

Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 28VDC, 5W, Diodes, Self Cut-Off, Solder Terminals, 2.92mm

The FMSW7297 is a Transfer electromechanical relay switch that operates across an ultra wide frequency range from DC to 43 GHz and can handle up to 5 Watts of Average Power in a break before make condition. The 50 Ohm design has a Latching Actuator with Self Cut-Off that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. The switch incorporates Suppression Diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.6 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 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 Transfer
Actuator Type Latching
Actuator Options Self Cut Off, Diodes

Description	Min	Typ	Max	Units
Frequency Range	DC		43	GHz
Operating Voltage	26	28	30	Volts
Actuating Current @ 28 Volts			250	mA
VSWR		1.4:1	2:1	
Insertion Loss		0.6	1.3	dB
Isolation	50	85		dB
Input Power			5	Watts
Switching Time			20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 6	6 - 12.4	12.4 - 26.5	26.5 - 40	40 - 43	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.8:1	2:1	
Insertion Loss, Max	0.2	0.4	0.7	1	1.3	dB
Isolation, Min	80	75	65	50	50	dB

Mechanical Specifications

Size
Length 2 in [50.8 mm]
Width/Diameter 2.16 in [54.86 mm]
Height 1.26 in [32 mm]
Weight 0.26 lbs [117.93 g]
Body Material and Plating Electroless Nickel



Features:

- Transfer Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- 2M Lifecycle Rating
- Suppression Diodes
- Insertion Loss 0.6 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 max
- Solder Terminal Pins for DC Control
- +28 Volt DC Bias
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 5 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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Connectors

RF Connector Type
Control Connector

2.92mm Female
Solder Terminals

Environmental Specifications

Temperature

Operating Range
Storage Range

-25 to +65 deg C
-55 to +100 deg C

Shock
Vibration

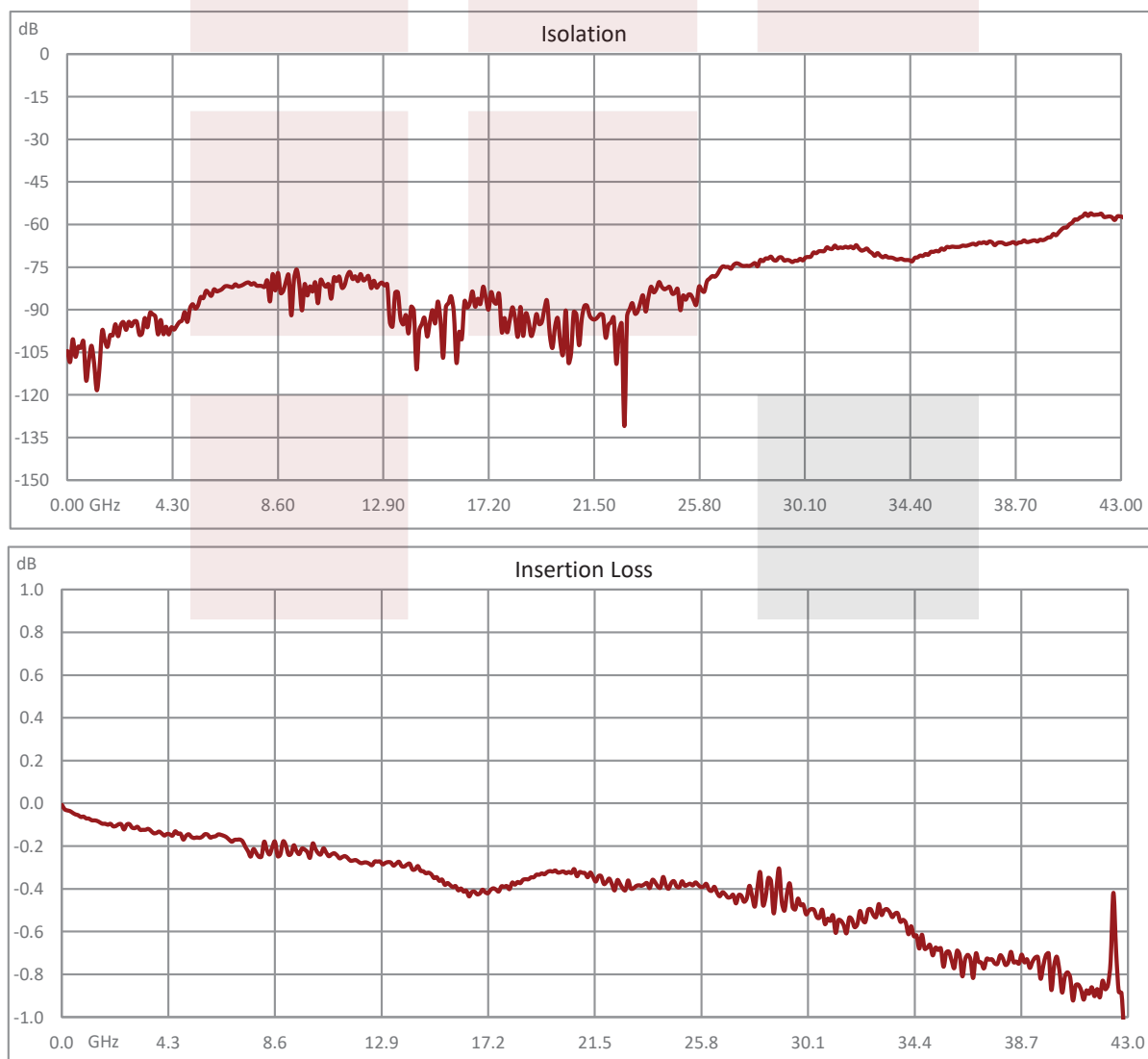
MIL-STD-202 Method 213, Condition D, 500G (non operational)
MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

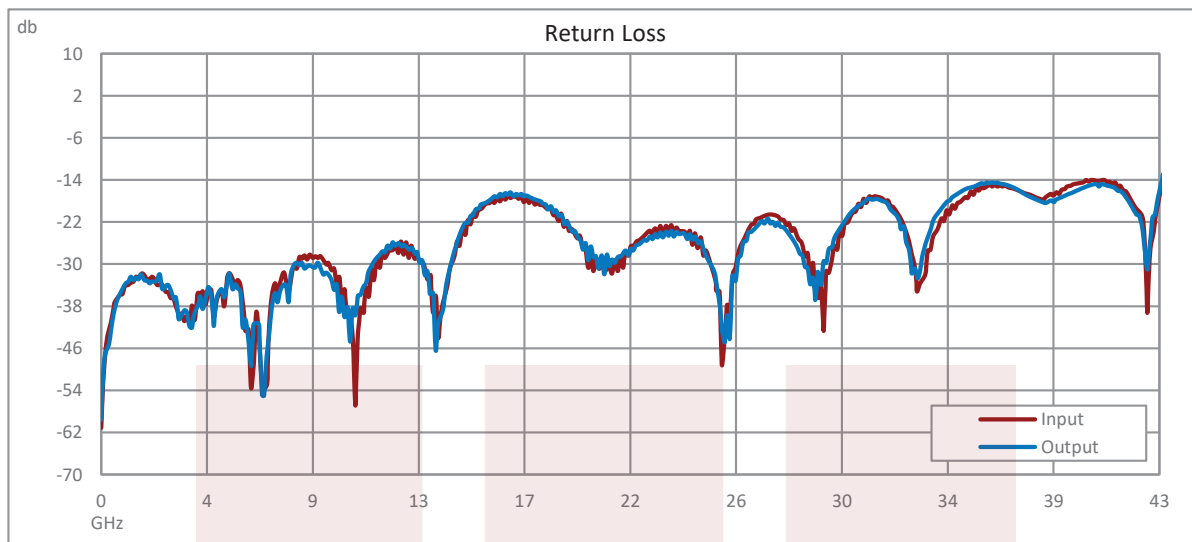
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

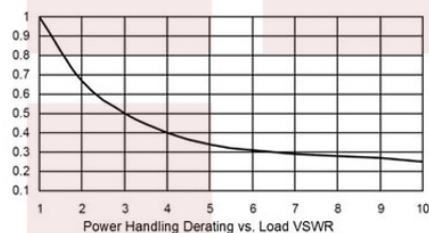
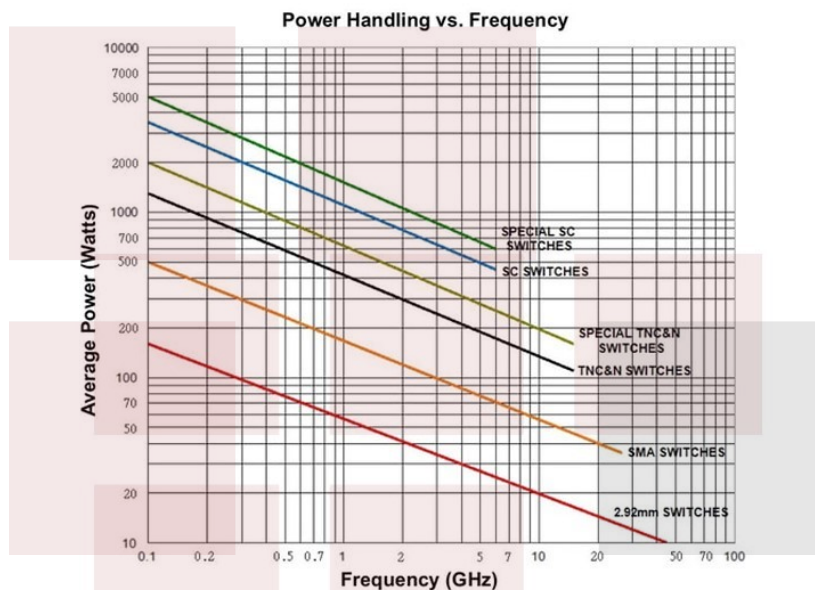
Notes:

Typical Performance Data





Power Handling vs. Frequency



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

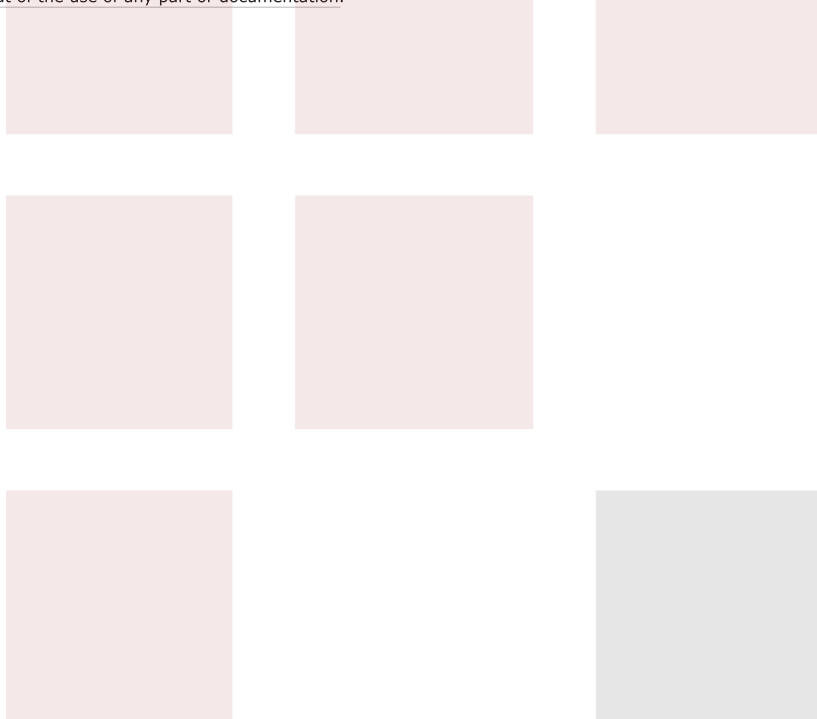
Note: specifications subject to change without notice

Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 28VDC, 5W, Diodes, Self Cut-Off, 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.

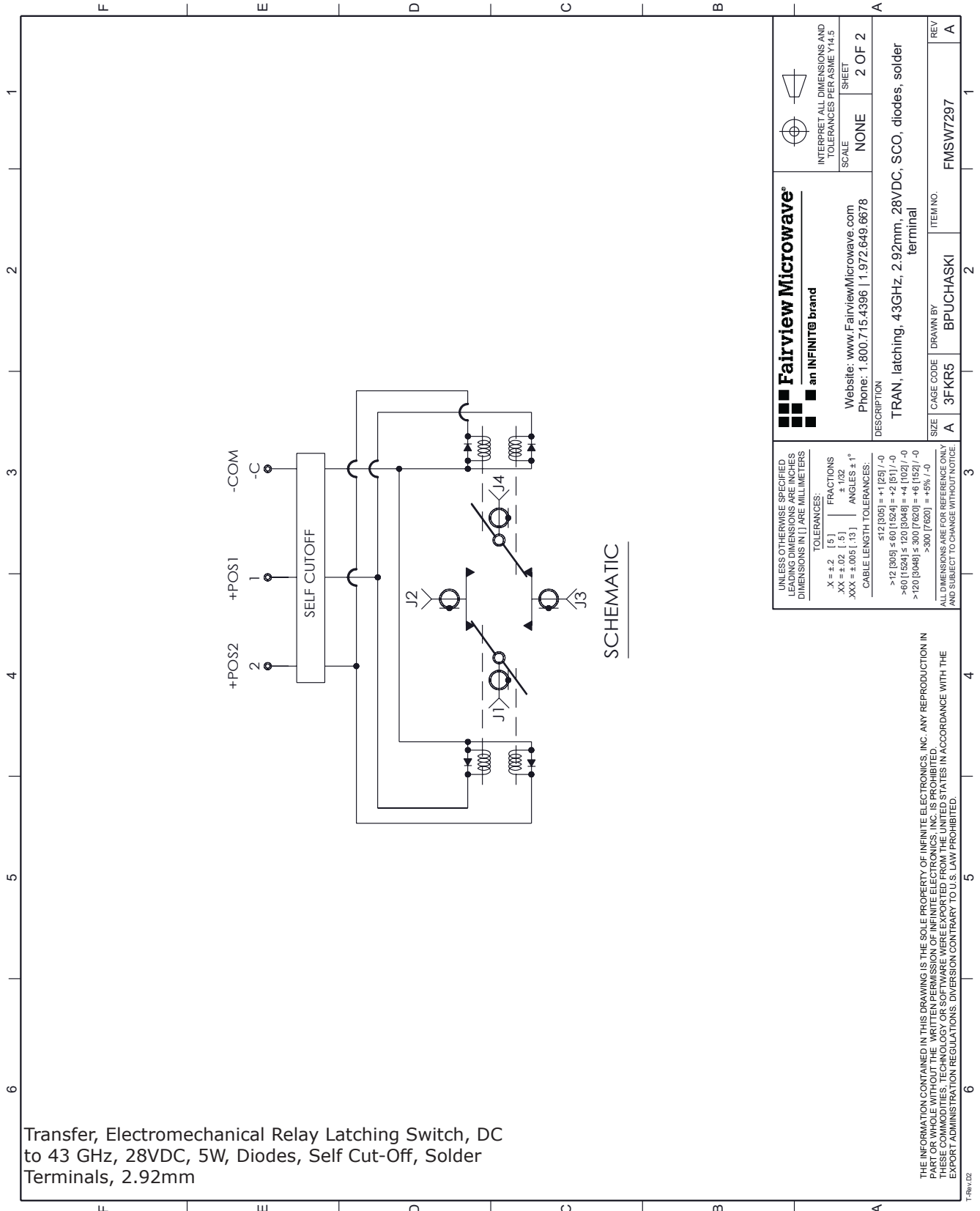
For additional information on this product, please click the following link: [Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 28VDC, 5W, Diodes, Self Cut-Off, Solder Terminals, 2.92mm FMSW7297](https://www.fairviewmicrowave.com/transfer-latching-43-ghz-electro-mechanical-relay-switch-diodes-self-cut-off-28v-2.92mm-fmsw7297-p.aspx)

URL: <https://www.fairviewmicrowave.com/transfer-latching-43-ghz-electro-mechanical-relay-switch-diodes-self-cut-off-28v-2.92mm-fmsw7297-p.aspx>

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS DIMENSIONS IN PARENTHESES ARE IN INCHES TOLERANCES: X = ±.2 [.5] FRACTIONS .XX = ±.02 [.5] ANGLES ± 1° .XXX = ±.005 [.13] CABLE LENGTH TOLERANCES: ≤12 [305] = ±1 [25] / -0 >12 [305] ≤ 60 [1524] = ±2 [51] / -0 >60 [1524] ≤ 120 [3048] = ±4 [102] / -0 >120 [3048] ≤ 300 [7620] = ±6 [152] / -0 >300 [7620] = ±5% / -0		SCALE NONE 2 OF 2
DESCRIPTION TRAN, latching, 43GHz, 2.92mm, 28VDC, SCO, diodes, solder terminal		ITEM NO. FMSW7297
SIZE A	CAGE CODE 3FKR5	REV A

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