

**SP4T Electromechanical Relay Latching Switch,  
 +COM, DC to 43 GHz, 10W, 28VDC, 2.92mm**

The FMSW6564 is a Single Pole Four Throw (SP4T) electromechanical relay switch that operates across a wideband frequency range from DC to 43 GHz and can handle 10W of average power in a break before make condition. The 50 Ohm design supports a positive common (+COM) biasing configuration and features a Latching Actuator with a 2 million lifecycle rating. The Latching Actuator magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Impressive typical performance includes 0.4 dB insertion loss and isolation greater than 80 dB. This switch requires 28 Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports 2.92mm female connectors and a 15 Pin D-SUB Connector for DC control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

**Electrical Specifications** (TA = +25°C, DC Voltage = 28 Vdc)

Switch Type SP4T  
 Actuator Type Latching

Description	Min	Typ	Max	Units
Frequency Range	DC		43	GHz
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts		110		mA
Actuating Reset Current		440		mA
VSWR		1.6:1	2.1:1	
Insertion Loss		0.4	1.6	dB
Isolation	40	90		dB
Switching Time		20		ms

**Performance by Frequency**

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12	12 - 18	18 - 26.5	26.5 - 32	GHz
VSWR, Max	1.15:1	1.25:1	1.35:1	1.5:1	1.7:1	
Insertion Loss, Max	0.2	0.3	0.6	0.8	0.8	dB
Isolation, Min	80	75	70	70	60	dB

**Performance by Frequency**

Description	F6	F7	F8	F9	F10	Units
Frequency Range	32 - 40	40 - 43				GHz
VSWR, Max	1.8:12.1:1					
Insertion Loss, Max	1.1	1.6				dB
Isolation, Min	60	40				dB


**Features:**

- Single Pole Four Throw (SP4T) Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Latching Actuator
- Positive Common (+COM) Configuration
- 2M Lifecycle Rating
- Insertion Loss 0.4 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.15:1 max
- 15 PIN D-SUB Connector for DC Control
- 28 Volt DC Bias
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- 10 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions
- Actuating Set / Reset Feature

**Applications:**

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

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**Mechanical Specifications**

<b>Size</b>	
Length	2.05 in [52.07 mm]
Width/Diameter	1.5 in [38.1 mm]
Height	0.52 in [13.21 mm]
Weight	0.168 lbs [76.2 g]

**Connectors**

RF Connector Type	2.92mm Female
Control Connector	D-Subminiature

**Environmental Specifications**

**Temperature**

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C

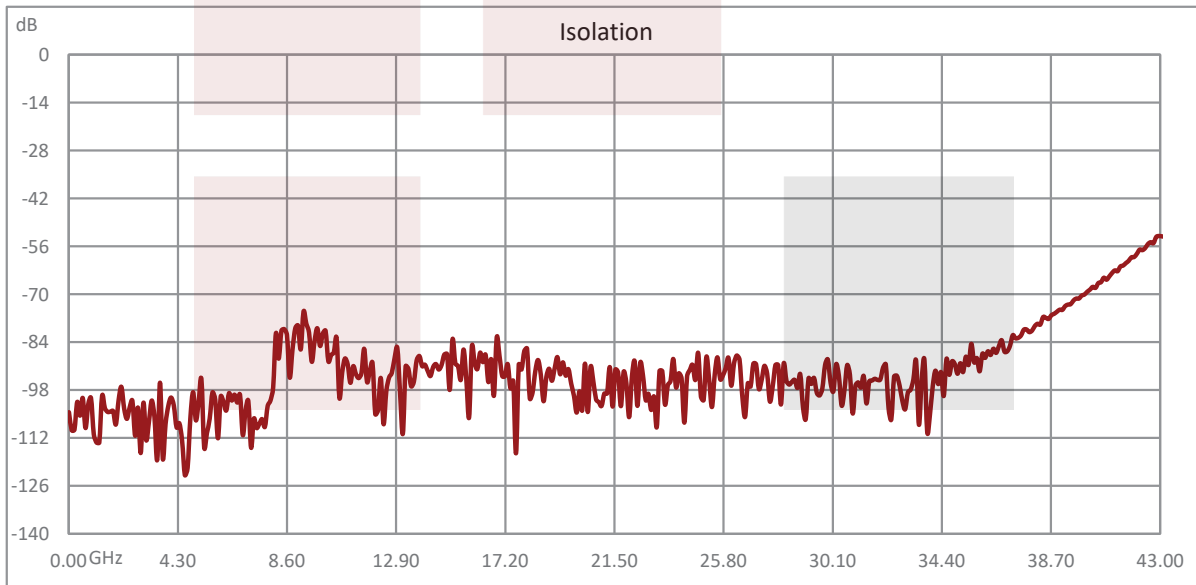
Shock	MIL-STD-202 Method 213, Condition D, 500G (non oper)
Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

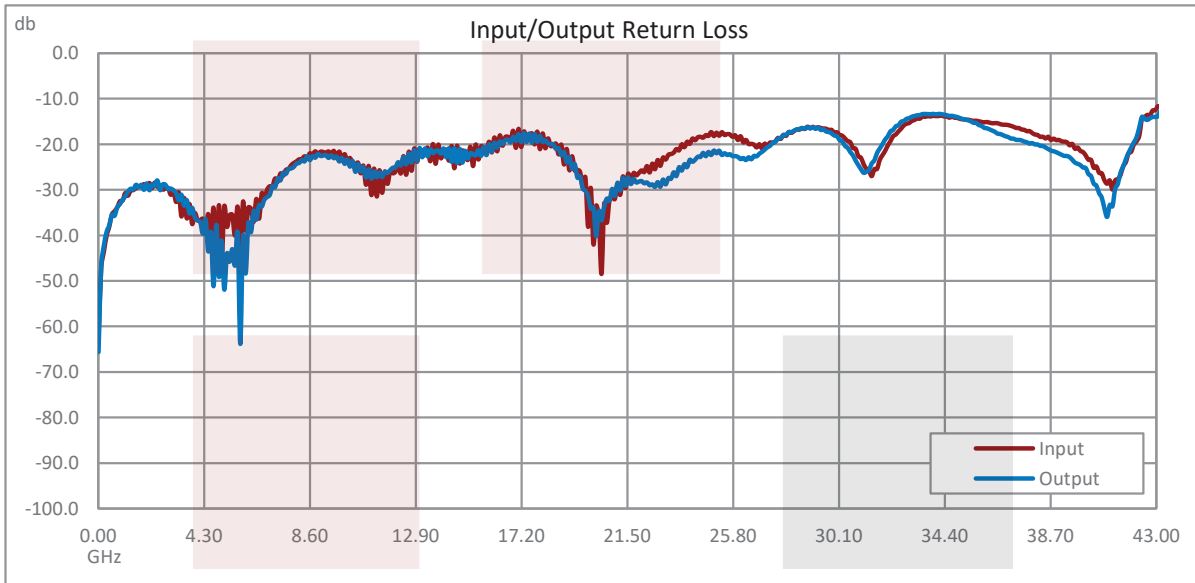
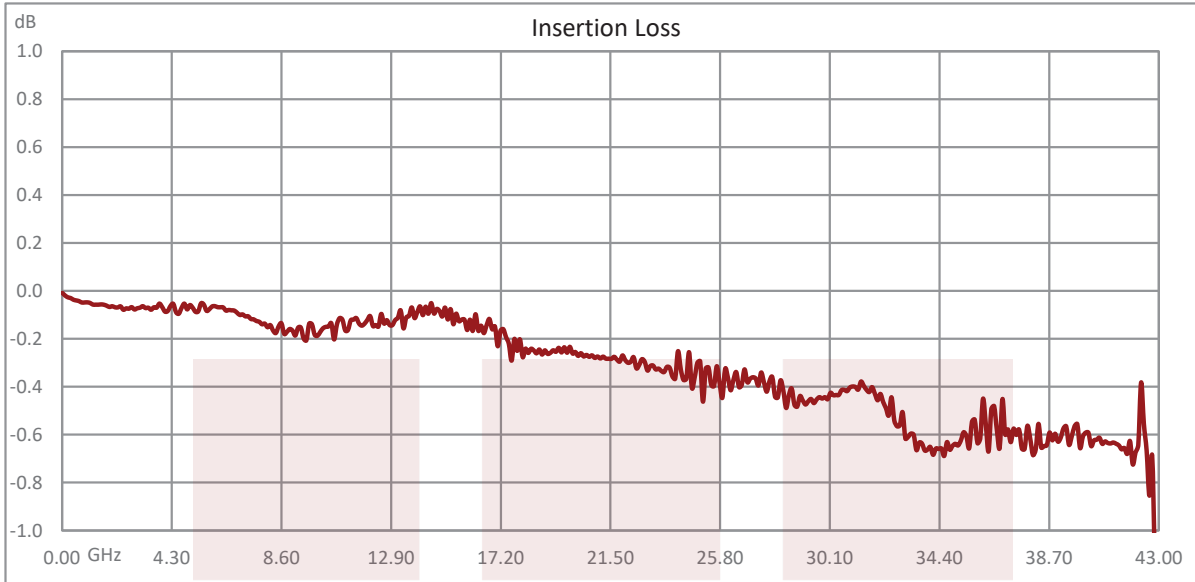
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

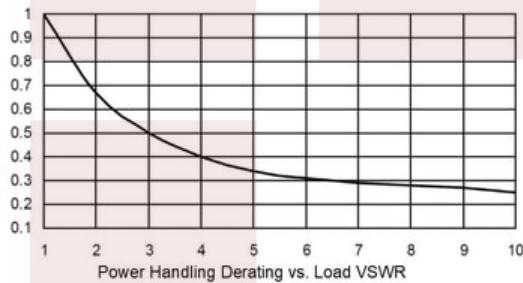
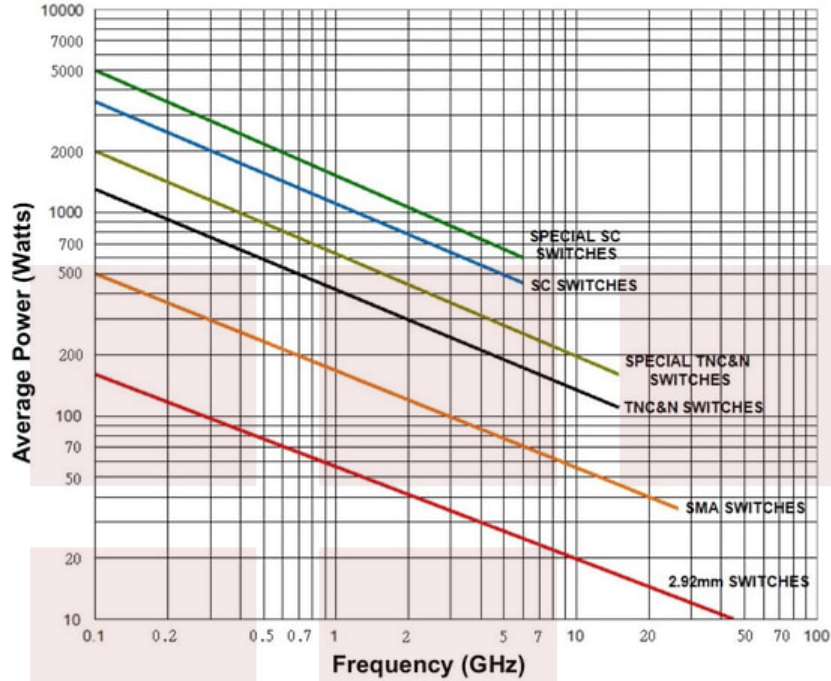
**Typical Performance Data**





**Power Handling vs. Frequency**

**Power Handling vs. Frequency**



Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

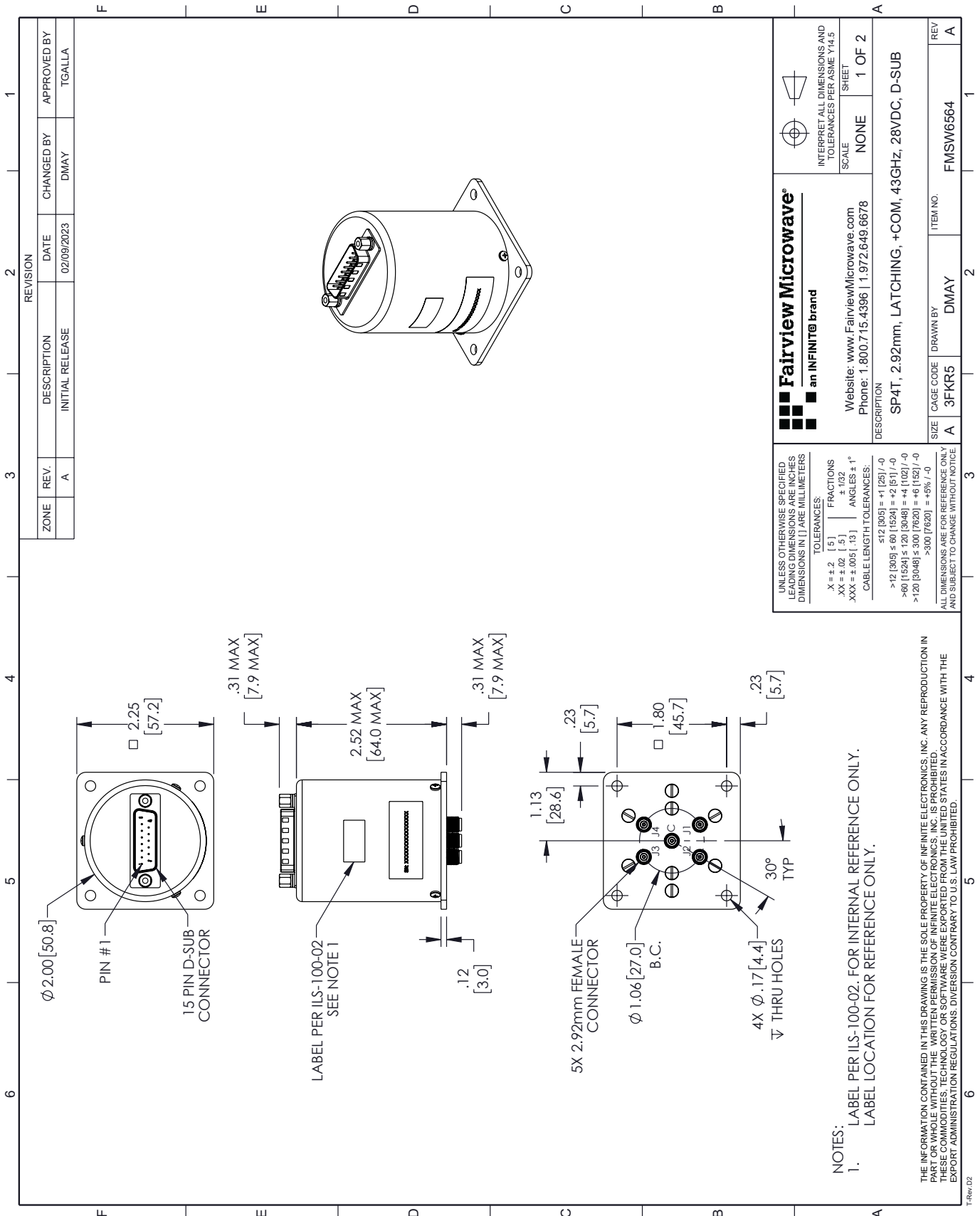
SP4T Electromechanical Relay Latching Switch, +COM, DC to 43 GHz, 10W, 28VDC, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

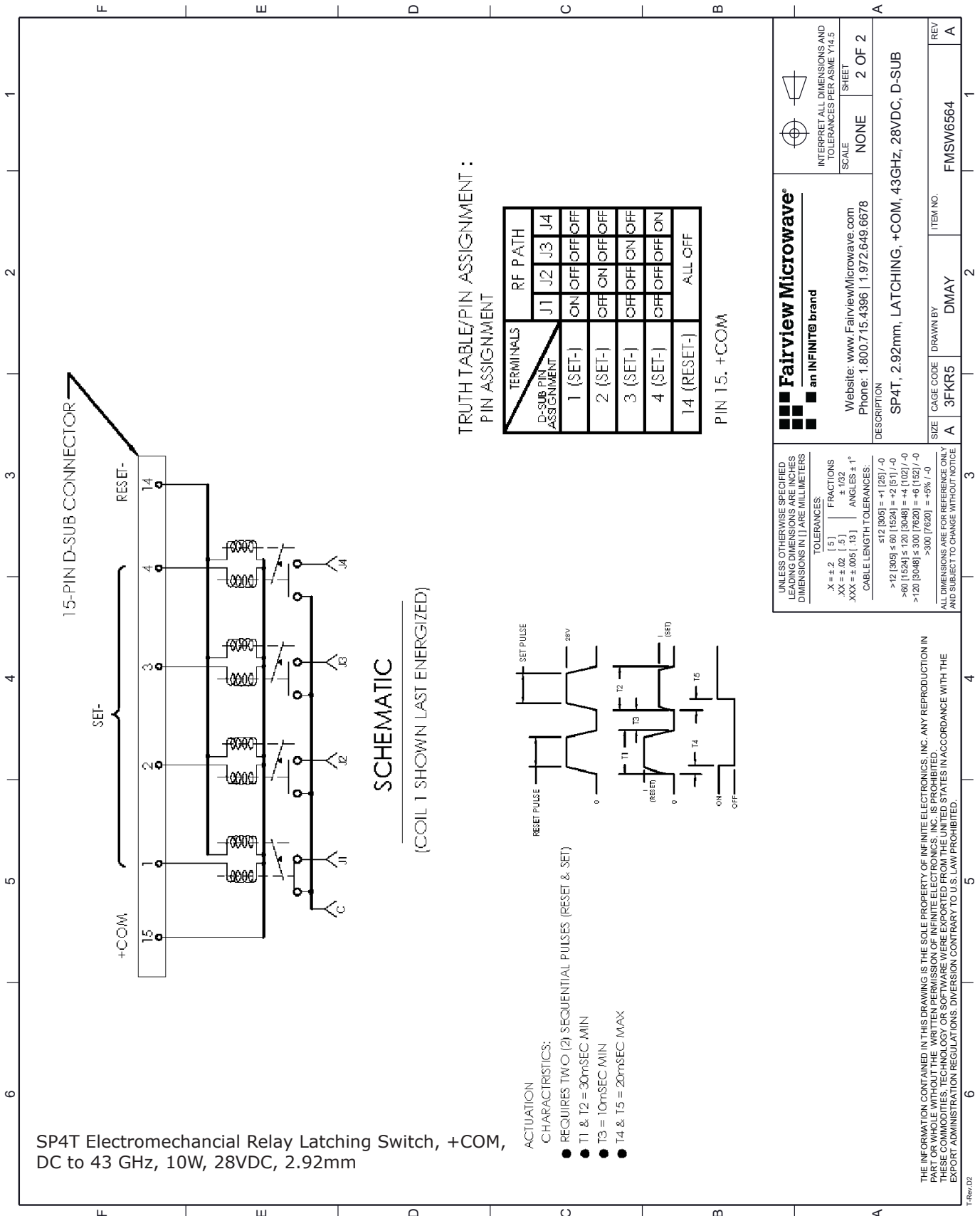
For additional information on this product, please click the following link: [SP4T Electromechanical Relay Latching Switch, +COM, DC to 43 GHz, 10W, 28VDC, 2.92mm FMSW6564](#)

URL: <https://www.fairviewmicrowave.com/sp4t-latching-43-ghz-electro-mechanical-relay-switch-28v-2.92mm-fm-sw6564-p.aspx>

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE NONE SHEET 2 OF 2

DESCRIPTION: SP4T, 2.92mm, LATCHING, +COM, 43GHz, 28VDC, D-SUB

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	3FKR5	DMAY	FMSW6564	A