

**Transfer, Electromechanical Relay Latching
Switch, DC to 43 GHz, 12VDC, 5W, Indicators, TTL,
Diodes, Self Cut-Off, Solder Terminals, 2.92mm**

The FMSW7298 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. Additional features include TTL logic control, Indicators to monitor the switch position, and 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 +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	Transfer
Actuator Type	Latching
Actuator Options	Indicators, TTL Logic, Diodes, Self Cut Off
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			300	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



Features:

- Transfer Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- 2M Lifecycle Rating
- TTL Logic Control
- Indicators
- 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
- +12 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

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
sales@fairviewmicrowave.com

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

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

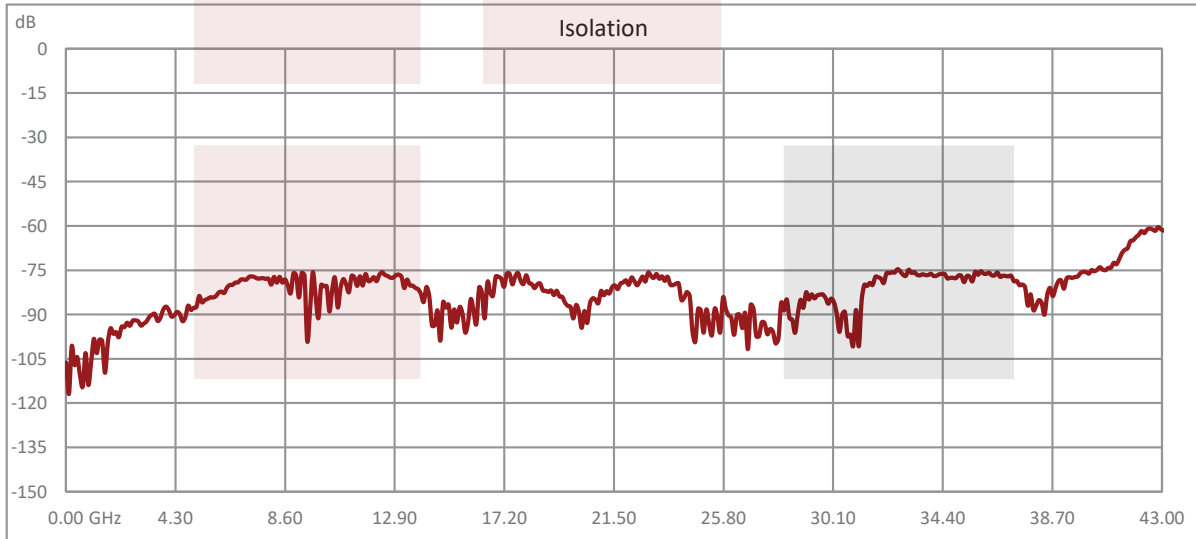
Shock	MIL-STD-202 Method 213, Condition D, 500G (non operational)
Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

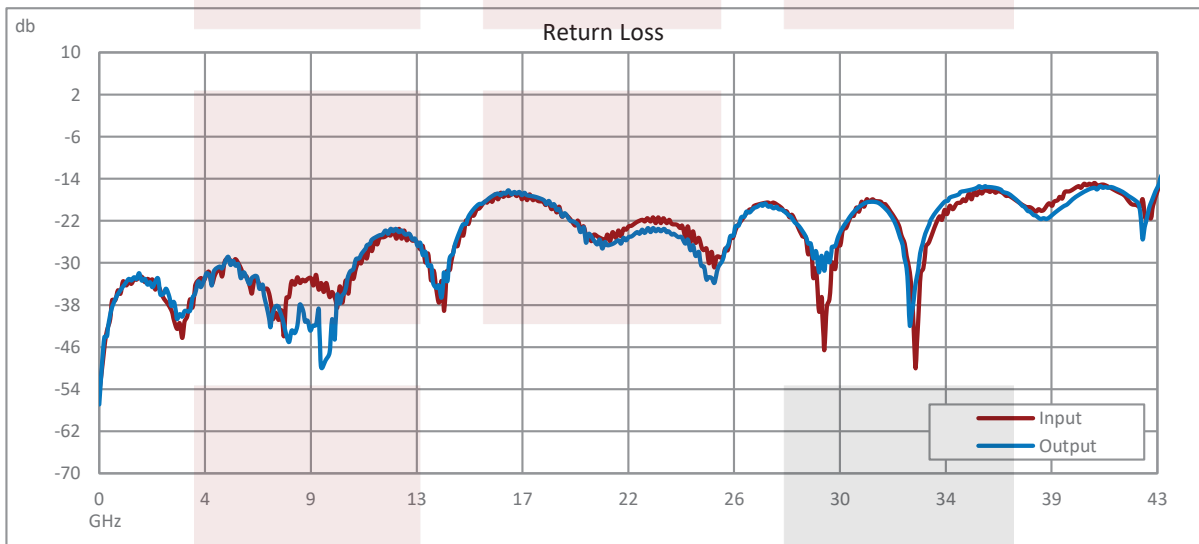
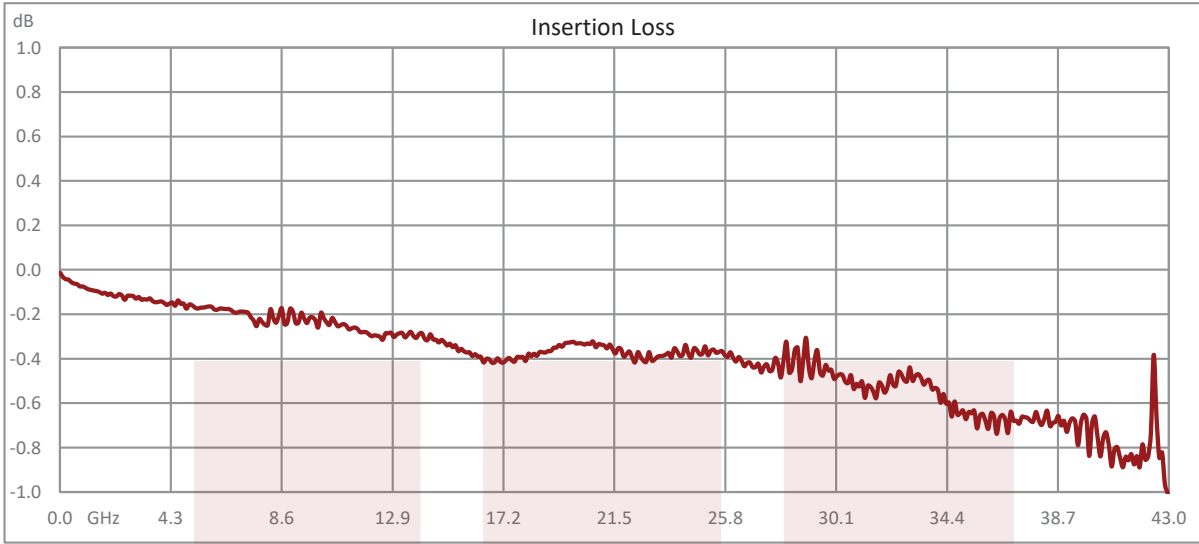
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

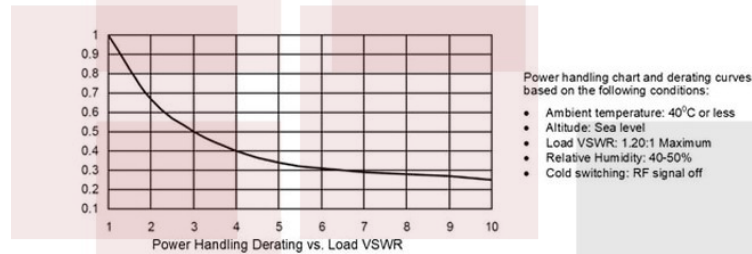
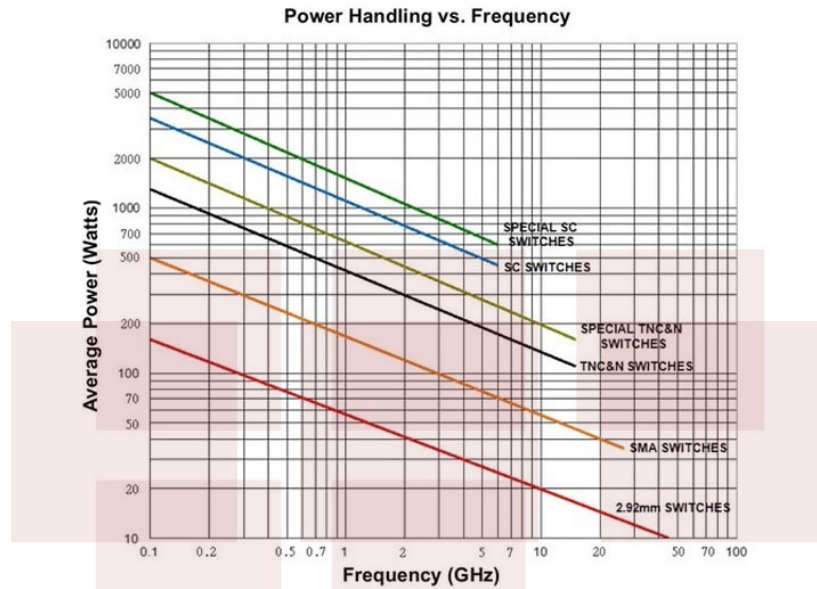
Notes:

Typical Performance Data





Power Handling vs. Frequency



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

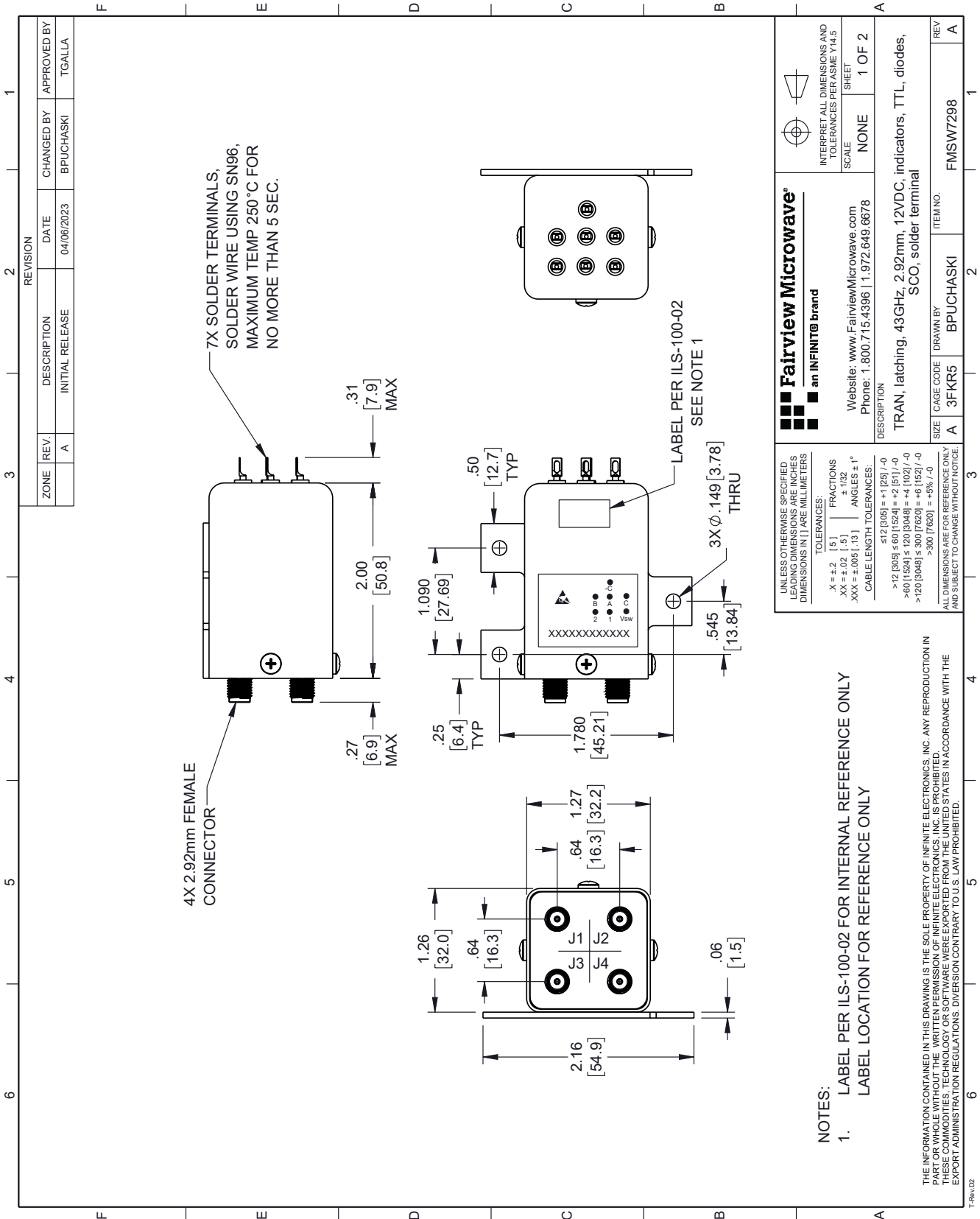
Note: specifications subject to change without notice

Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 12VDC, 5W, Indicators, TTL, 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, 12VDC, 5W, Indicators, TTL, Diodes, Self Cut-Off, Solder Terminals, 2.92mm FMSW7298](https://www.fairviewmicrowave.com/transfer-latching-43-ghz-electro-mechanical-relay-switch-indicators-ttl-diodes-self-cut-off-12v-2.92mm-fmsw7298-p.aspx)

URL: <https://www.fairviewmicrowave.com/transfer-latching-43-ghz-electro-mechanical-relay-switch-indicators-ttl-diodes-self-cut-off-12v-2.92mm-fmsw7298-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



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

<p>Fairview Microwave an INFINITE brand</p> <p>Website: www.FairviewMicrowave.com Phone: 1.800.715.4396 1.972.649.6678</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> <p>SCALE: NONE</p> <p>SHEET: 1 OF 2</p>	
<p>DESCRIPTION</p> <p>TRAN, latching, 43GHz, 2.92mm, 12VDC, indicators, TTL, diodes, SCO, solder terminal</p>			
SIZE	CAGE CODE	ITEM NO.	REV
A	3FKR5	FMSW7298	A

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS IN LARGE MILLIMETERS.

TOLERANCES:

.X = ±.2 (5) FRACTIONS
 .XX = ±.02 (.5) ± .032
 .XXX = ±.005 (.13) ANGLES ± 1°

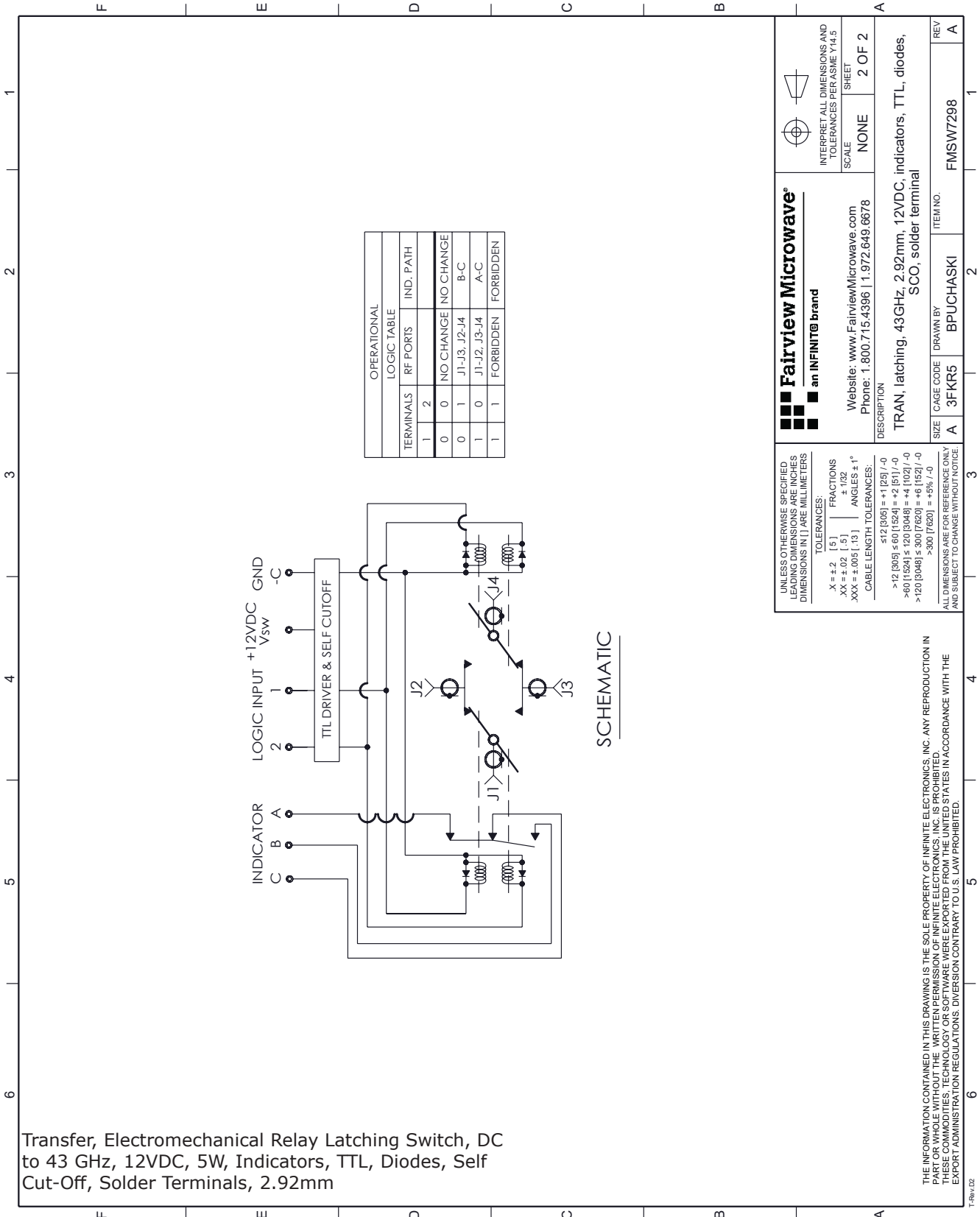
CABLE LENGTH TOLERANCES:

≤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

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

NOTES:
 1. LABEL PER ILS-100-02 FOR INTERNAL REFERENCE ONLY
 LABEL LOCATION FOR REFERENCE ONLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.



Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 12VDC, 5W, Indicators, TTL, Diodes, Self Cut-Off, Solder Terminals, 2.92mm

OPERATIONAL LOGIC TABLE		
TERMINALS	RF PORTS	IND. PATH
1	2	
0	0	NO CHANGE
0	1	J1-J3, J2-J4
1	0	J1-J2, J3-J4
1	1	FORBIDDEN

<p>Fairview Microwave an INFINIT[®] brand</p>	<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p>
	<p>SCALE: NONE</p> <p>SHEET: 2 OF 2</p>
<p>Website: www.FairviewMicrowave.com</p> <p>Phone: 1.800.715.4396 1.972.649.6678</p>	
<p>DESCRIPTION</p> <p>TRAN, latching, 43GHz, 2.92mm, 12VDC, indicators, TTL, diodes, SCO, solder terminal</p>	
<p>SIZE: A</p> <p>CAGE CODE: 3FKR5</p>	<p>ITEM NO.: FMSW7298</p> <p>REV: A</p>

UNLESS OTHERWISE SPECIFIED, DIMENSIONS AND TOLERANCES ARE IN MILLIMETERS

TOLERANCES:

X = ±.2 (.5) FRACTIONS ±.02 (.5) ANGLES ± 1°

.XX = ±.005 (.13)

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.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITY TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.