relay Switch From DC to 40 GHz, 10 Watts with Indicators, Self Cut Off, 2.92mm		DWG NO SEMS-4069-DPDT-K		CAGE CODE 3FKR5	
CAD FILE	082815	SHEET	SCALE	N/A	SIZE A 150

Voltage	RF Continuity	Indicator
- C + 1	1 ↔ 3 2 ↔ 4	C . 1
_ C + 2	1 ↔ 2 3 ↔ 4	C . 2



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CAD FILE	092914	SHEET	SCALE	N/A	SIZE A 150