



**WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 12V, Self Cut Off**

**Waveguide Electromechanical Relay Switches Technical**

**PEWGS6050**

**Features**

- 7.5 to 18 GHz SPDT Double Ridge Waveguide Switch
- Optional DPDT Configuration
- WRD-750 Double Ridge Waveguide
- Insertion Loss: 0.30 dB Max
- Isolation: 60 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 8.5 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

**Description**

The PEWGS6050 electromechanical relay switch supports double ridge WRD-750 waveguide ports and operates across an ultra-wide frequency range from 7.5 GHz to 18 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 0.30 dB max insertion loss, 60 dB min Isolation, 1.15:1 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 8.5 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.

**Electrical Specifications**

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	7.5		18	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.15:1	
Insertion Loss			0.3	dB
Isolation	60			dB
Switching Time		100		ms
Input Power (CW)			8.5	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 12V, Self Cut Off PEWGS6050](#)



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**Mechanical Specifications**  
**Size**

Operating Life 250,000 Cycles  
Operating Pressure 30 psig

**Configuration**

Waveguide Size WRD-750  
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

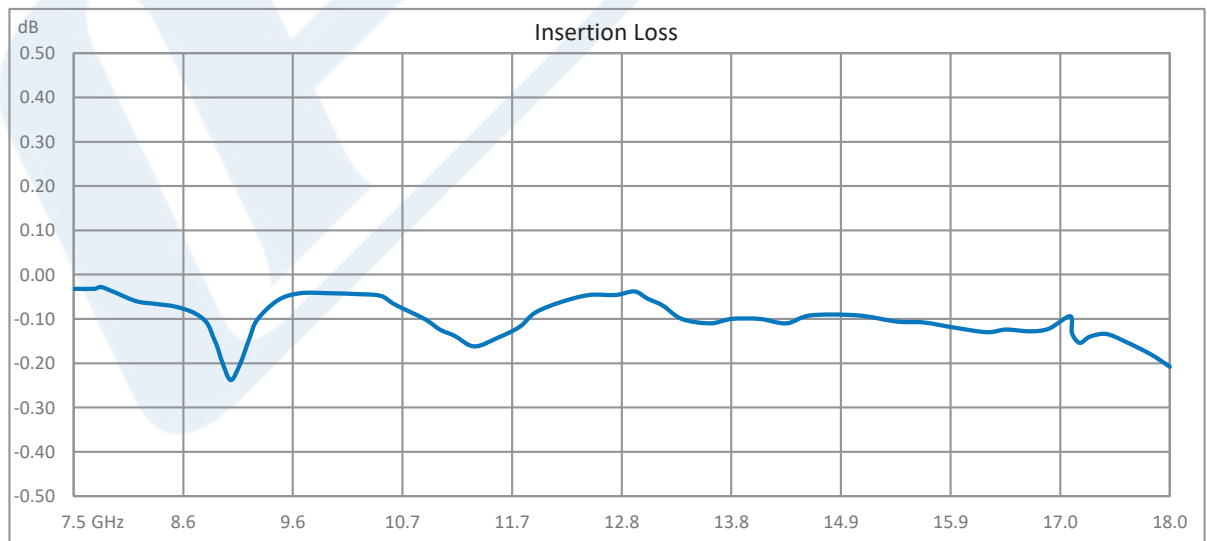
Humidity 0 to 100%, Fully Weatherized

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



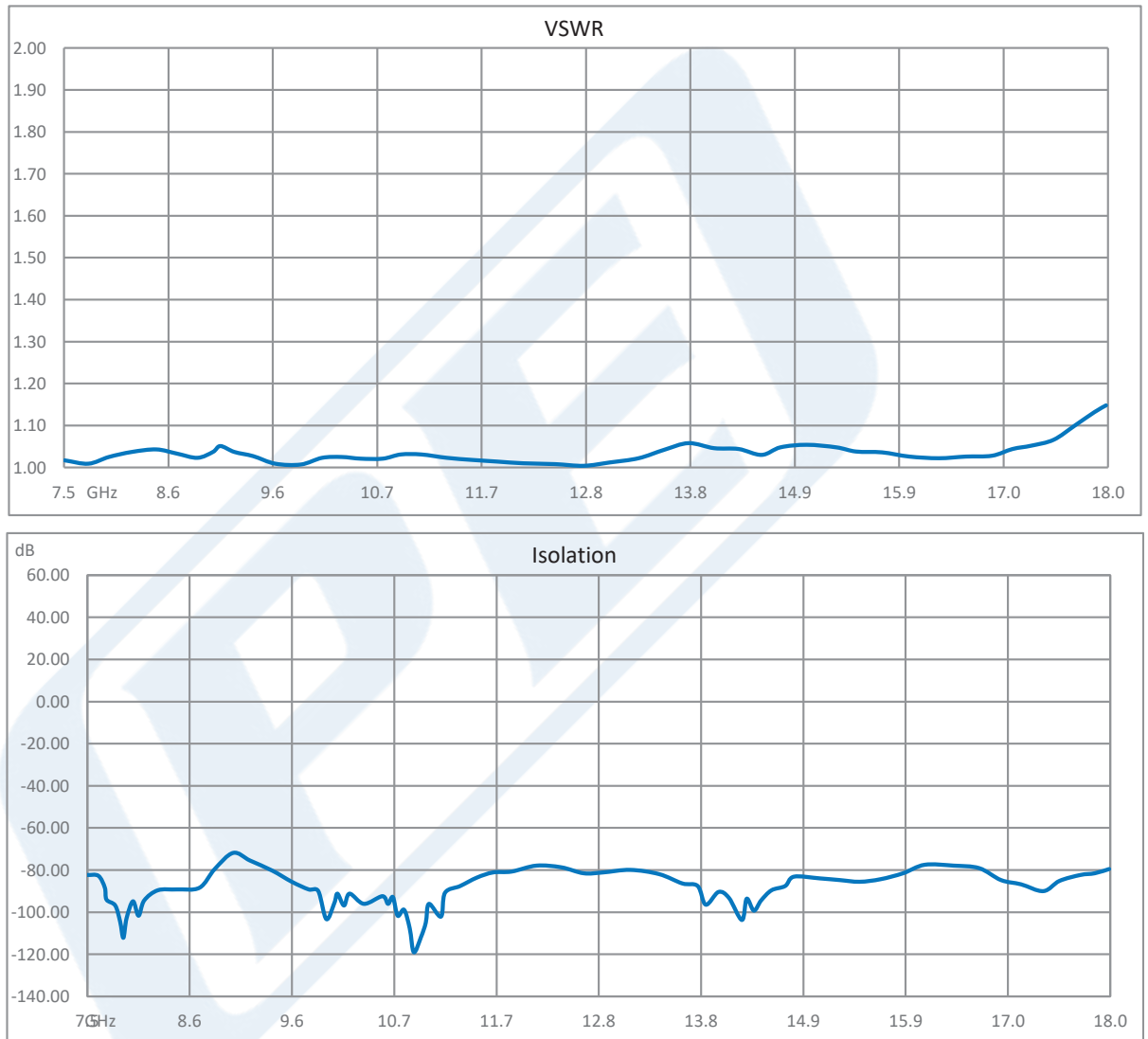
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PEWGS6050

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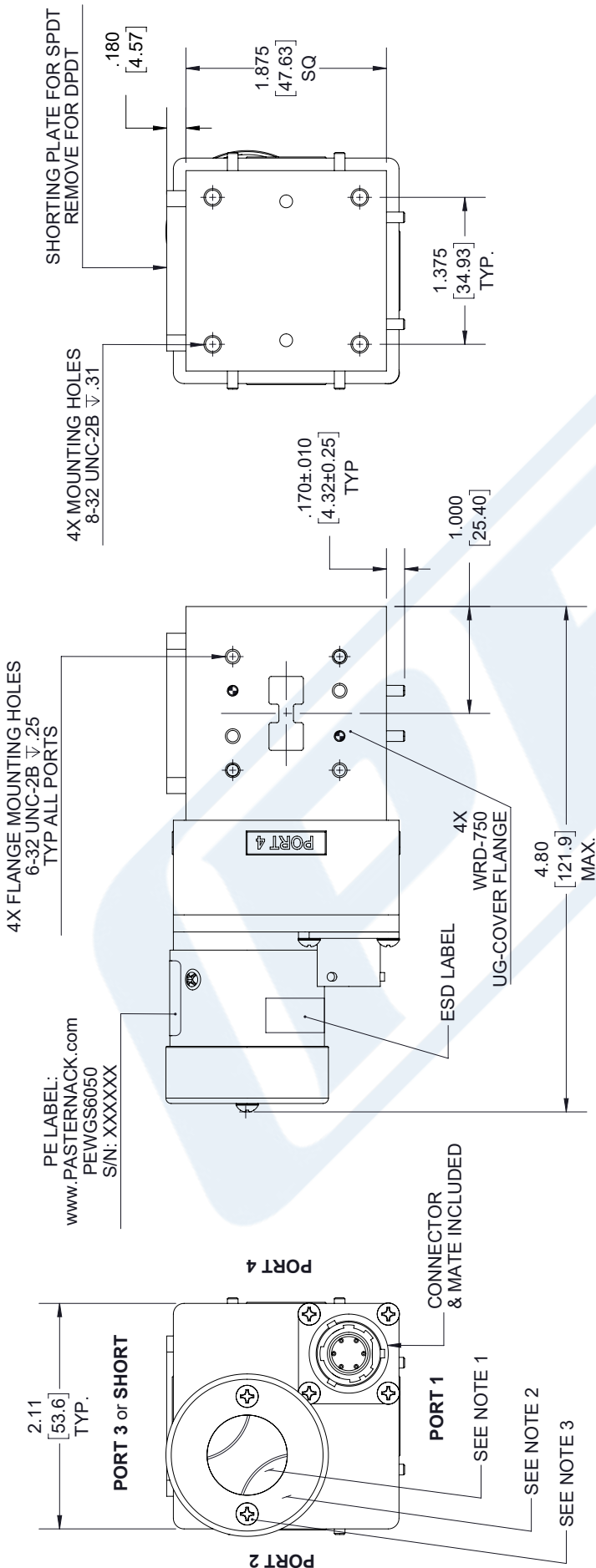
URL: <https://www.pasternack.com/wrd-750-waveguide-electromechanical-relay-spd-dpdt-latching-switch-18-ghz-pewgs6050-p.aspx>

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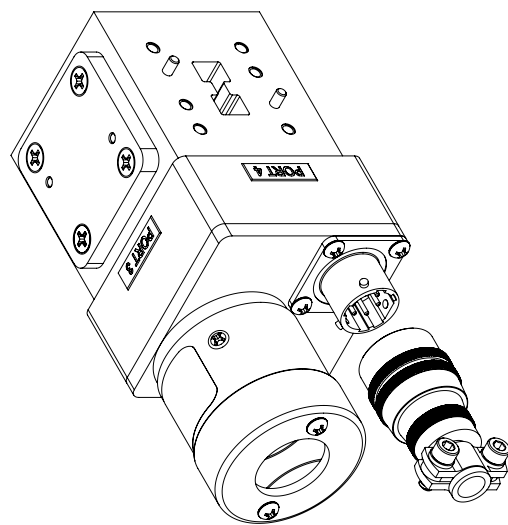
# PEWGS6050 CAD Drawing

WRD-750 Double Ridge Waveguide SPDT/DPDT Latching Relay Switch, 7.5 GHz to 18 GHz Frequency Band, 8,500 Watts, UG Cover, 12V, Self Cut Off

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	07/16/19	T. GALLA



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



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
X $\pm$ .2	[5.08]
.XX $\pm$ .01	[.25]
.XXX $\pm$ .005	[.13]
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	
THIRD-ANGLE PROJECTION	

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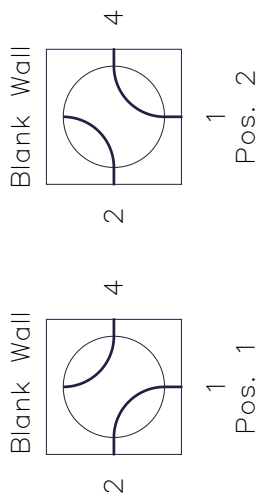
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SCALE N/A

SIZE A  
CAGE 53919  
DRAWN BY K.DANG  
PART NUMBER PEWGS6050  
REV A

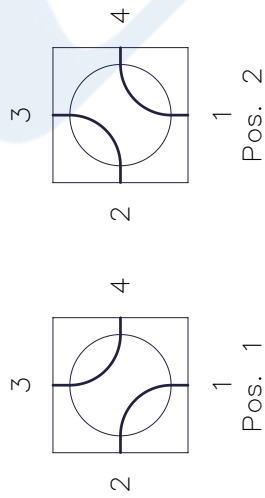
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# PEWGS6050 CAD Drawing

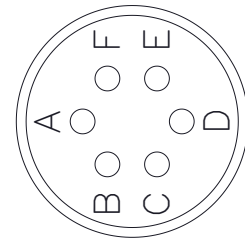
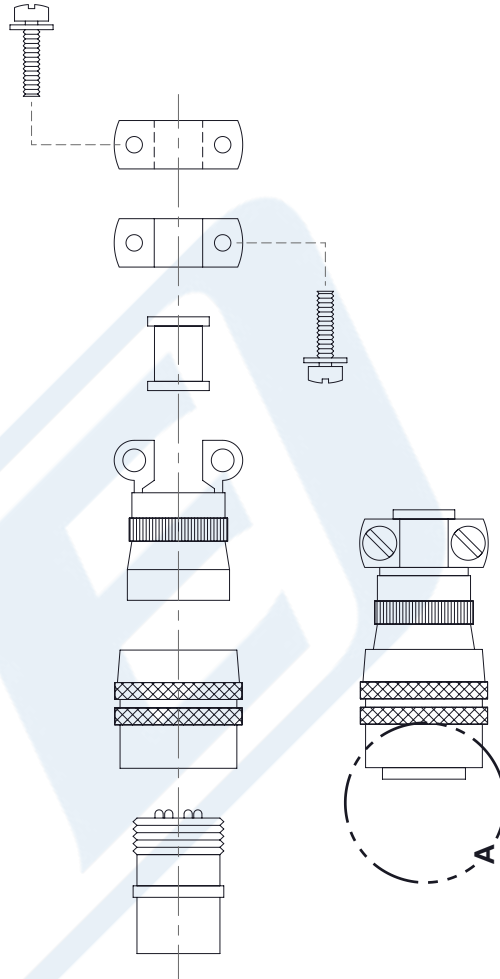
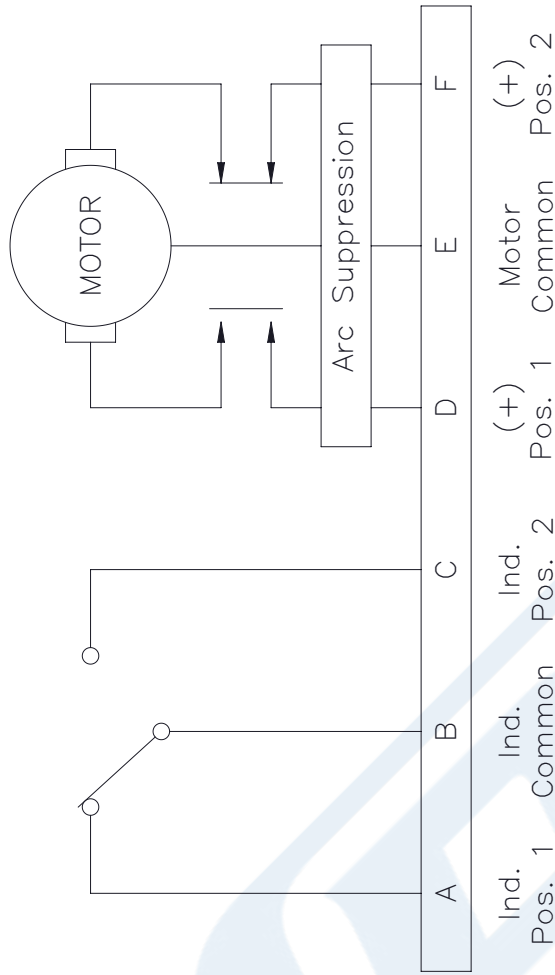
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R.F. PATHS--SRDI



R.F. PATHS--DPDI



VIEW A

<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <table border="0"> <tr> <td>X±.2</td> <td>[5.08]</td> <td>FRACTIONS</td> </tr> <tr> <td>.XX±.01</td> <td>[.25]</td> <td>±1/32</td> </tr> <tr> <td>.XXX±.005</td> <td>[.13]</td> <td>ANGLES ± 1°</td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> <p>THIRD-ANGLE PROJECTION</p>	X±.2	[5.08]	FRACTIONS	.XX±.01	[.25]	±1/32	.XXX±.005	[.13]	ANGLES ± 1°	<p><b>PE PASTERNAK</b> an INFINITO brand</p> <p>Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1,949,261,1920   1,866,727,8376 Fax: 1,949,261,7451 www.pasternack.com   e-mail: sales@pasternack.com</p>	<p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.</p>
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<p>SIZE: A</p> <p>CAGE: 53919</p> <p>DRAWN BY: K.DANG</p> <p>PART NUMBER: PEWGS6050</p>	<p>SHEET: 2 OF 2</p> <p>SCALE: N/A</p>										

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