

**WR-42 Waveguide Electromechanical Relay
Latching Switch SPDT 26.5 GHz Max Frequency,
800 Watts K Band UG-595/U Square Cover Flange**

The FMWGS6004 electromechanical WR-42 waveguide switch operates across a wide frequency range from 18 GHz to 26.5 GHz and 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 0.013 dB typ insertion loss, 90 dB typ Isolation, 1.07:1 typ VSWR, and an operating life of 250K cycles minimum. The design operates across a temperature range of -40°C to +85°C, requires +28Vdc nominal bias voltage, and has an input power rating of up to 0.8 KW CW maximum. The waveguide ports have Grooved UG-595/U Square Cover Flanges (O-Rings included) for pressurized operation. 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.

Electrical Specifications

Switch Type	SPDT
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	Self Cut Off, Window Indicator, Manual Override
Polarity	Negative Common

Description	Min	Typ	Max	Units
Frequency Range	18		26.5	GHz
Impedance		50		Ohms
Operating Voltage	21	28	32	Volts
Actuating Current @ 28 Volts		190	1,000	mA
VSWR		1.07:1	1.1:1	
Insertion Loss		0.013	0.15	dB
Isolation	60	90		dB
Switching Time		54	80	ms
Input Power (CW)			800	Watts
Input Power, Peak 10% Duty Cycle			25.3	KWatts

Mechanical Specifications

Size	
Length	4.1 in [104.14 mm]
Width/Diameter	2.11 in [53.59 mm]
Height	2.11 in [53.59 mm]
Weight	1.0085 lbs [457.45 g]
Operating Life (Cold Switching)	250,000 Cycles
Operating Pressure	30 psig



Features:

- 18 to 26.5 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-42 Waveguide with O-Rings
- Insertion Loss: 0.013 dB typ
- Isolation: 90 dB typ
- +28 Vdc Nominal Voltage
- Input Power Rating up to 0.8 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

Applications:

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

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Configuration

Waveguide Size	WR-42
Flange Type	Square Cover
Flange Designation	UG-595/U
Body Material and Plating	Aluminum, Chem Film
Body Plating Specification	MIL-DTL-5541 Type II Class 3

Mechanical Specification Notes:
 Production Burn-In IAW MIL-DTL-55041 1500 cycles

Environmental Specifications

Temperature

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

Ingress Protection (IP) Rating	IP67
Humidity	0-100%, Fully Weatherized
ESD Sensitivity	ESD Sensitive Material, Transport material in Approved ESD bags. Handle in approved ESD Workstation.

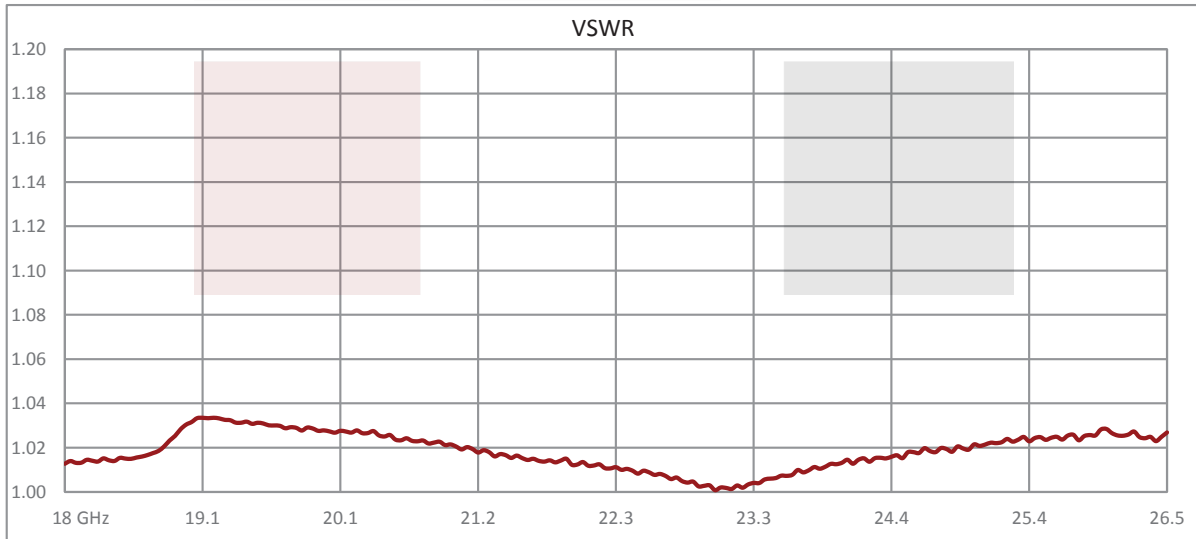


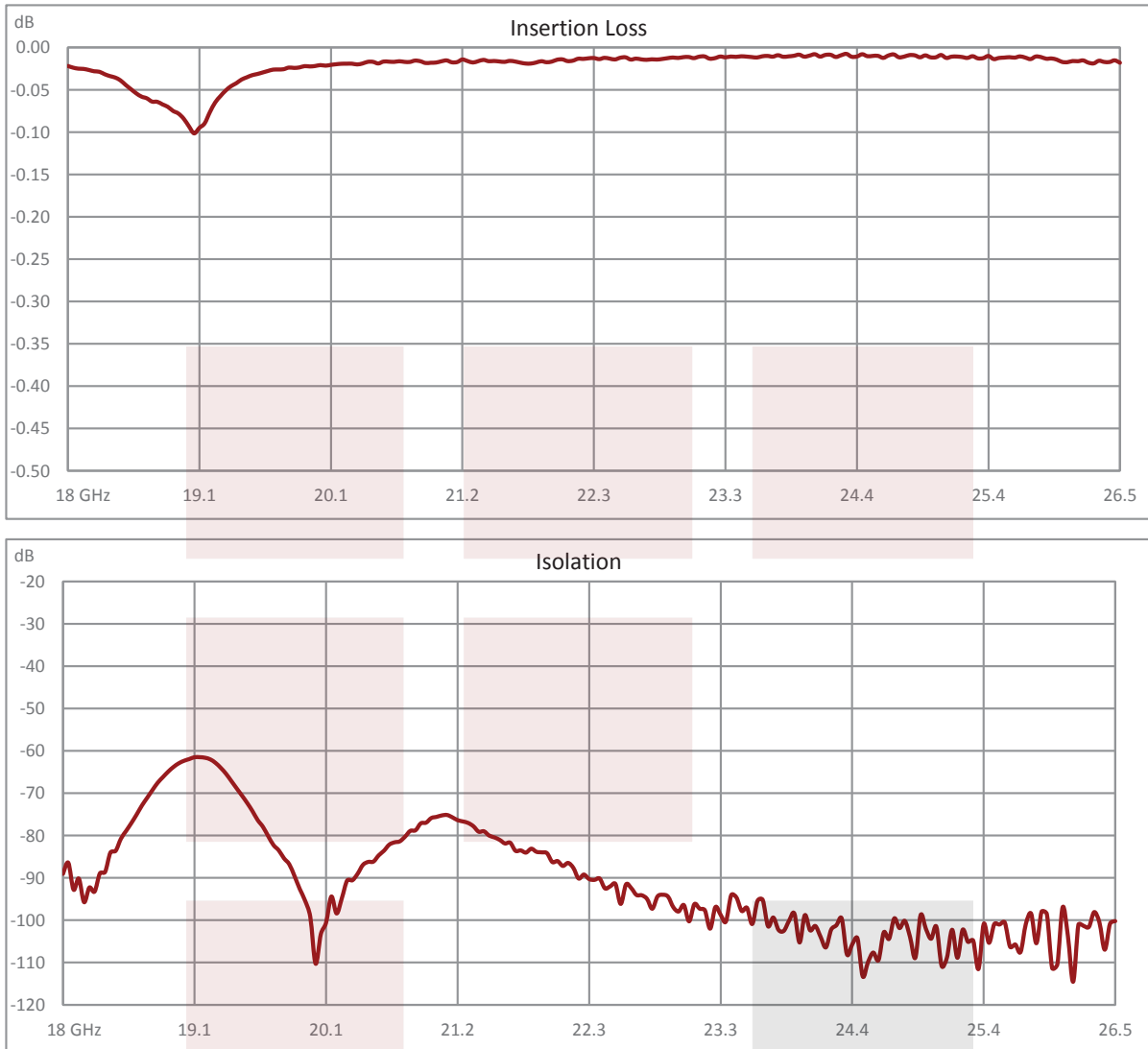
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



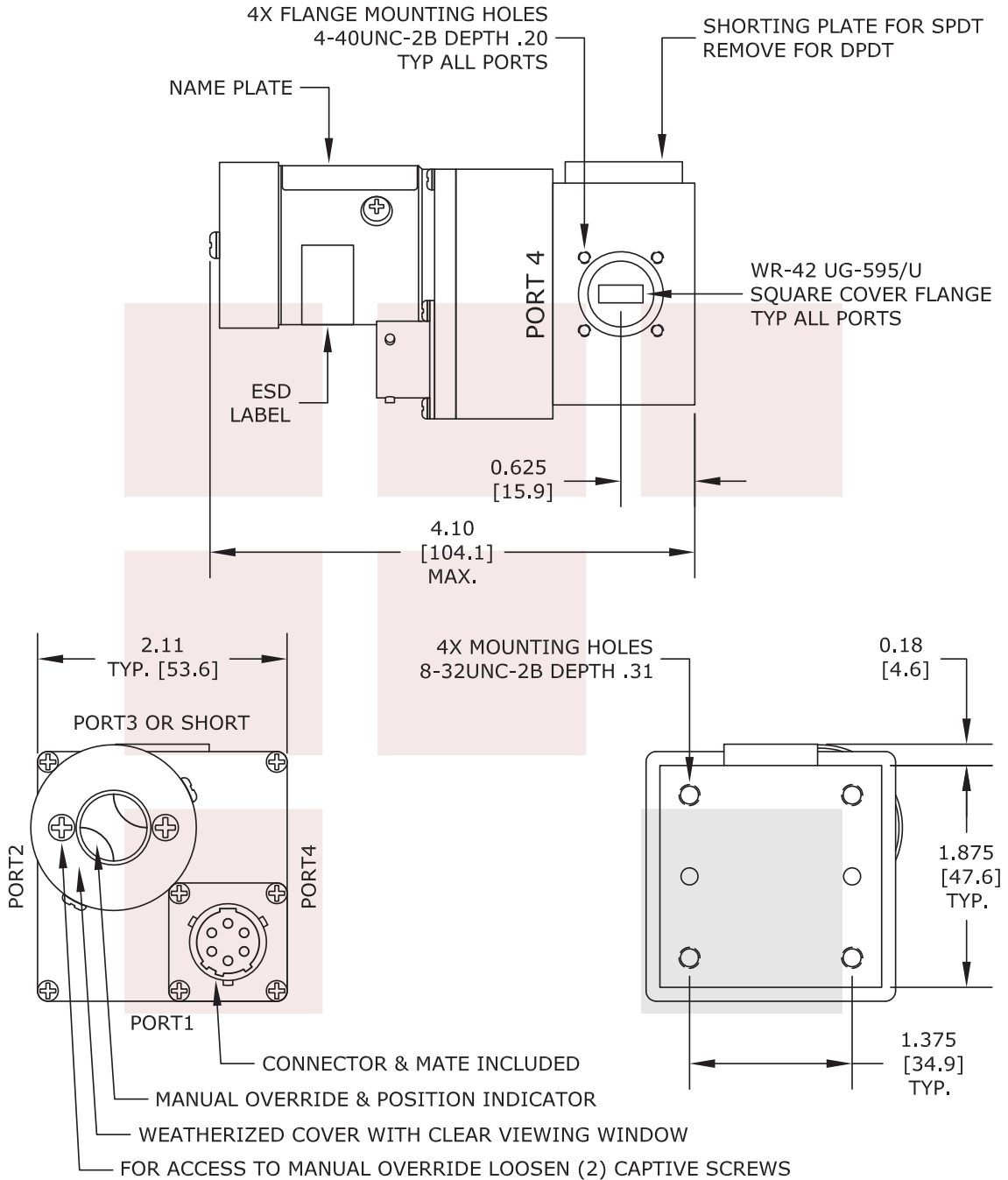


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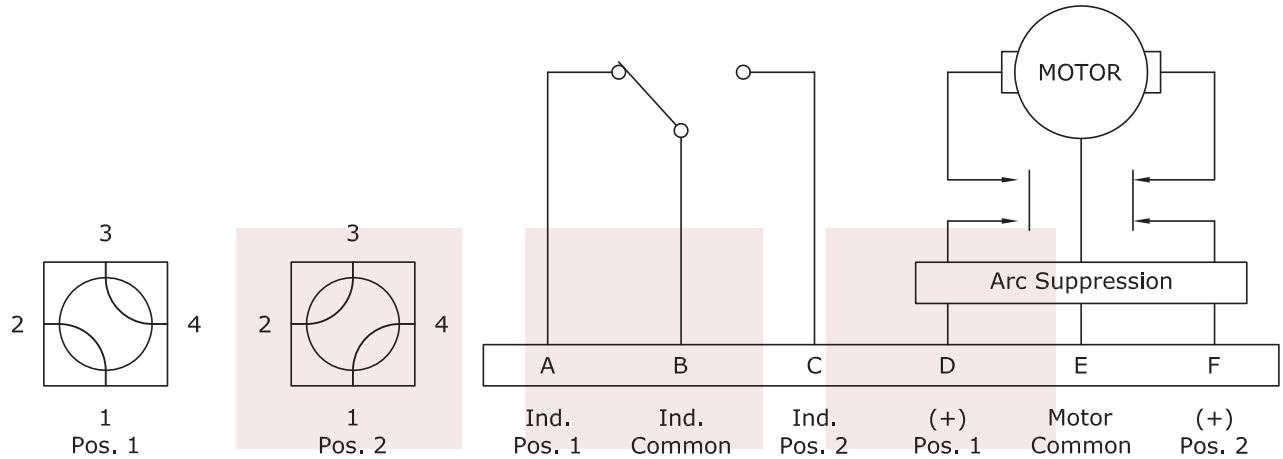
For additional information on this product, please click the following link: [WR-42 Waveguide Electromechanical Relay Latching Switch SPDT 26.5 GHz Max Frequency, 800 Watts K Band UG-595/U Square Cover Flange FMWGS6004](https://www.fairviewmicrowave.com/wr-42-waveguide-electromechanical-relay-latching-switch-spdt-26.5-ghz-fmwgs6004)

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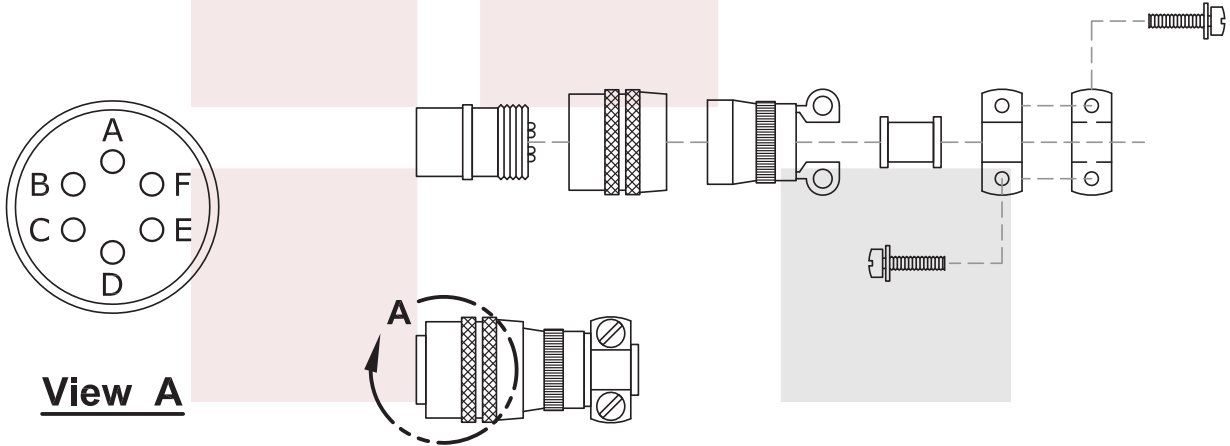
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TITLE WR-42 Waveguide Electromechanical Relay Latching Switch SPDT 26.5 GHz Max Frequency, 800 Watts K Band UG-595/U Square Cover Flange		DWG NO FMWGS6004		CAGE CODE 3FKR5	
CAD FILE	012717	SHEET	SCALE	N/A	SIZE A 2233



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