

SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 28VDC, 10W, Solder Terminals, 2.92mm

The FMSW7280 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. Impressive typical performance includes 0.4 dB insertion loss and isolation greater than 85 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 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 = 28 Vdc)

Switch Type SPDT
 Actuator Type Failsafe

Description	Min	Typ	Max	Units
Frequency Range	DC		43	GHz
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts			90	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
- 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

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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

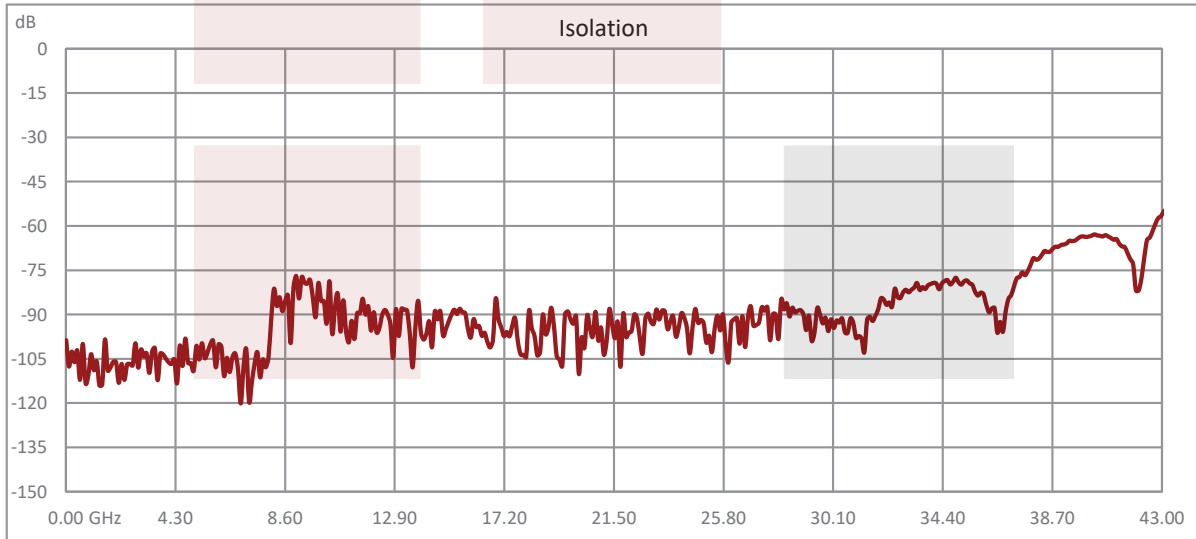
Shock	MIL-STD-202 Method 213, Condition D, 500G (non operational)
Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

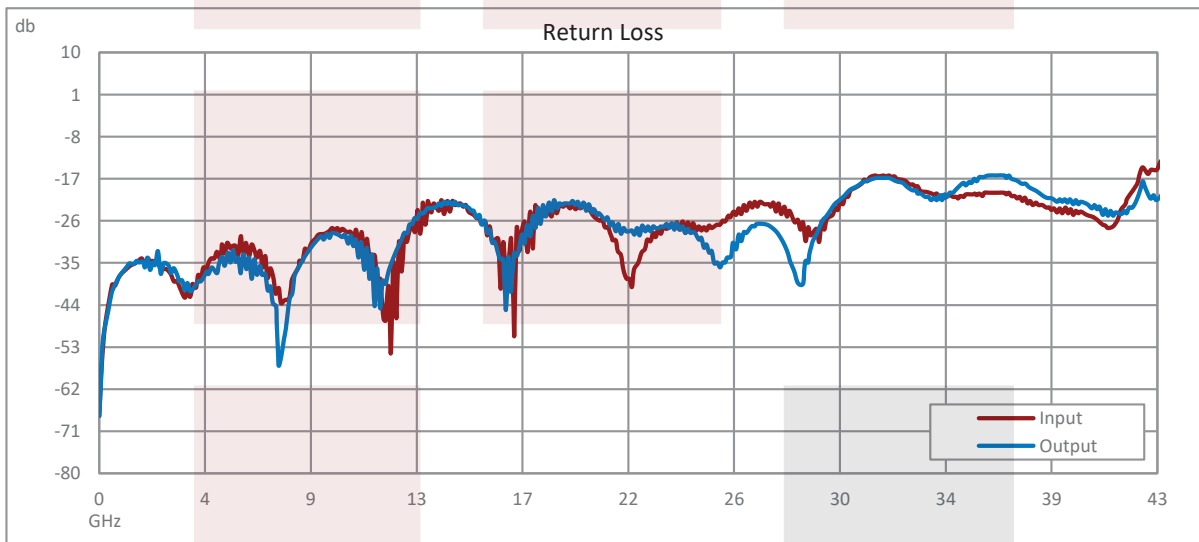
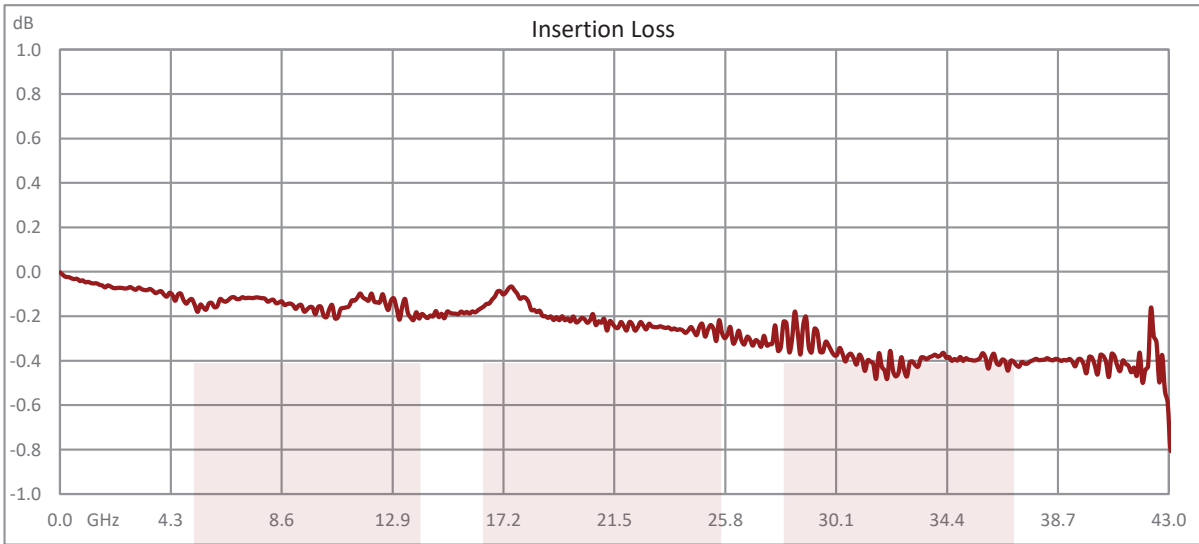
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

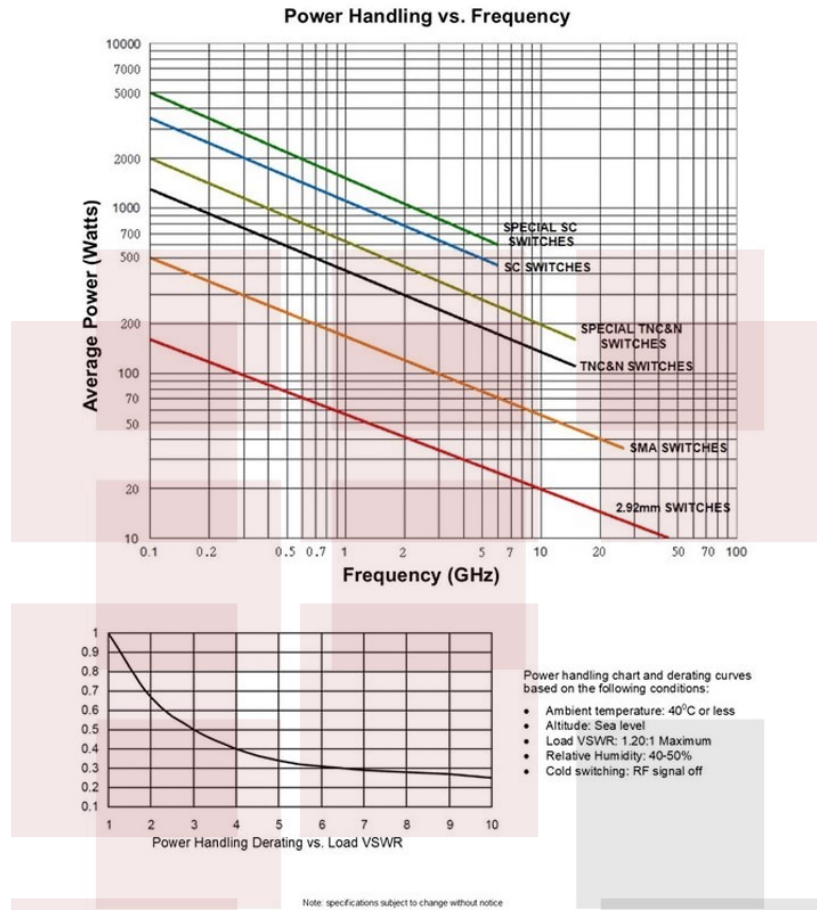
Notes:

Typical Performance Data





Power Handling vs. Frequency

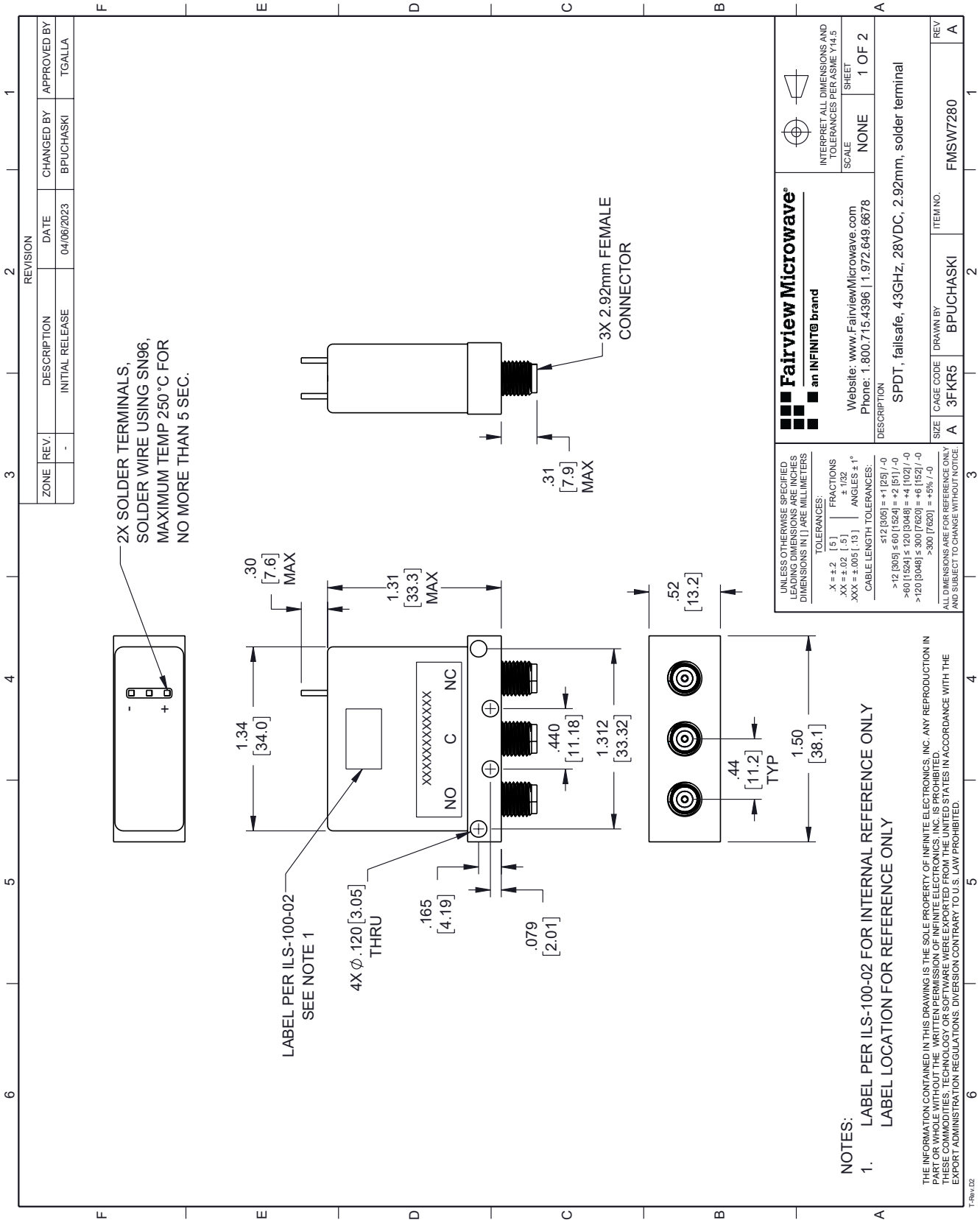


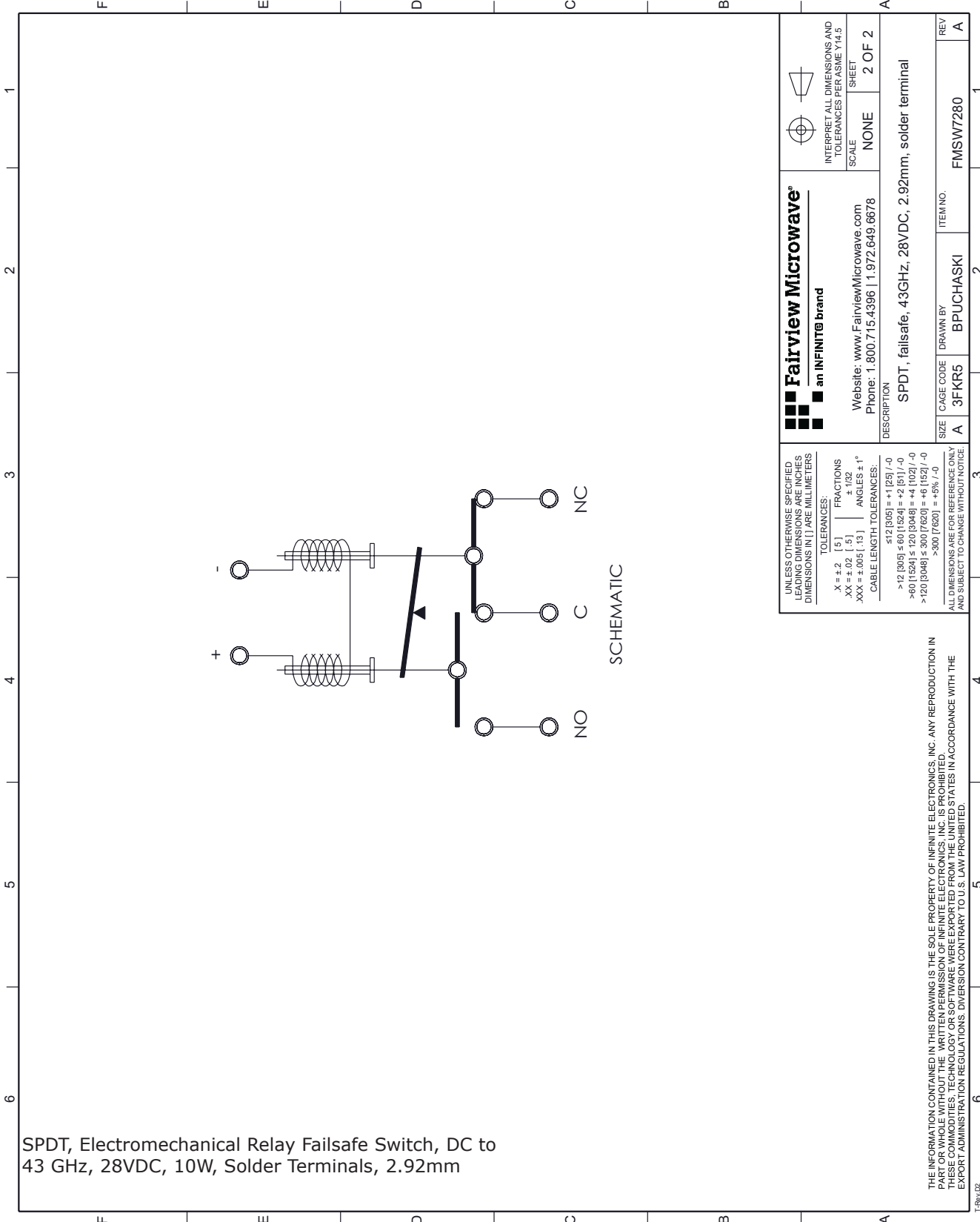
SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 28VDC, 10W, Solder Terminals, 2.92mm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview 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, 28VDC, 10W, Solder Terminals, 2.92mm FMSW7280](https://www.fairviewmicrowave.com/spdt-failsafe-43-ghz-electro-mechanical-relay-switch-28v-2.92mm-fm-sw7280)

URL: <https://www.fairviewmicrowave.com/spdt-failsafe-43-ghz-electro-mechanical-relay-switch-28v-2.92mm-fm-sw7280-p.aspx>

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SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 28VDC, 10W, Solder Terminals, 2.92mm

Fairview Microwave[®] an INFINIT [®] brand		INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	
Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678		SCALE NONE	SHEET 2 OF 2
DESCRIPTION SPDT, failsafe, 43GHz, 28VDC, 2.92mm, solder terminal			
SIZE A	CAGE CODE 3FKR5	DRAWN BY BPUCHASKI	ITEM NO. FMSW7280
		REV A	REV A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS AND TOLERANCES ARE IN MILLIMETERS

TOLERANCES:
 .X = ±.2 (.5) FRACTIONS
 .XX = ±.02 (.5) ±.152
 .XXX = ±.005 (.13) ANGLES ± 1°

CABLE LENGTH TOLERANCES:
 ≤12 (305) = ±.125 / -0
 >12 (305) ≤ 60 (1524) = ±.2 (51) / -0
 >60 (1524) ≤ 120 (3048) = ±.4 (102) / -0
 >120 (3048) ≤ 300 (7620) = ±.6 (152) / -0
 >300 (7620) = ±.8% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE.

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