

SPDT Failsafe DC to 22 GHz Terminated Electro-Mechanical Relay Switch, TTL, Indicators, 20W, 12V, SMA

FMSW6295 is a Single Pole Double Throw (SPDT) Terminated Electromechanical Relay Switch that operates from DC to 22 GHz and has a rating of 20 Watts input power (CW) in a Break Before Make condition. The output port is terminated in 50 ohms when switched in the isolation (off) state. The design features TTL Logic control Failsafe Actuator with Indicators and Internal Terminations. It is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min at 3 GHz, with +12 Vdc operating voltage. Performance is guaranteed over -35°C to +85°C and the switch assembly is RoHS compliant. The package interface uses solder terminals and SMA Female connectors.

Electrical Specifications

Switch Type	SPDT, Terminated
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	TTL Logic, Indicators
TTL Control	on: 3.5 to 5.5 Volts off: 0 to 0.8 Volts

Description	Min	Typ	Max	Units
Frequency Range	DC		22	GHz
Impedance		50		Ohms
Operating Voltage	10.8	12	13.2	Volts
Actuating Current @ 12 Volts			420	mA
Input Power (CW)			20	Watts
Termination Input Power (CW)			5	Watts
Switching Time			20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC - 3	3 - 8	8 - 12.4	12.4 - 18	18 - 22	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1	1.7:1	
Insertion Loss, Max	0.2	0.3	0.4	0.5	0.6	dB
Isolation, Min	80	70	60	60	55	dB

Mechanical Specifications

Size	
Weight	0.1866 lbs [84.64 g]
Body Material and Plating	Aluminum, Nickel
Package Type	Connectorized
Operating Life	1,000,000 Cycles
Connectors	
RF Connector Type	SMA Female
RF Connector Contact Material & Plating	Beryllium Copper, Gold
RF Connector Body Material & Plating	Passivated Stainless Steel
Control Connector	Solder Pin



Features:

- Single Pole Double Throw Terminated Relay Switch
- DC to 22 GHz Frequency Range
- 1M Cycle Min Operating Life
- Failsafe Actuator
- TTL Logic
- Indicators
- Insertion Loss 0.6 dB max
- Isolation 55 dB min
- 20 Watts Avg Power Max
- Switching Sequence Break Before Make

Applications:

- Test & Measurement
- Communications System
- Instrumentation
- Military Communications

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Environmental Specifications

Temperature

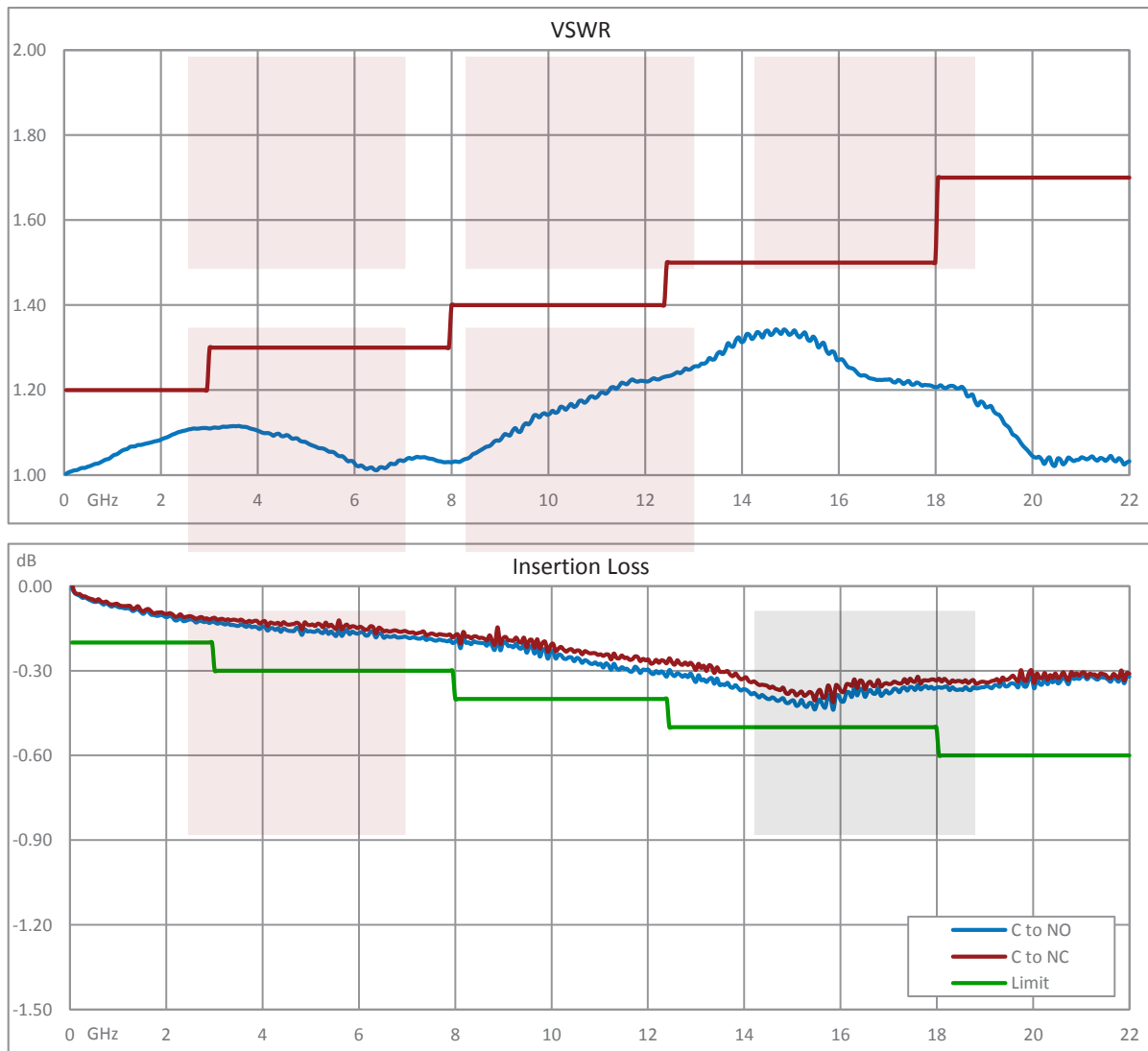
Operating Range -35 to +85 deg C

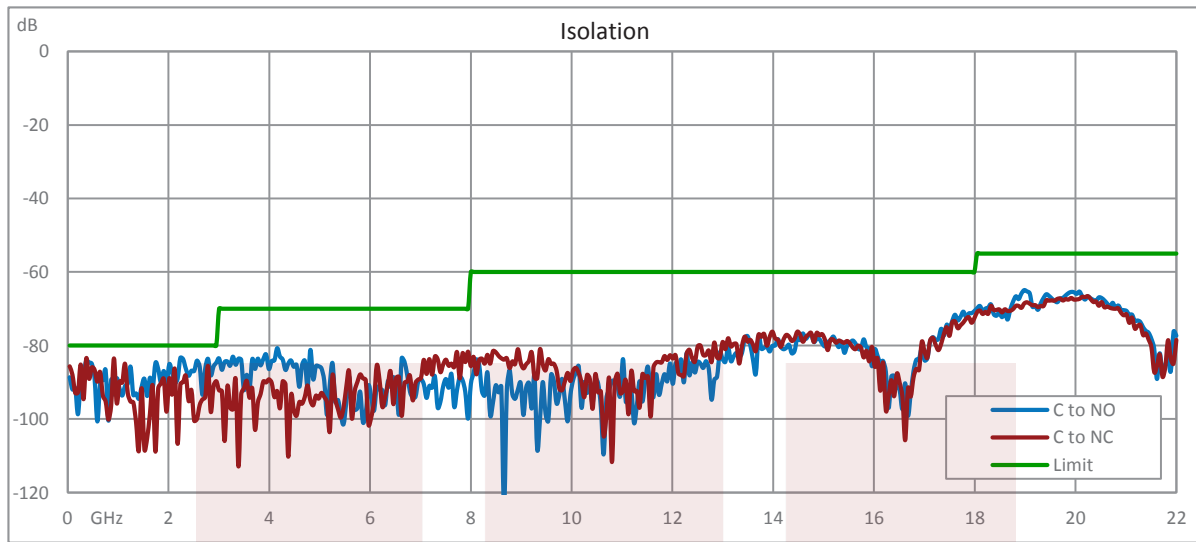
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



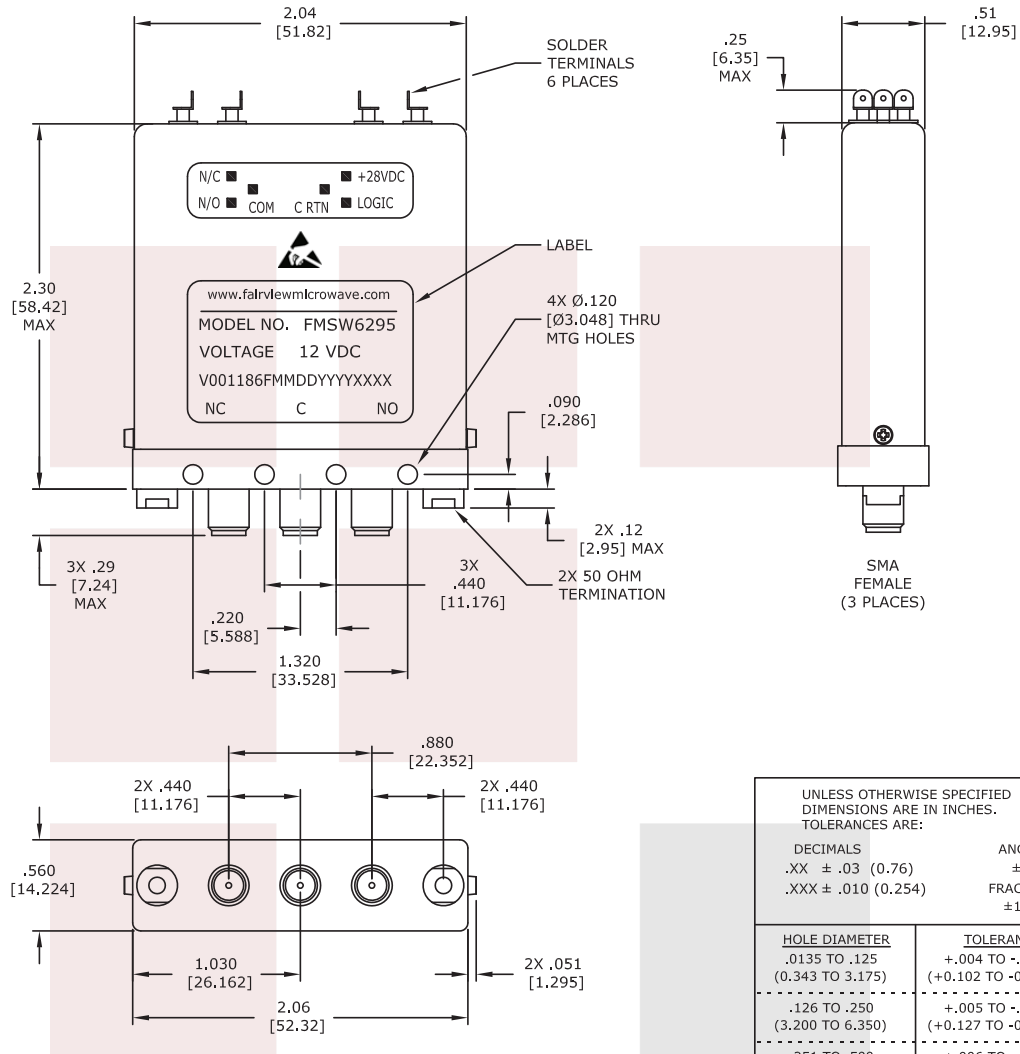


SPDT Failsafe DC to 22 GHz Terminated Electro-Mechanical Relay Switch, TTL, Indicators, 20W, 12V, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SPDT Failsafe DC to 22 GHz Terminated Electro-Mechanical Relay Switch, TTL, Indicators, 20W, 12V, SMA FMSW6295](https://www.fairviewmicrowave.com/spdt-failsafe-electromechanical-relay-switch-ttl-indicators-terminated-fm-sw6295-p.aspx)

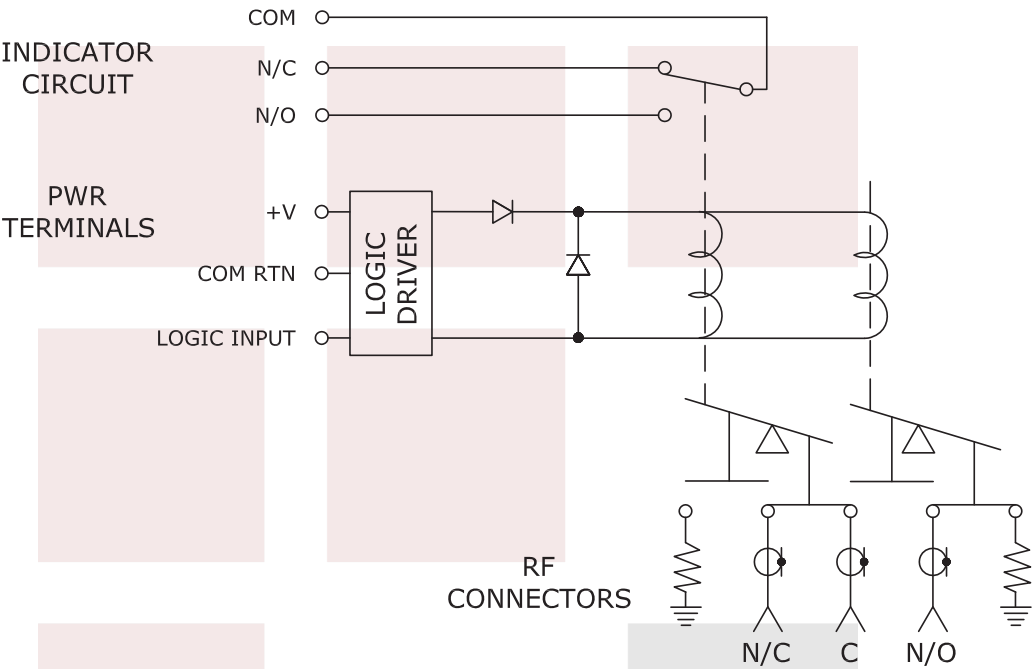
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.



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TITLE		DWG NO		CAGE CODE	
SPDT Fail-safe DC to 22 GHz Terminated Electro-Mechanical Relay Switch, TTL, Indicators, 20W, 12V, SMA		FMSW6295		3FKR5	
CAD FILE	071516	SHEET	SCALE	N/A	SIZE A 2233



SCHEMATIC FAILSAFE IN NORMALLY CLOSED POSITION

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TITLE SPDT Fail-safe DC to 22 GHz Terminated Electro-Mechanical Relay Switch, TTL, Indicators, 20W, 12V, SMA	DWG NO FMSW6295		CAGE CODE 3FKR5		
	CAD FILE 071516	SHEET	SCALE N/A	SIZE A	2233