



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

Waveguide Electromechanical Relay Switches Technical

PEWGS6043

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 TTL Logic 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 PEWGS6043 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 TTL Logic controlled 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 10 pin MIL-SPEC DC bias connector with mate included.

Electrical Specifications

Switch Type	SPDT/DPDT
Actuator Type	Latching
Actuator Options	TTL Logic, 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, TTL, Self Cut Off PEWGS6043](#)



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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

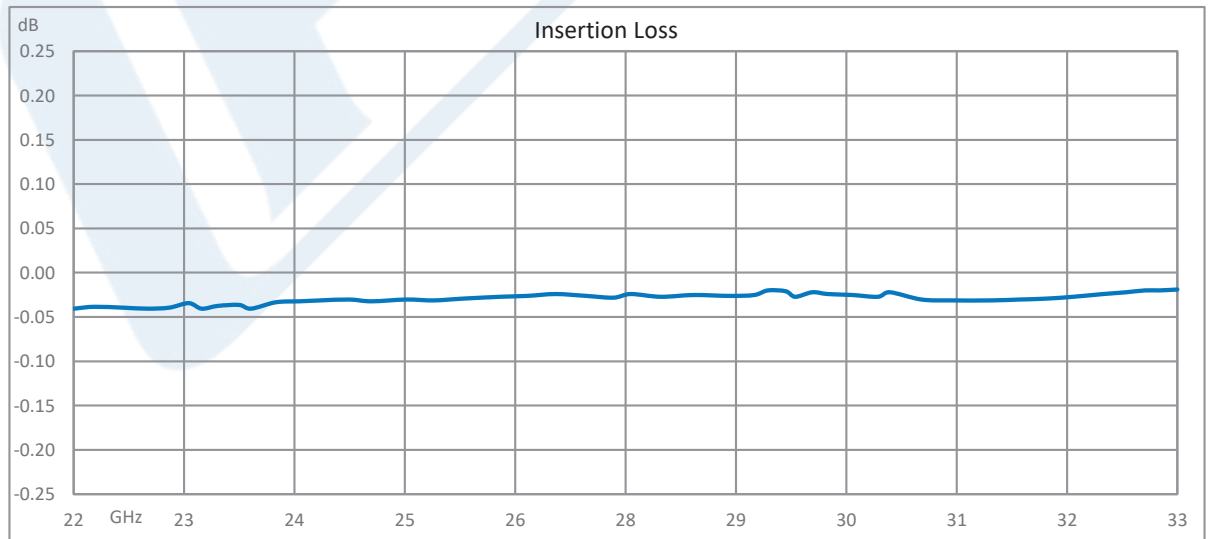
Humidity 0 to 100%, Fully Weatherized

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

Plotted and Other Data

Notes:

Typical Performance Data



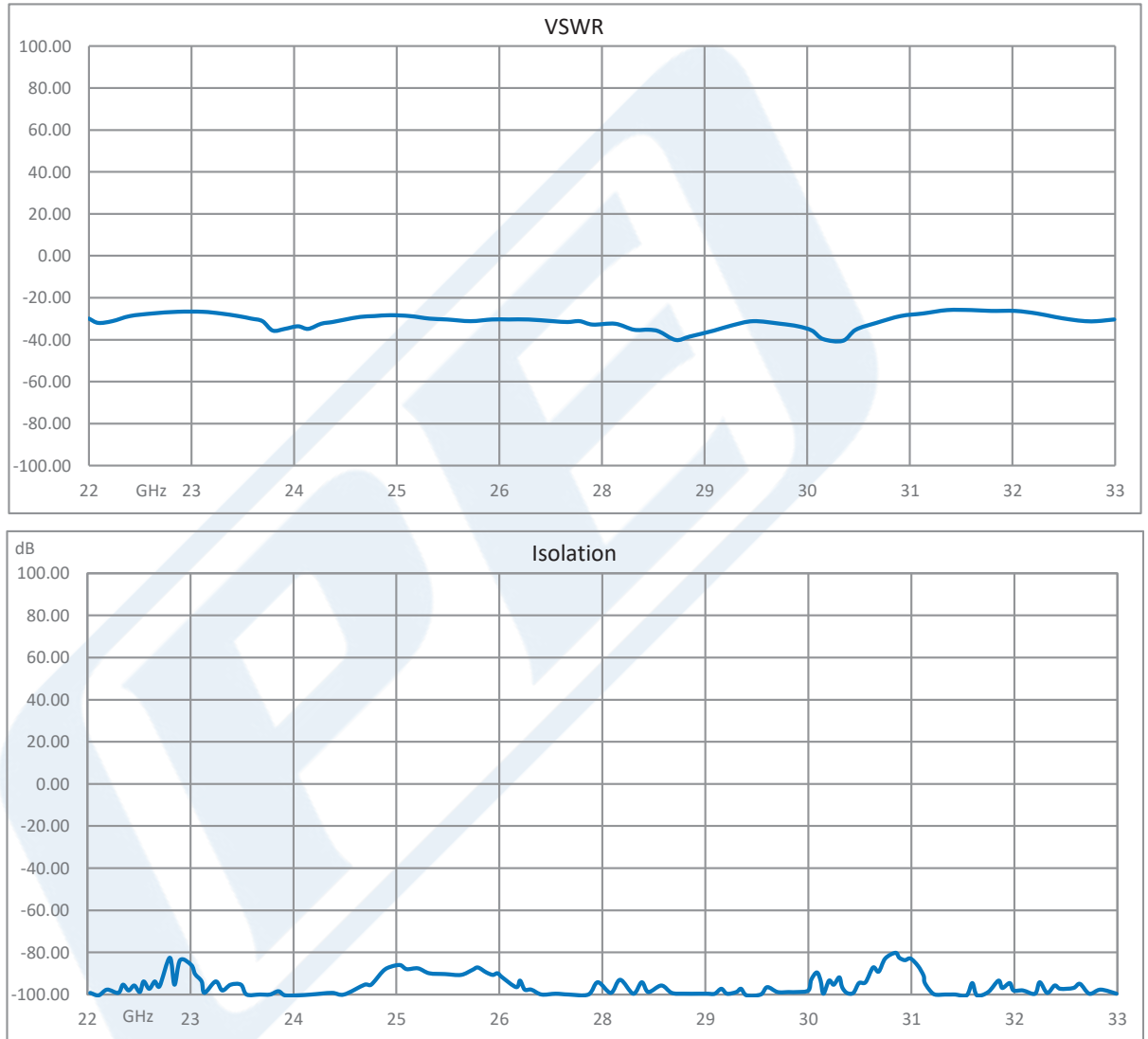
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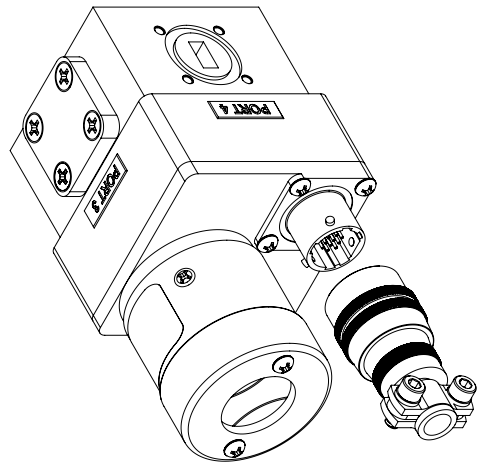
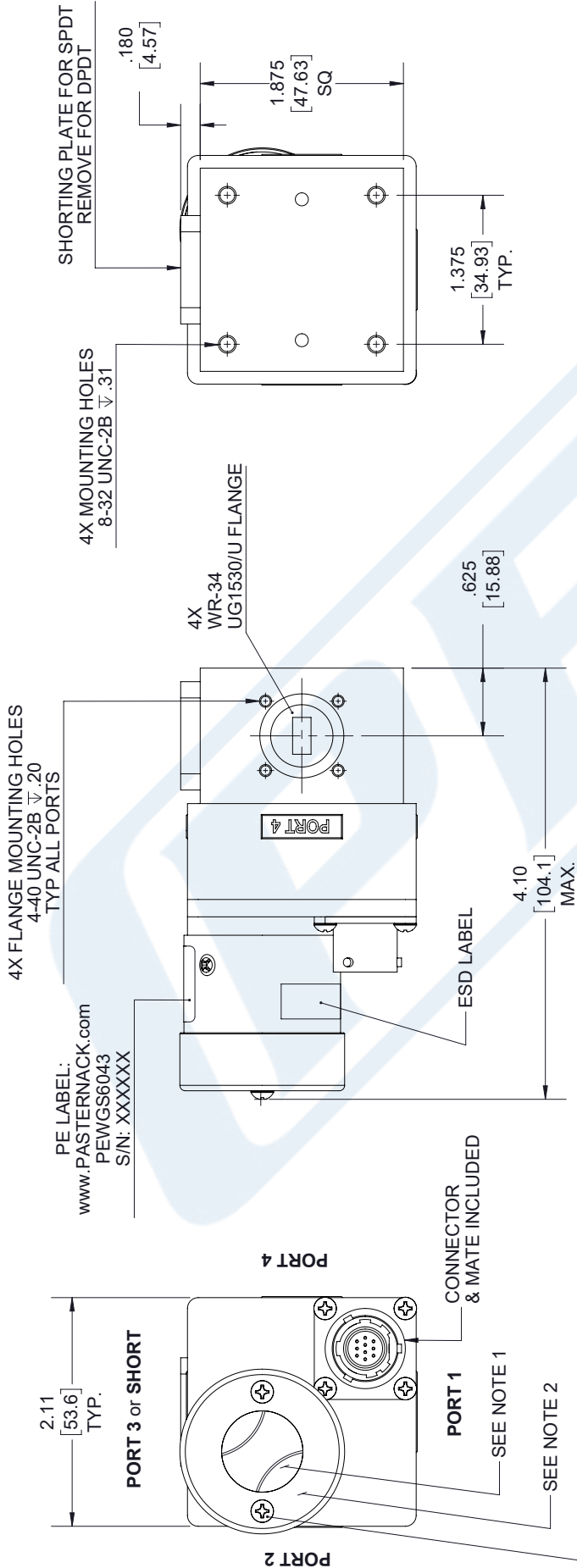
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PEWGS6043 CAD Drawing

WR-34 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, Ka Band 33 GHz Max. Freq., 620 Watts, UG Cover, 12V, TTL, 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±.2 [5.08]	±.132
XX±.01 [.25]	ANGLES ± 1°
.XXX±.005 [.13]	ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
THIRD-ANGLE PROJECTION	

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Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
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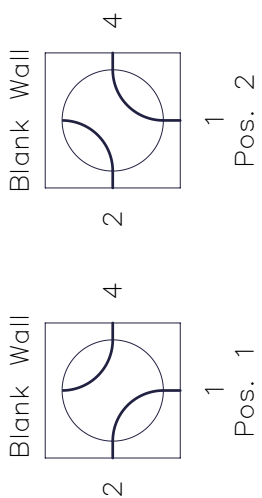
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SCALE N/A

SIZE A
CAGE 53919
DRAWN BY K.DANG
PART NUMBER PEWGS6043
REV A

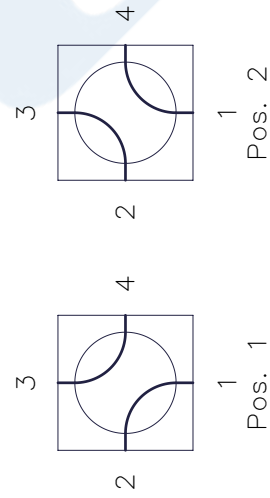
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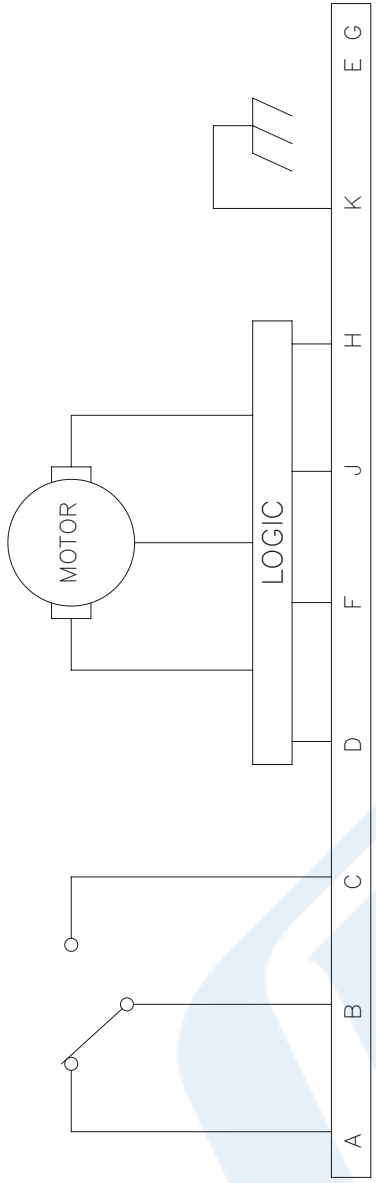
Pos. 1 1
Pos. 2 1



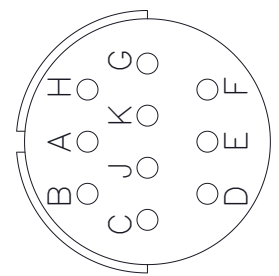
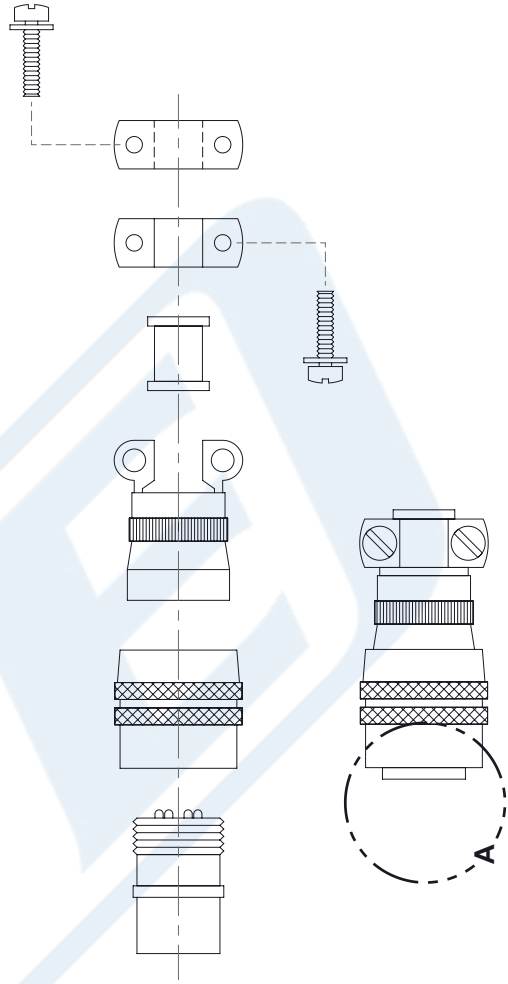
Pos. 1 1
Pos. 2 1

R.F. PATHS—SPDT

R.F. PATHS—DPDT



A Ind. Pos. 1 Common
B Ind. Pos. 1 Common
C Ind. Pos. 2 Logic Command
D Pos. 1 Logic Command
E Pos. 2 Logic Command
F Pos. 1 Logic Command
G Pos. 2 Logic Command
H +Vdc Nominal Voltage
I -Vdc Nominal Voltage
J Case Ground
K Case Ground
L Spares



VIEW A

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LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
X±.2 [5.08]
.XX±.01 [.25]
.XXX±.005 [.13]

FRACTIONS
±.132
ANGLES ± 1°

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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

SIZE [CAGE] DRAWN BY PART NUMBER
A 53919 K.DANG PEWGS6043

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SHEET 2 OF 2
SCALE N/A

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