



## WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL

### Waveguide Electromechanical Relay Switches Technical

PEWGS6011

#### Features

- 12.4 to 18 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-62 Waveguide with O-Rings
- Insertion Loss: 0.08 dB typ
- Isolation: 105 dB typ
- +12 Vdc Nominal Voltage
- Input Power Rating up to 2 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 PEWGS6011 electromechanical WR-62 waveguide switch operates across a wide frequency range from 12.4 GHz to 18 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 0.08 dB typ insertion loss, 105 dB typ Isolation, 1.08:1 typ VSWR, and an operating life of 250K cycles minimum. The design operates across a temperature range of -40°C to +85°C, requires +12Vdc nominal bias voltage, and has an input power rating of up to 2 KW CW maximum. The waveguide ports have Grooved UG-416/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 10 pin MIL-SPEC DC bias connector with mate included.

#### Electrical Specifications

Switch Type	SPDT
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	TTL Logic, Self Cut Off, Window Indicator, Manual Override
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts
TTL Control Current	1.2 mA at 5.5 Volts 1.2 mA at 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	12.4		18	GHz
Impedance		50		Ohms
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts		471	786	mA
VSWR		1.08:1	1.1:1	

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](#)



WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6011

Insertion Loss		0.08	0.1	dB
Isolation	60	105		dB
Switching Time		67	80	ms
Input Power (CW)			2	KWatts
Input Power (Peak) 10% Duty Cycle			70	KWatts

**Mechanical Specifications**

**Size**

Length	4.3 in [109.22 mm]
Width/Diameter	2.11 in [53.59 mm]
Height	2.11 in [53.59 mm]
Weight	1.144 lbs [518.91 g]
Operating Life (Cold Switching)	250,000 Cycles
Operating Pressure	30 psig

**Configuration**

Waveguide Size	WR-62
Flange Type	Square Cover
Flange Designation	UG-419/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**

Humidity	IP67
ESD Sensitivity	0-100%, Fully Weatherized ESD Sensitive Material, Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](#)



WR-62 Waveguide Electromechanical Relay SPDT  
Latching Switch, Ku Band 18 GHz Max. Freq.,  
2,000 Watts, UG-419/U Square Cover, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

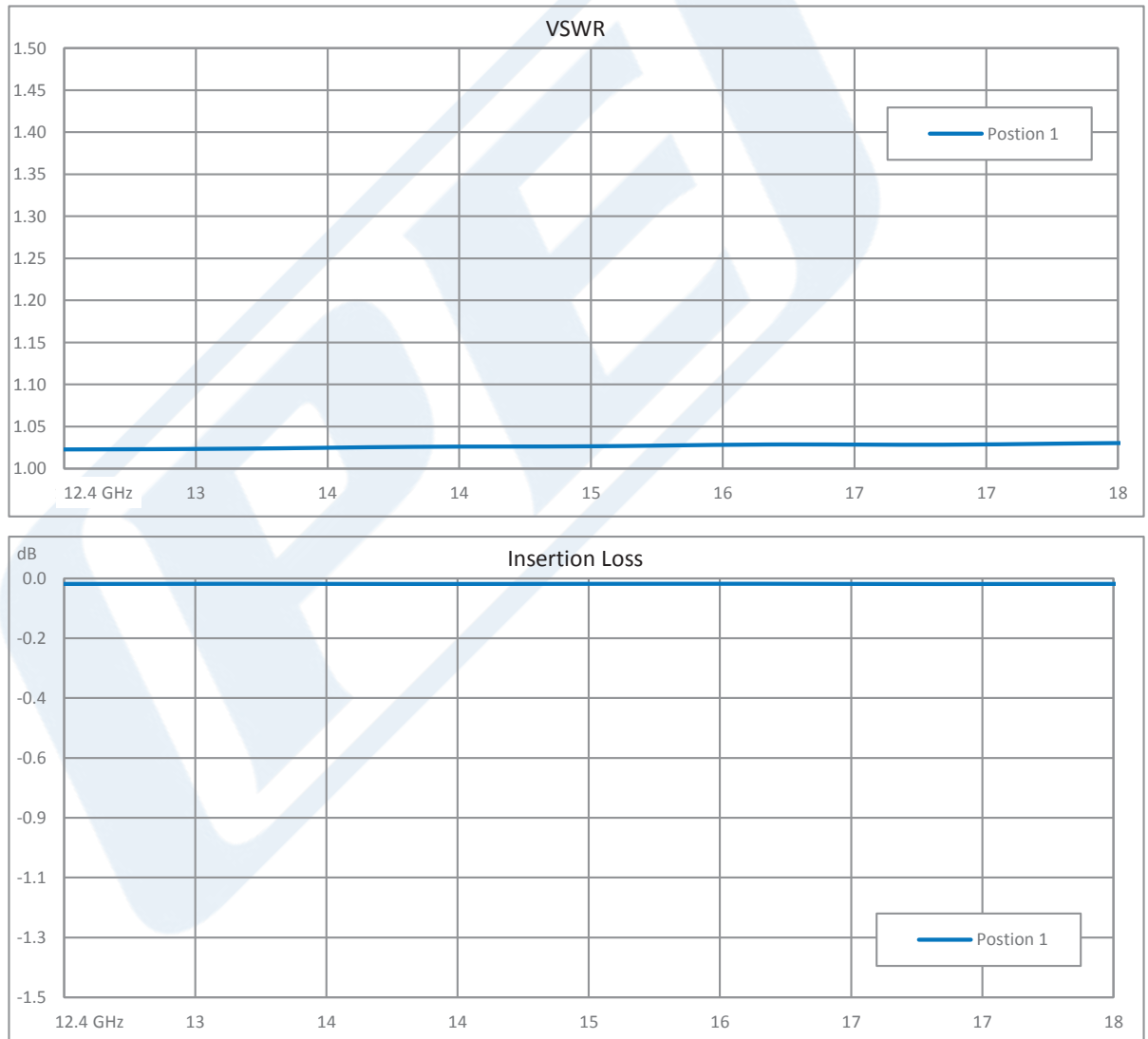
PEWGS6011

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**



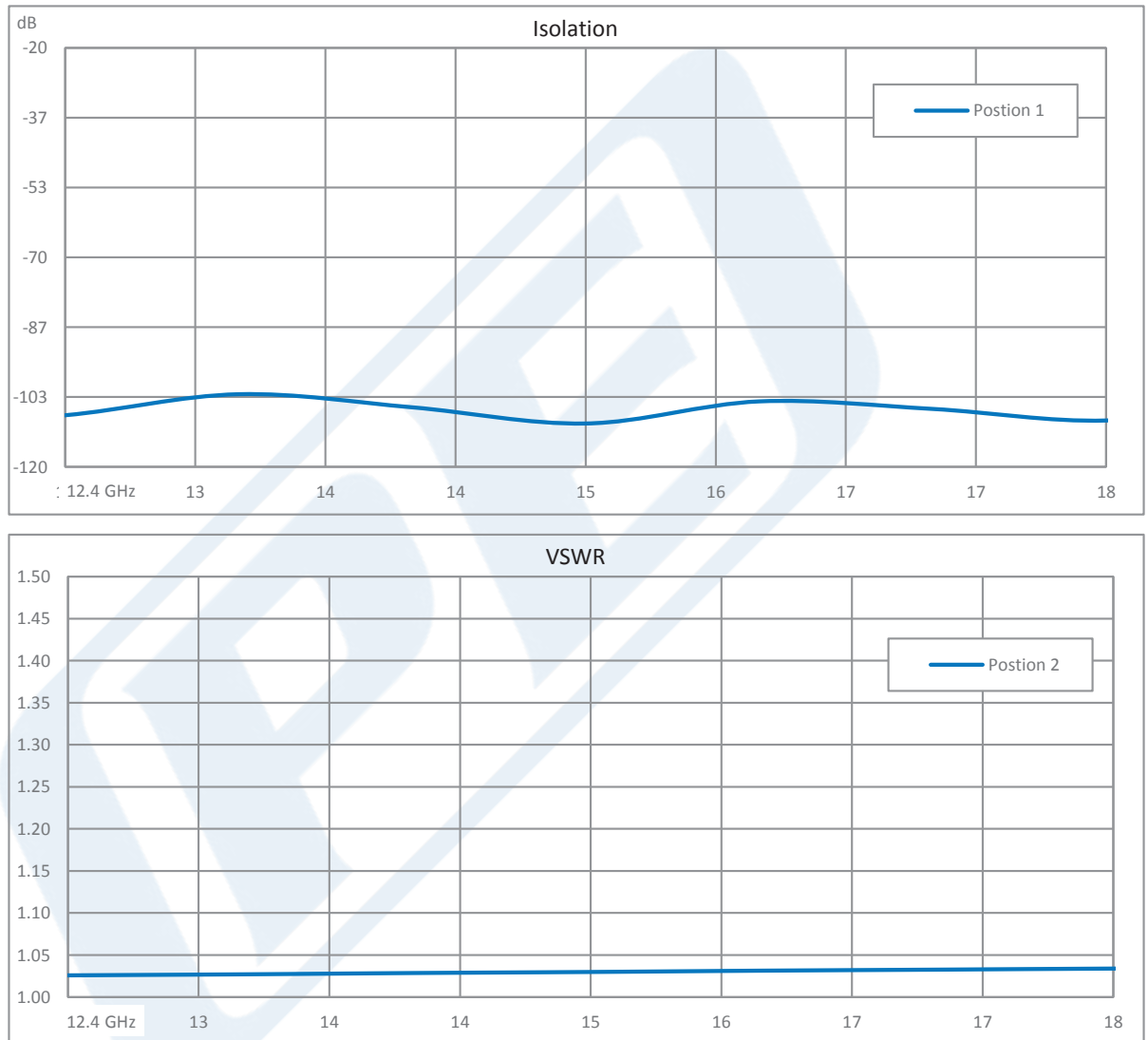
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](#)



WR-62 Waveguide Electromechanical Relay SPDT  
Latching Switch, Ku Band 18 GHz Max. Freq.,  
2,000 Watts, UG-419/U Square Cover, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6011



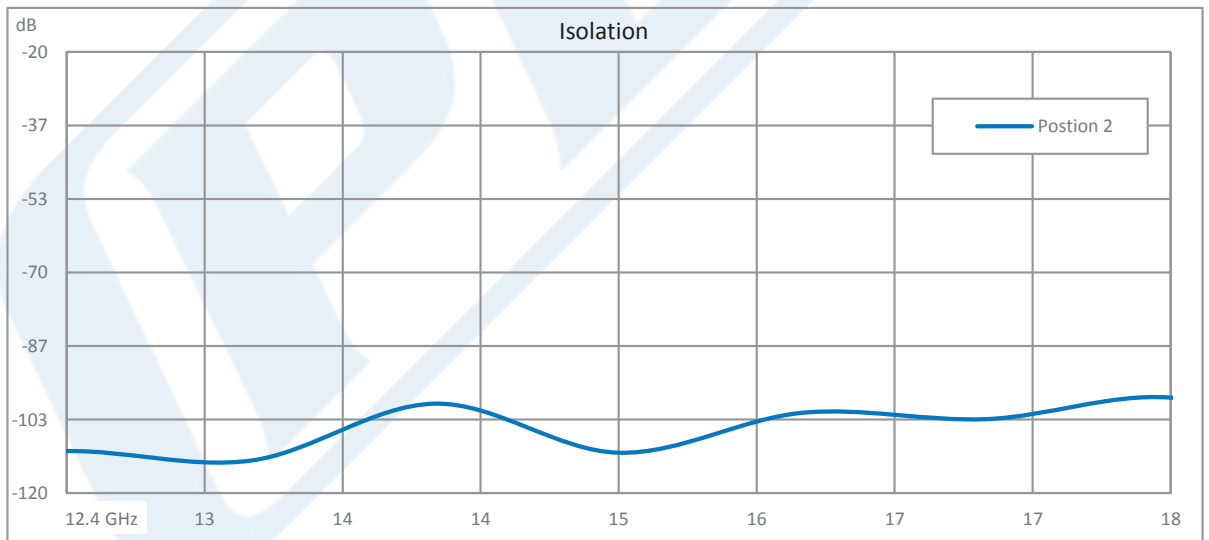
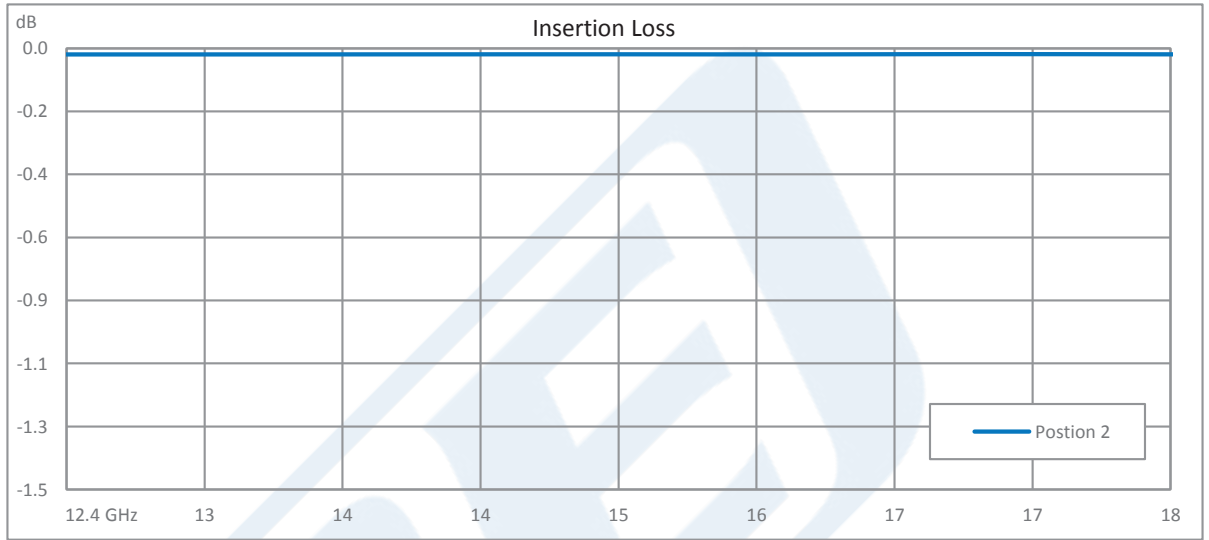
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](#)



WR-62 Waveguide Electromechanical Relay SPDT  
Latching Switch, Ku Band 18 GHz Max. Freq.,  
2,000 Watts, UG-419/U Square Cover, 12V, TTL

Waveguide Electromechanical Relay Switches Technical

PEWGS6011



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](#)



WR-62 Waveguide Electromechanical Relay SPDT  
Latching Switch, Ku Band 18 GHz Max. Freq.,  
2,000 Watts, UG-419/U Square Cover, 12V, TTL

## Waveguide Electromechanical Relay Switches Technical

PEWGS6011

WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL 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.

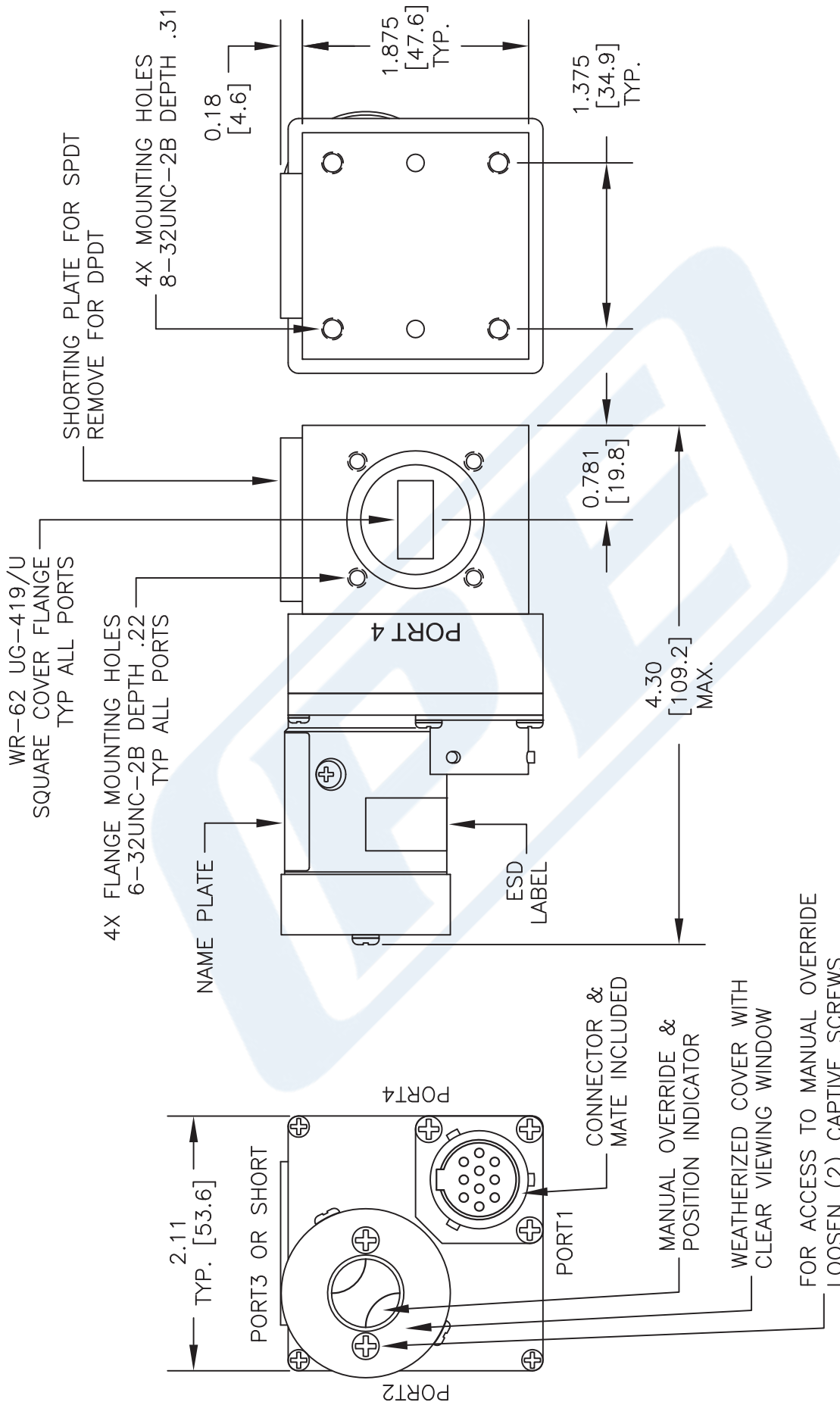
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band 18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL PEWGS6011](https://www.pasternack.com/wr-62-waveguide-electromechanical-relay-spdt-latching-switch-18-ghz-pewgs6011-p.aspx)

URL: <https://www.pasternack.com/wr-62-waveguide-electromechanical-relay-spdt-latching-switch-18-ghz-pewgs6011-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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PEWGS6011 CAD Drawing

WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band  
18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL



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].

DWG TITLE  
**PEWGS6011**

CAGE CODE 53919

CAD FILE 012417

SCALE N/A

SIZE A

2233

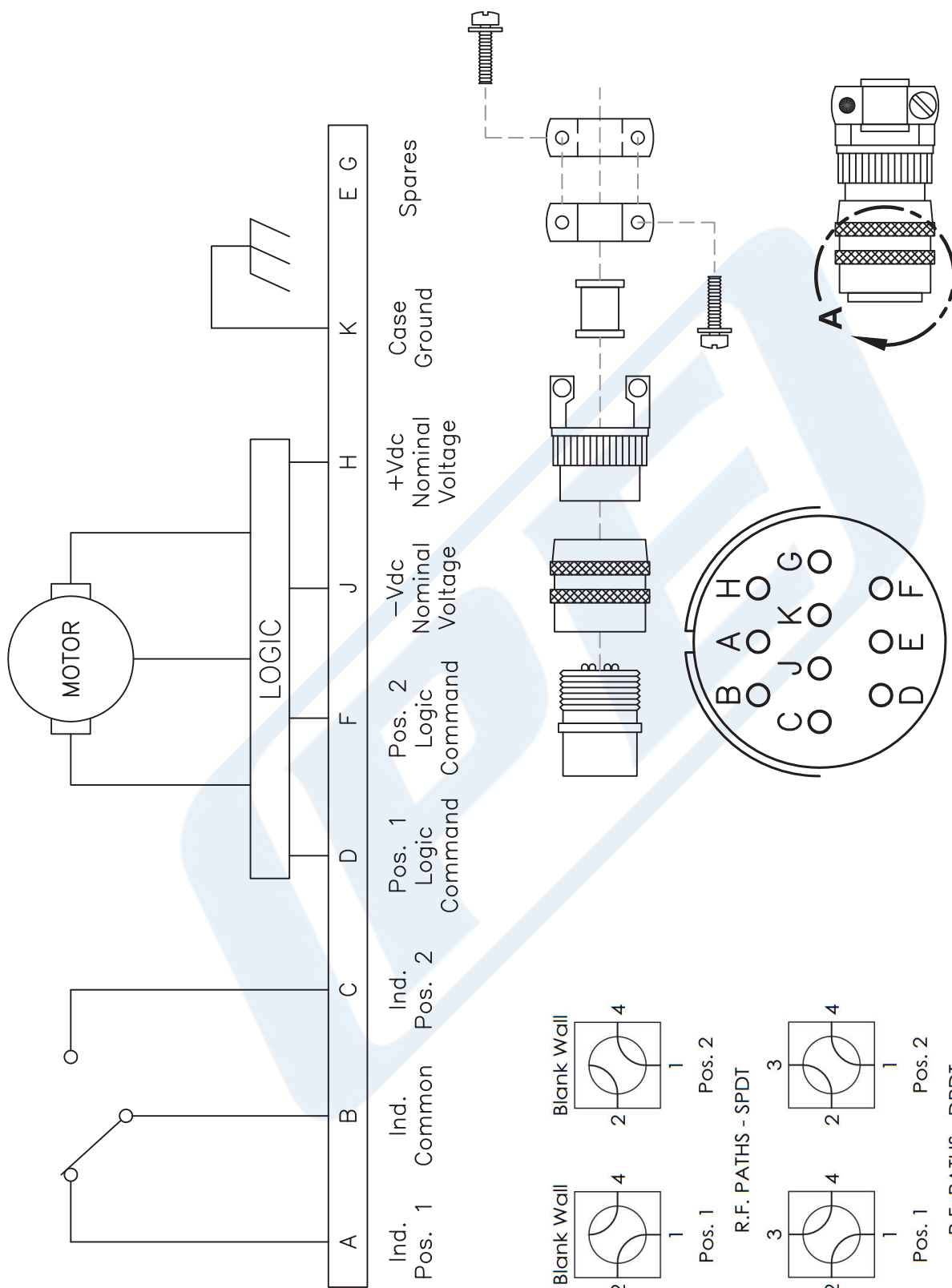
**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE

Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623

Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com

# PEWGS6011 CAD Drawing

WR-62 Waveguide Electromechanical Relay SPDT Latching Switch, Ku Band  
18 GHz Max. Freq., 2,000 Watts, UG-419/U Square Cover, 12V, TTL



**View A**

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].

DWG TITLE  
**PEWGS6011**

**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE  
Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com

CAGE CODE 53919

SCALE N/A  
SIZE A  
2233