



WR-34 Waveguide Electromechanical Relay SPDT/  
 DPDT Latching Switch, Ka Band 33 GHz Max.  
 Freq., 620 Watts, UG Cover, 12V, Self Cut Off

## Waveguide Electromechanical Relay Switches Technical

PEWGS6042

### Features

- 22 to 33 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-34 Waveguide
- Insertion Loss: 0.15 dB Max
- Isolation: 60 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 0.62 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 PEWGS6042 electromechanical WR-34 waveguide switch operates across a wide frequency range from 22 GHz to 33 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 0.15 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 0.62 KW CW maximum. The waveguide ports have standard UG Cover with Custom O-Ring Groove 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	22		33	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.15:1	
Insertion Loss			0.15	dB
Isolation	60			dB
Switching Time		80		ms
Input Power (CW)			620	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-34 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, Ka Band 33 GHz Max. Freq., 620 Watts, UG Cover, 12V, Self Cut Off PEWGS6042](#)



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**Mechanical Specifications**

**Size**

Operating Life 250,000 Cycles  
Operating Pressure 30 psig

**Configuration**

Waveguide Size WR-34  
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

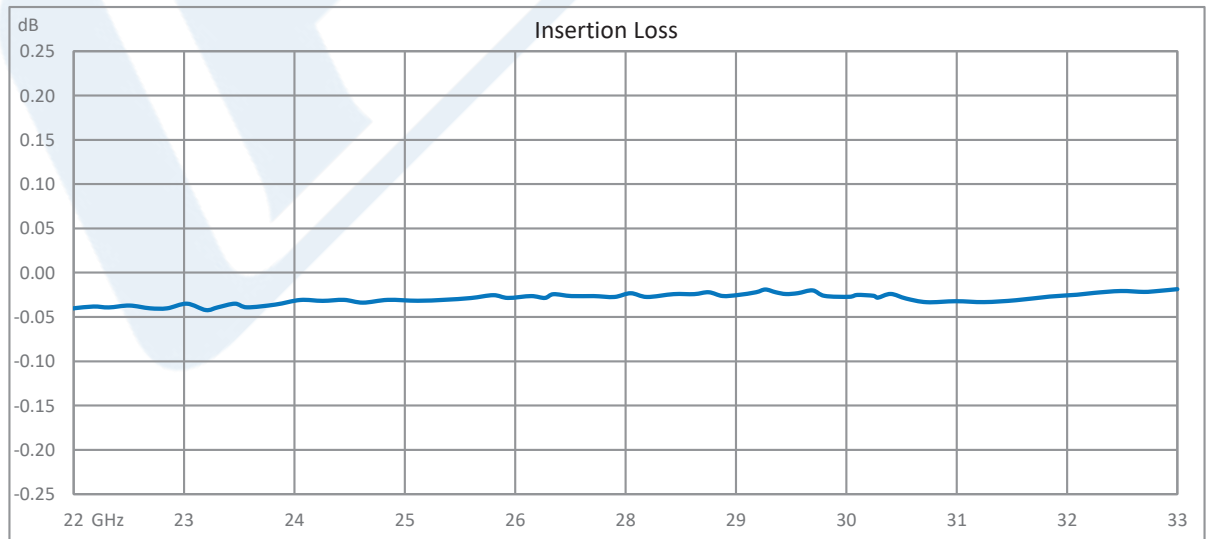
Humidity 0 to 100%, Fully Weatherized

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



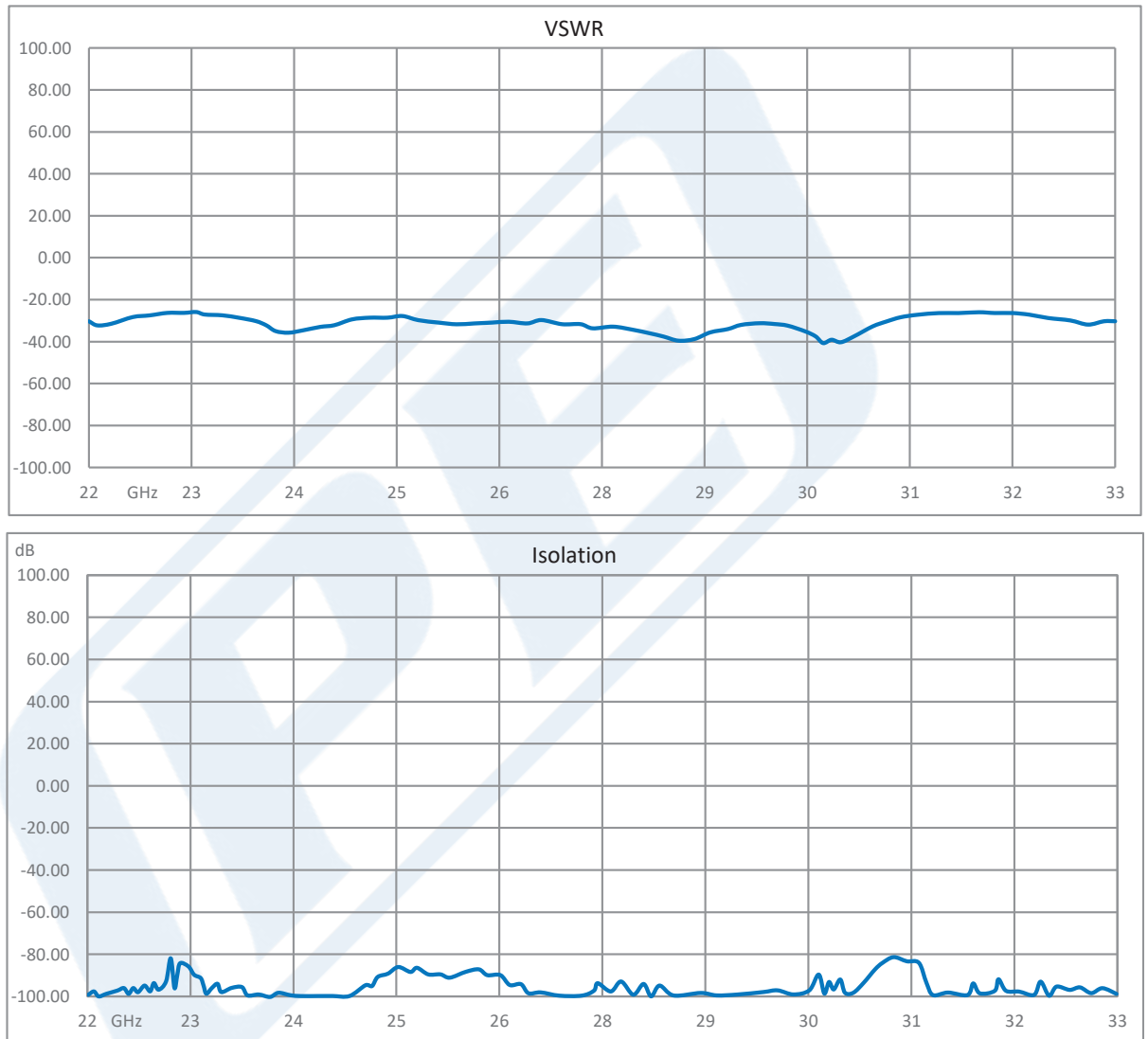
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WR-34 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, Ka Band 33 GHz Max. Freq., 620 Watts, UG Cover, 12V, Self Cut Off from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/wr-34-waveguide-electromechanical-relay-spd-dpdt-latching-switch-33-ghz-pewgs6042-p.aspx>

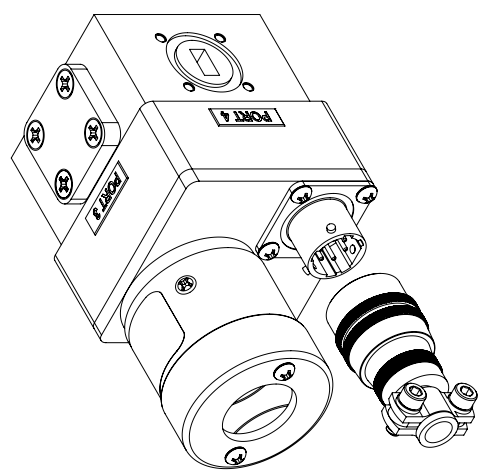
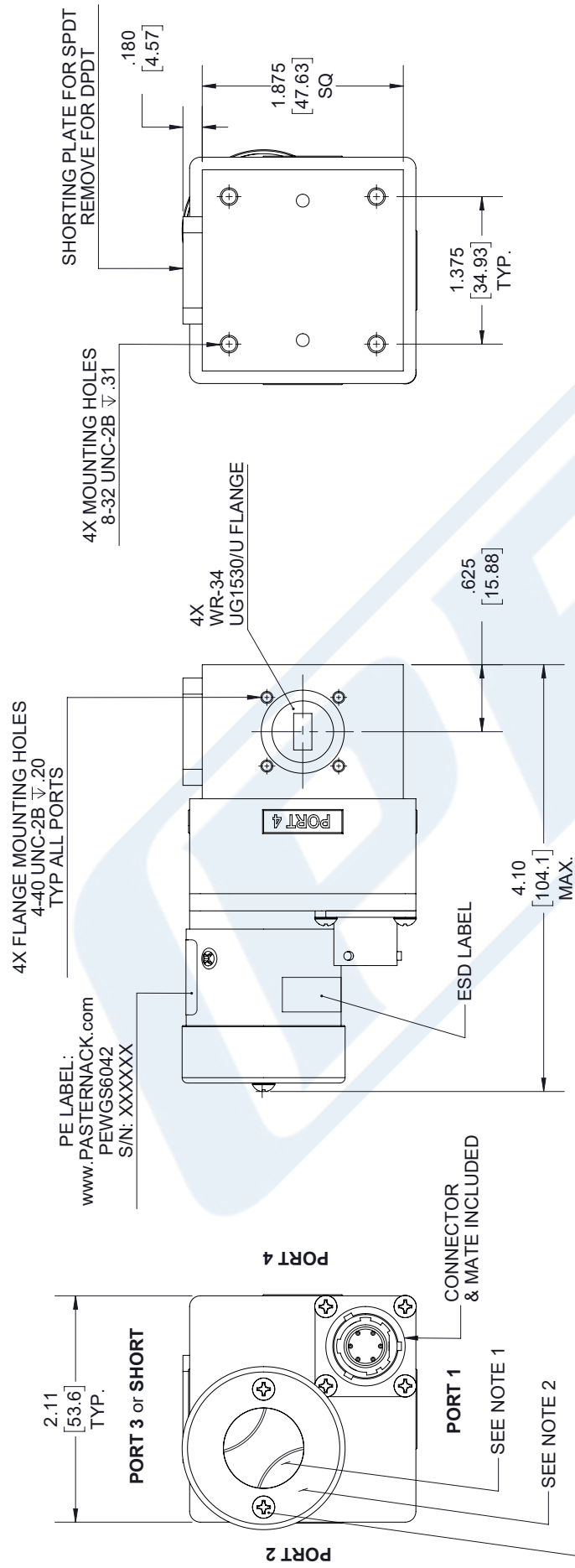
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# PEWGS6042 CAD Drawing

WR-34 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch,  
Ka Band 33 GHz Max. Freq., 620 Watts, UG Cover, 12V, Self Cut Off

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

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

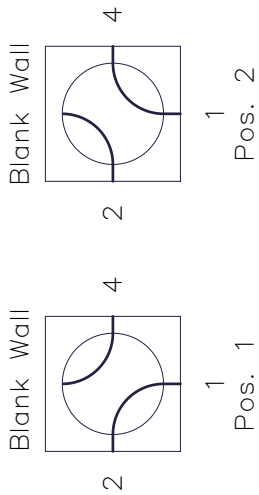


<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <table border="0"> <tr> <td>X<math>\pm</math></td> <td>2</td> <td>[5.08]</td> <td>FRACTIONS</td> </tr> <tr> <td>XX<math>\pm</math></td> <td>.01</td> <td>[.25]</td> <td><math>\pm</math>.132</td> </tr> <tr> <td>.XXX<math>\pm</math></td> <td>.005</td> <td>[.13]</td> <td>ANGLES <math>\pm</math> 1°</td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p> <p>THIRD-ANGLE PROJECTION</p>	X $\pm$	2	[5.08]	FRACTIONS	XX $\pm$	.01	[.25]	$\pm$ .132	.XXX $\pm$	.005	[.13]	ANGLES $\pm$ 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>
	X $\pm$	2	[5.08]	FRACTIONS										
XX $\pm$	.01	[.25]	$\pm$ .132											
.XXX $\pm$	.005	[.13]	ANGLES $\pm$ 1°											
<p>SIZE A</p> <p>CAGE 53919</p> <p>DRAWN BY K.DANG</p> <p>PART NUMBER PEWGS6042</p>	<p>SHEET 1 OF 2</p> <p>SCALE N/A</p>													

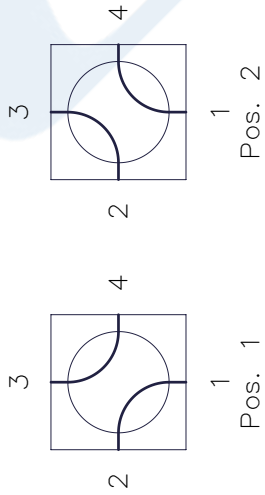
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# PEWGS6042 CAD Drawing

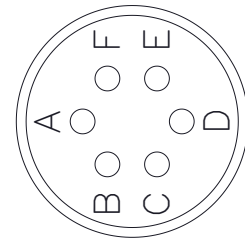
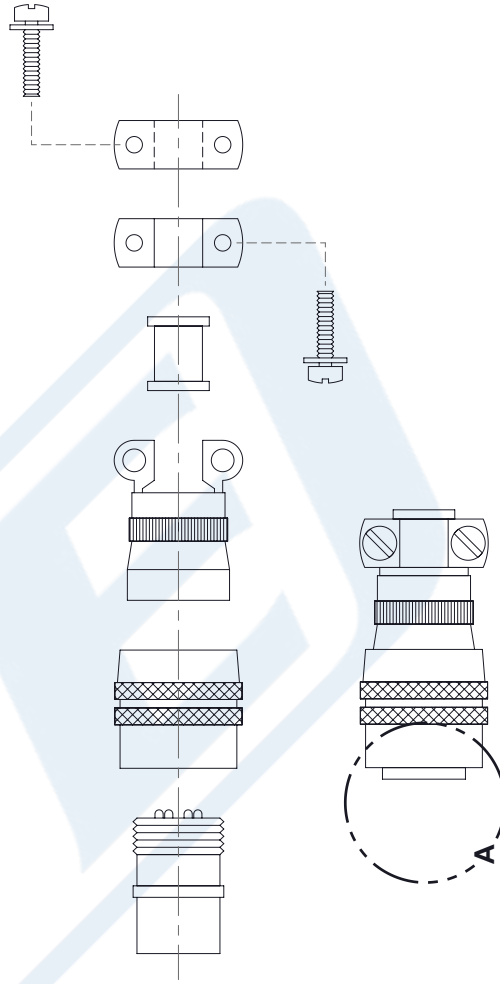
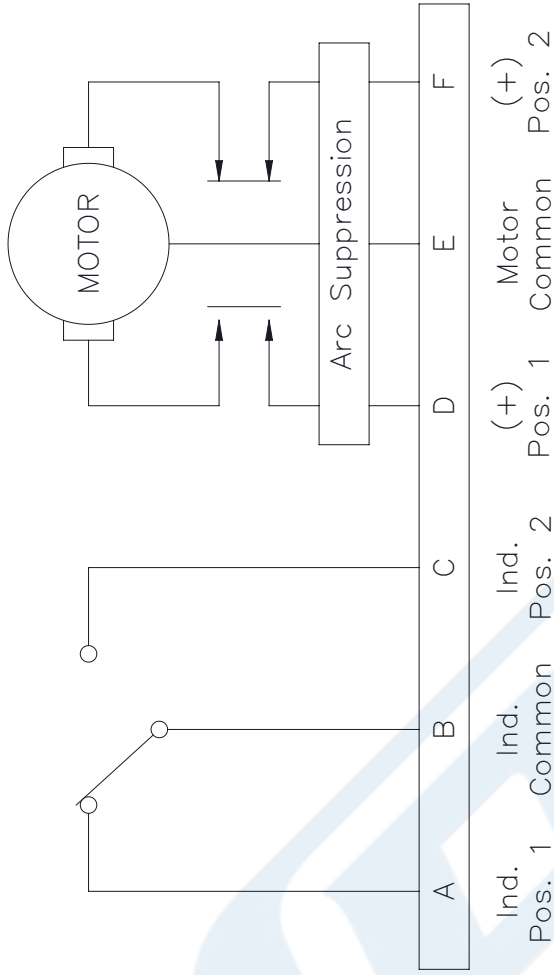
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R.F. PATHS--SRDI



R.F. PATHS--DPDI



VIEW A

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LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:

X±.2	(5.08)	FRACTIONS
.XX±.01	(.25)	±.132
.XXX±.005	(.13)	ANGLES ± 1°

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THIRD-ANGLE PROJECTION

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SHEET	2	OF	2
SCALE	N/A		
SIZE	CAGE	DRAWN BY	PART NUMBER
A	53919	K.DANG	PEWGS6042
REV	A		

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