

**SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Indicators, TTL, Diodes, Solder Terminals, 2.92mm**

The FMSW7281 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across an ultra wide frequency range from DC to 43 GHz and can handle up to 10 Watts of Average Power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Failsafe Actuator. Additional features include TTL control logic, indicators to monitor the switch position, and suppression diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.4 dB insertion loss and isolation greater than 85 dB. This switch requires +12 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 solder terminal pins 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 = 12 Vdc)

Switch Type	SPDT
Actuator Type	Failsafe
Actuator Options	Indicators, TTL Logic, Diodes
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts

Description	Min	Typ	Max	Units
Frequency Range	DC		43	GHz
Operating Voltage	11	12	13	Volts
Actuating Current @ 12 Volts			200	mA
VSWR		1.4:1	1.9:1	
Insertion Loss		0.4	1.2	dB
Isolation	40	85		dB
Input Power			10	Watts
Switching Time			20	ms

**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	1.15:1	1.35:1	1.4:1	1.45:1	1.5:1	
Insertion Loss, Max	0.2	0.3	0.4	0.5	0.7	dB
Isolation, Min	85	80	80	75	60	dB

**Performance by Frequency**

Description	F6	F7	F8	F9	F10	Units
Frequency Range	40 - 43					GHz
VSWR, Max	1.9:1					
Insertion Loss, Max	1.2					dB
Isolation, Min	40					dB


**Features:**

- Single Pole Double Throw (SPDT) Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Failsafe Actuator
- Indicators
- TTL Logic Control
- Suppression Diodes
- 2M Lifecycle Rating
- Insertion Loss 0.4 dB typ
- Isolation > 85 dB typ
- VSWR as low as 1.15:1 max
- Solder Terminal Pins for DC Control
- +12 Volt DC Bias
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 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

**Applications:**

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

Fairview Microwave  
 301 Leora Ln., Suite 100  
 Lewisville, TX 75056  
 Tel: 1-800-715-4396 / (972) 649-6678  
 Fax: (972) 649-6689  
[www.fairviewmicrowave.com](http://www.fairviewmicrowave.com)  
[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

**Mechanical Specifications**

**Size**

Length	2.05 in [52.07 mm]
Width/Diameter	1.5 in [38.1 mm]
Height	0.52 in [13.21 mm]
Weight	0.1 lbs [45.36 g]
Body Material and Plating	Electroless Nickel

**Connectors**

RF Connector Type	2.92mm Female
Control Connector	Solder Terminals

**Environmental Specifications**

**Temperature**

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

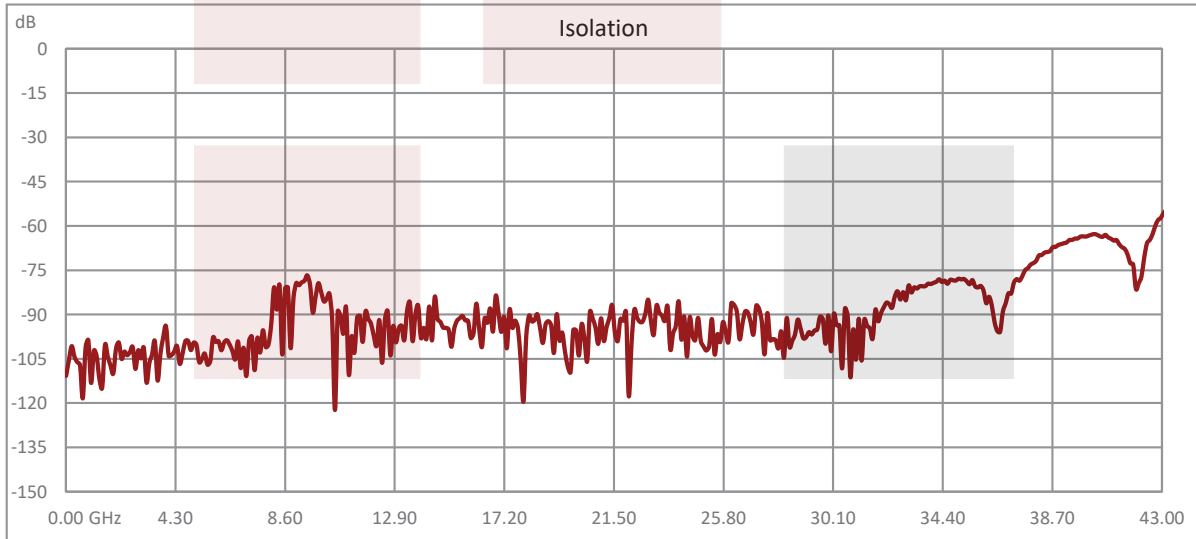
Shock	MIL-STD-202 Method 213, Condition D, 500G (non operational)
Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

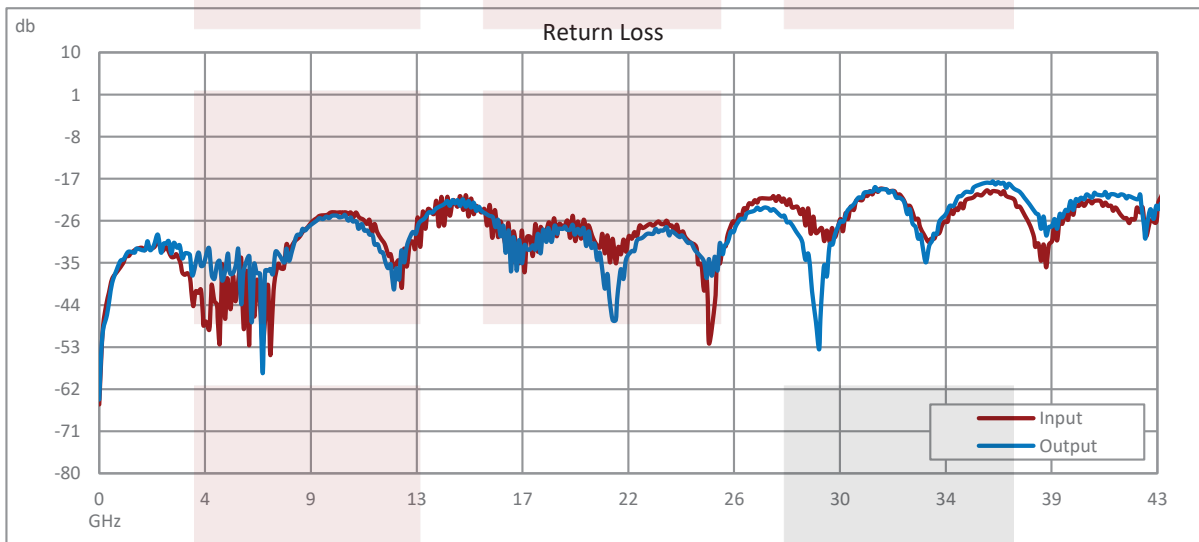
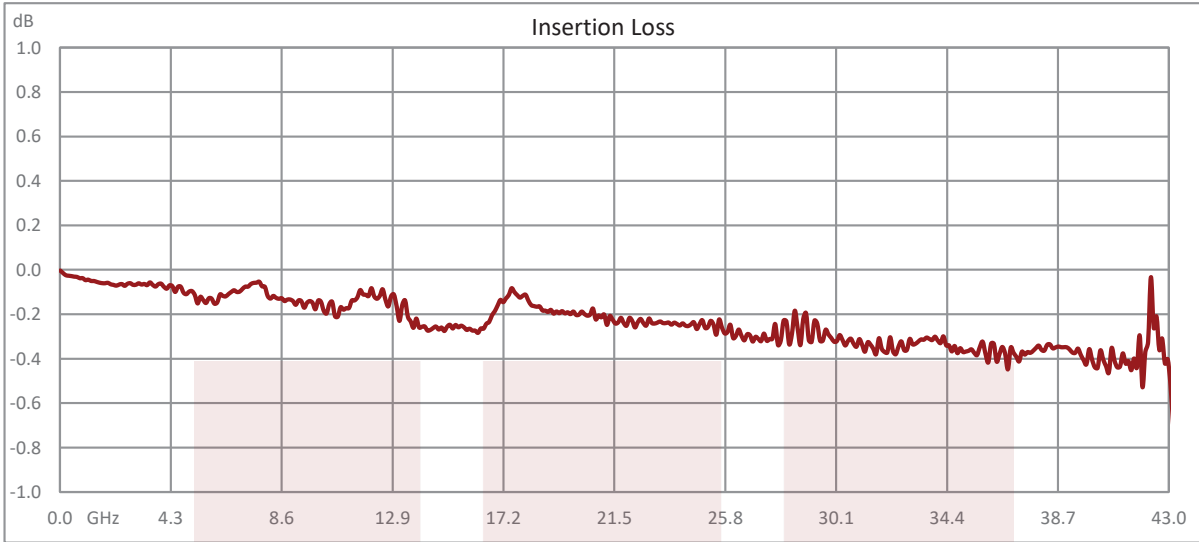
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

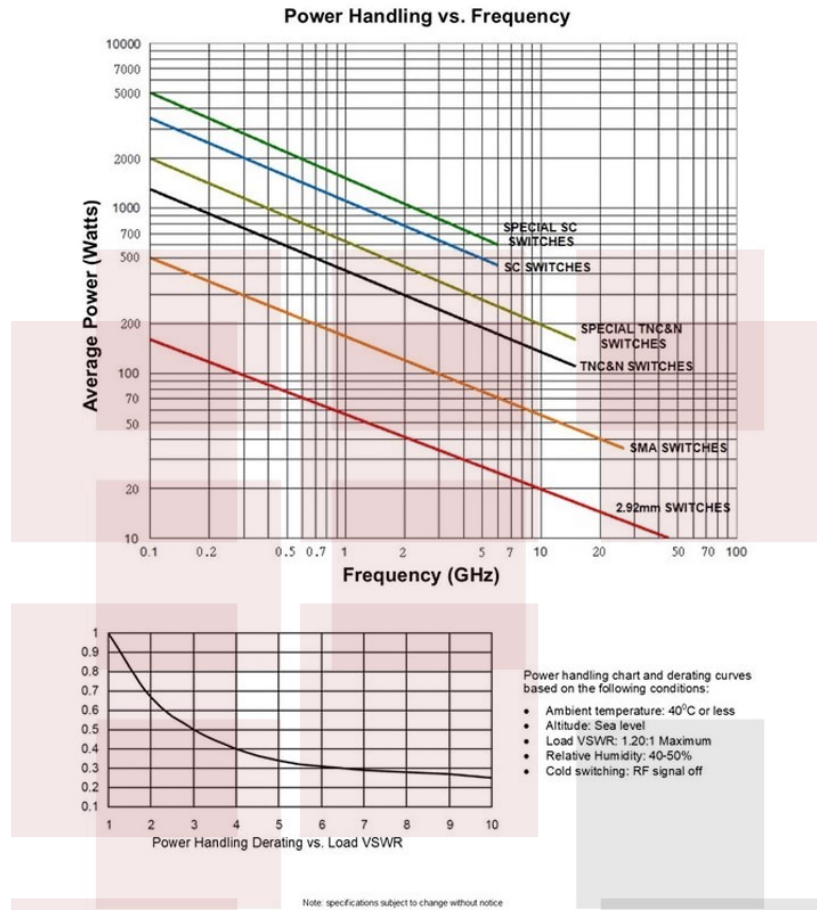
Notes:

**Typical Performance Data**





**Power Handling vs. Frequency**

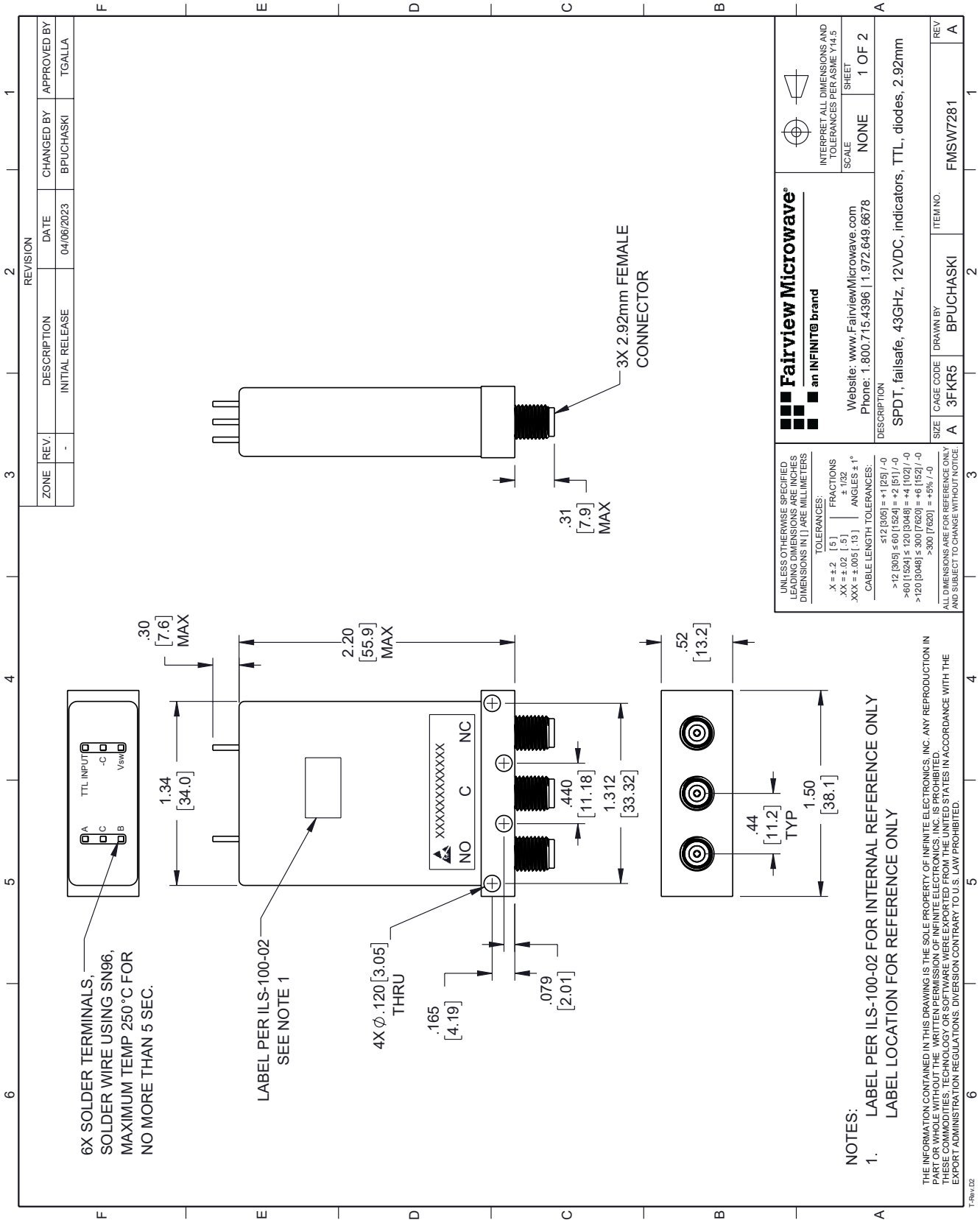


SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Indicators, TTL, Diodes, Solder Terminals, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Indicators, TTL, Diodes, Solder Terminals, 2.92mm FMSW7281](https://www.fairviewmicrowave.com/spdt-failsafe-43-ghz-electro-mechanical-relay-switch-indicators-ttl-diodes-12v-2.92mm-fmsw7281)

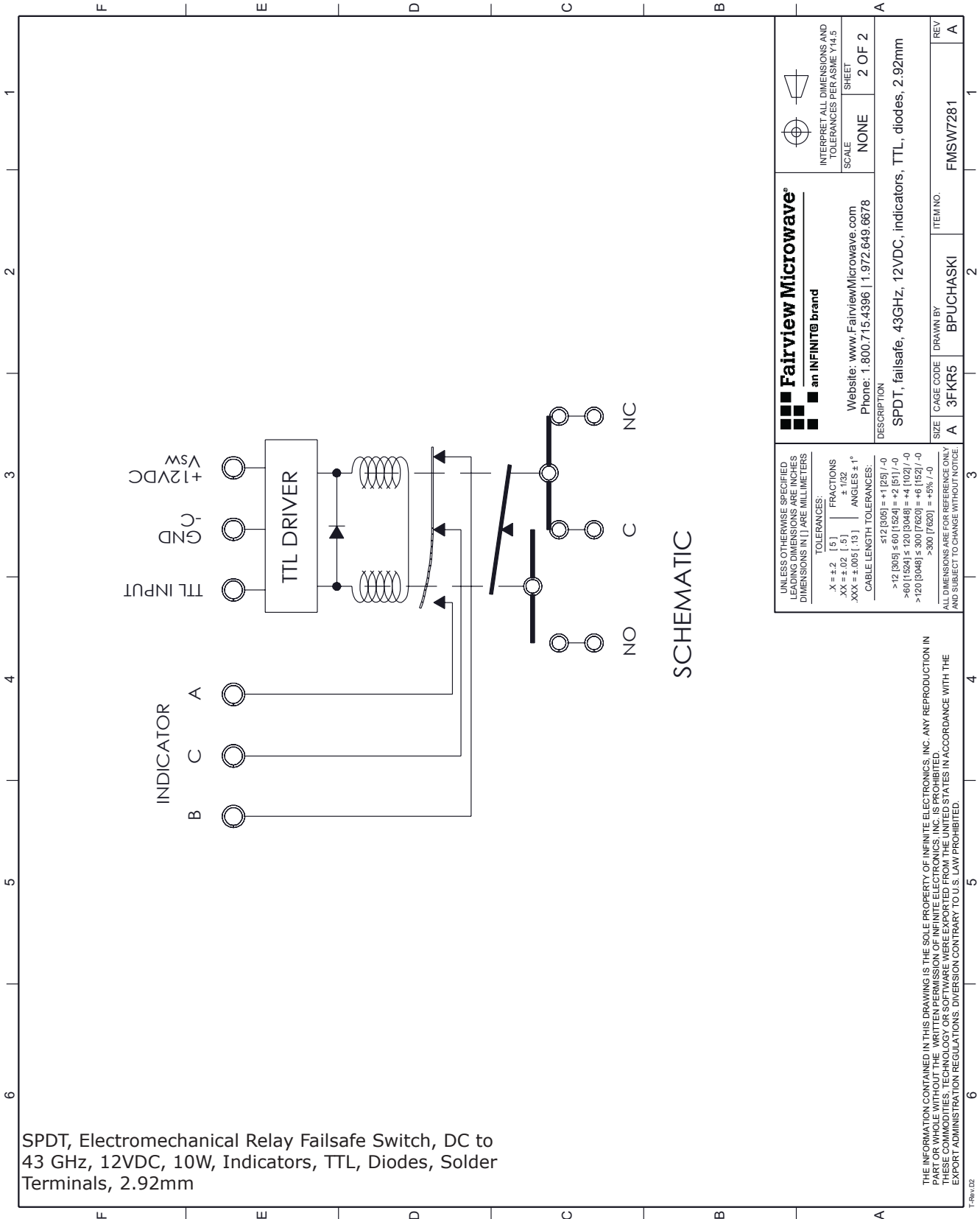
URL: <https://www.fairviewmicrowave.com/spdt-failsafe-43-ghz-electro-mechanical-relay-switch-indicators-ttl-diodes-12v-2.92mm-fmsw7281-p.aspx>

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ZONE	REV.	DESCRIPTION	DATE	CHANGED BY	APPROVED BY
		INITIAL RELEASE	04/06/2023	BPUCHASKI	TGALLA

<p><b>Fairview Microwave</b> an INFINIT<sup>®</sup> brand</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p>
<p>Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a></p> <p>Phone: 1.800.715.4396   1.972.649.6678</p>	<p>SCALE: NONE</p> <p>SHEET: 1 OF 2</p>	<p>DESCRIPTION: SPDT, failsafe, 43GHz, 12VDC, indicators, TTL, diodes, 2.92mm</p>
<p>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS IN LARGE MILLIMETERS</p> <p>TOLERANCES:          .X = ±.2 [5] FRACTIONS ±.152 [4] ANGLES ± 1°          .XX = ±.02 [5] ±.152 [4] ANGLES ± 1°          .XXX = ±.005 [13] ±.152 [4] ANGLES ± 1°</p> <p>CABLE LENGTH TOLERANCES:          ≤12 [305] = +1 [25] / -0          &gt;12 [305] ≤ 60 [1524] = +2 [51] / -0          &gt;60 [1524] ≤ 120 [3048] = +4 [102] / -0          &gt;120 [3048] ≤ 300 [7620] = +6 [152] / -0          &gt;300 [7620] = +5% / -0</p>	<p>SIZE: A</p> <p>CAGE CODE: 3FKR5</p> <p>ITEM NO.: FMSW7281</p>	<p>REV: A</p>



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	<p>SIZE: A</p> <p>CAGE CODE: 3FKR5</p> <p>DRAWN BY: BPUCHASKI</p> <p>ITEM NO.: FMSW7281</p> <p>REV: A</p>	<p>REV: A</p>	

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