

**WRD-180 Double Ridge Waveguide Latching Relay Switch SPDT/DPDT, 18 GHz to 40 GHz Frequency Band, 2,000 Watts, UG Cover, 12V, Self Cut Off**

The FMWGS6054 electromechanical relay switch supports double ridge WRD-180 waveguide ports and operates across an ultra-wide frequency range from 18 GHz to 40 GHz. The switch is configured for single pole double throw (SPDT) operation. A shorting plate on port 3 can be removed for optional double pole double throw (DPDT) operation. This innovative design features a latching Self Cut Off actuator and patented motor drive with arc suppression. The motor drive housing supports a viewable position indicator window and a cover that can be removed for manual override access. Impressive performance includes 0.40 dB max insertion loss, 50 dB min Isolation, 1.30:1 max VSWR, and an operating life of 250K cycles minimum. The design operates across a temperature range of -40°C to +85°C, requires +12Vdc nominal bias voltage, and has an input power rating of up to 2 KW CW maximum. The double ridge waveguide ports have standard UG Cover Flanges. The rugged package design is fully weatherized for up to 100% humidity exposure and supports a quick connect circular 6 pin MIL-SPEC DC bias connector with mate included.



**Features:**

- 18 to 40 GHz SPDT Double Ridge Waveguide Switch
- Optional DPDT Configuration
- WRD-180 Double Ridge Waveguide
- Insertion Loss: 0.40 dB Max
- Isolation: 50 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 2 KW CW max
- Latching Self Cut Off Actuator
- Position Indicator and Manual Override Access
- Fully Weatherized Package
- Quick Connect Circular DC Connector with Mate
- -40°C to +85°C Operating Temperature

**Electrical Specifications**

Switch Type	SPDT/DPDT		
Actuator Type	Latching		
Actuator Options	Self Cut Off, Set Indicators, Manual Override, Viewing Window		

Description	Min	Typ	Max	Units
Frequency Range	18		40	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.3:1	
Insertion Loss			0.4	dB
Isolation	50			dB
Switching Time		80		ms
Input Power (CW)			2	kWatts

**Applications:**

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Space Systems
- Test Instrumentation
- Research and Development

**Mechanical Specifications**

**Size**

Operating Life	250,000 Cycles
Operating Pressure	30 psig

**Configuration**

Waveguide Size	WRD-180
Flange Type	UG Cover
Body Material and Plating	Aluminum, Gold
Body Plating Specification	MIL-DTL-5541

**Environmental Specifications**

**Temperature**

Operating Range	-40 to +85 deg C
Storage Range	-55 to +100 deg C

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Humidity 0 to 100%, Fully Weatherized

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

**Plotted and Other Data**

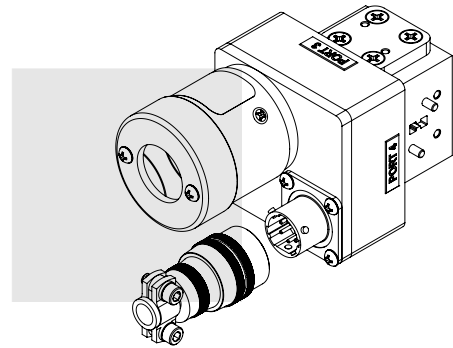
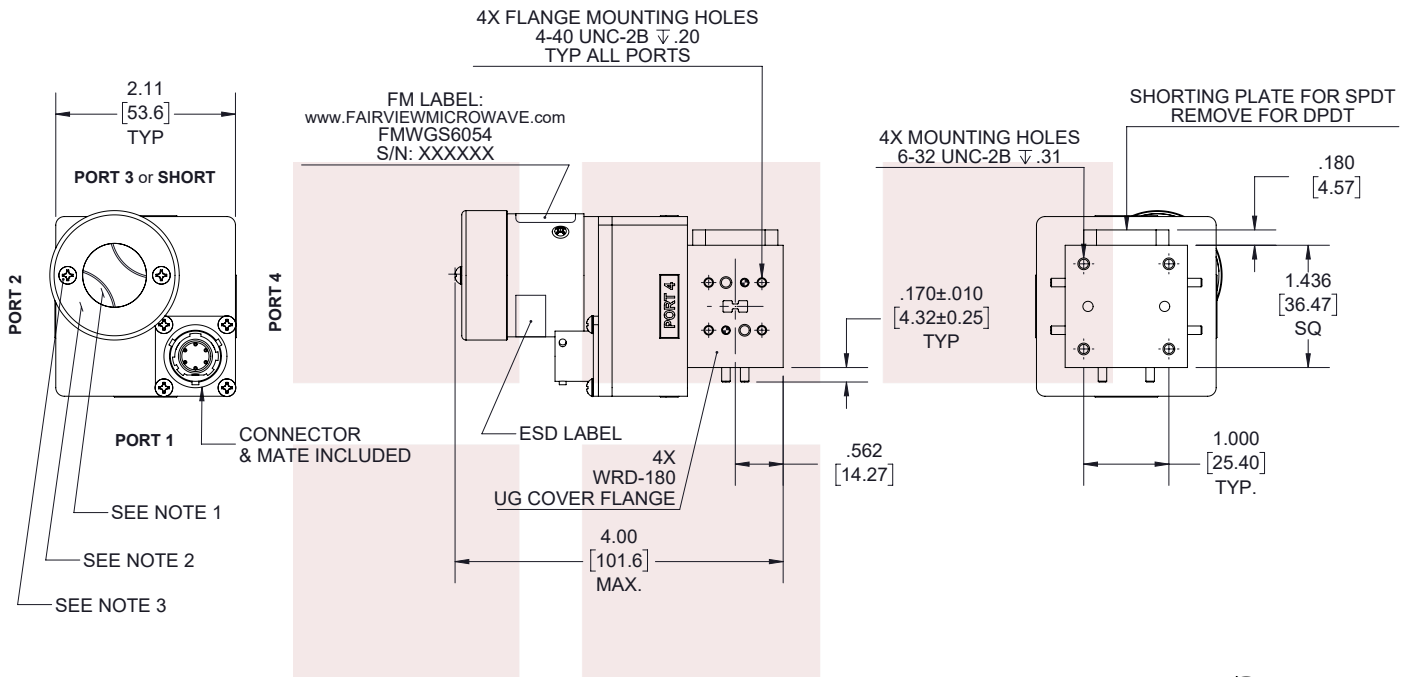
Notes:

WRD-180 Double Ridge Waveguide Latching Relay Switch SPDT/DPDT, 18 GHz to 40 GHz Frequency Band, 2,000 Watts, UG Cover, 12V, Self Cut Off 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: [WRD-180 Double Ridge Waveguide Latching Relay Switch SPDT/DPDT, 18 GHz to 40 GHz Frequency Band, 2,000 Watts, UG Cover, 12V, Self Cut Off FMWGS6054](#)

URL: <https://www.fairviewmicrowave.com/wrd-180-waveguide-electromechanical-relay-latching-switch-spdt-dpdt-40-ghz-fmwgs6054-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.



**STANDARD TOLERANCES**

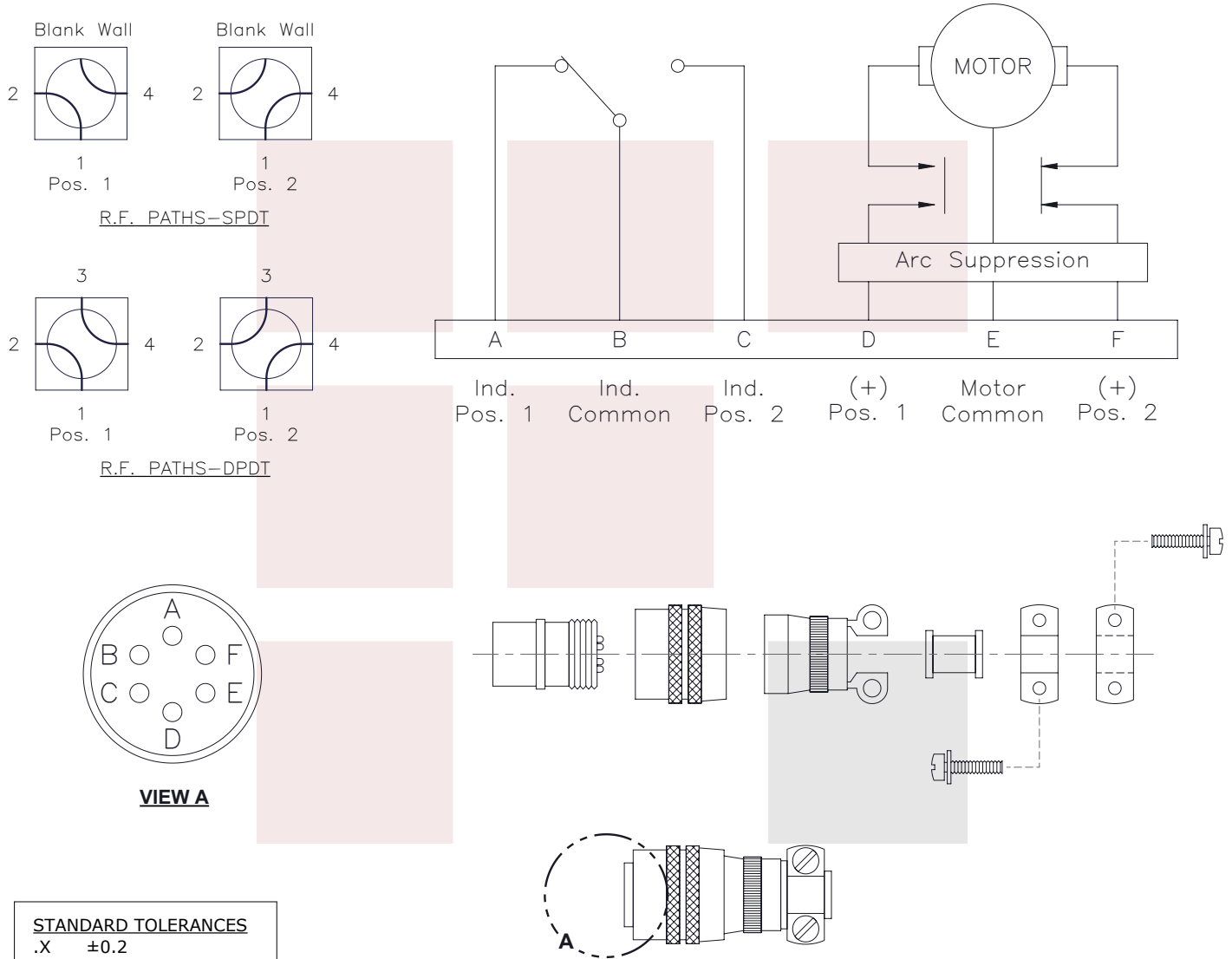
- .X  $\pm$ 0.2
- .XX  $\pm$ 0.01
- .XXX  $\pm$ 0.005

**NOTES:**

1. MANUAL OVERRIDE & POSITION INDICATOR.
2. WEATHERIZED COVER WITH CLEAR VIEWING WINDOW.
3. FOR ACCESS TO MANUAL OVERRIDE LOOSEN (2) CAPTIVE SCREWS.

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<p><b>Fairview Microwave</b> an INFINIT<sup>®</sup> brand</p>		<p>NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].</p>			
<p>TITLE</p> <p>WRD-180 Double Ridge Waveguide Latching Relay Switch SPDT/DPDT, 18 GHz to 40 GHz Frequency Band, 2,000 Watts, UG Cover, 12V, Self Cut Off</p>		<p>DWG NO</p> <p>FMWGS6054</p>		<p>CAGE CODE</p> <p>3FKR5</p>	
CAD FILE	07/29/19	SHEET	1 OF 2	SCALE	N/A
				SIZE	A
					7361



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

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