

WR-102 Waveguide Electromechanical Relay SPDT/
 DPDT Latching Switch, X Band 11 GHz Max. Freq.,
 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off



Waveguide Electromechanical Relay Switches Technical

PEWGS6039

Features

- 7 to 11 GHz SPDT Waveguide Switch
- Optional DPDT Configuration
- WR-102 Waveguide
- Insertion Loss: 0.06 dB Max
- Isolation: 80 dB min
- +12 Vdc Nominal Voltage
- Input Power Rating up to 6 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 PEWGS6039 electromechanical WR-102 waveguide switch operates across a wide frequency range from 7 GHz to 11 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 0.06 dB max insertion loss, 80 dB min Isolation, 1.10:1 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 6 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
 Actuator Type
 Actuator Options

SPDT/DPDT
 Latching
 TTL Logic, Self Cut Off, Set Indicators, Manual Override,
 Viewing Window

Description	Minimum	Typical	Maximum	Units
Frequency Range	7		11	GHz
Operating Voltage	10	12	20	Volts
Actuating Current @ 12 Volts			1	A
VSWR			1.1:1	
Insertion Loss			0.06	dB
Isolation	80			dB
Switching Time		100		ms
Input Power (CW)			6	kWatts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off PEWGS6039](#)

WR-102 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, X Band 11 GHz Max. Freq.,
6,000 Watts, UG Cover, 12V, TTL, Self Cut Off



Waveguide Electromechanical Relay Switches Technical

PEWGS6039

Mechanical Specifications

Size

Operating Life 250,000 Cycles
Operating Pressure 30 psig

Configuration

Waveguide Size WR-102
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

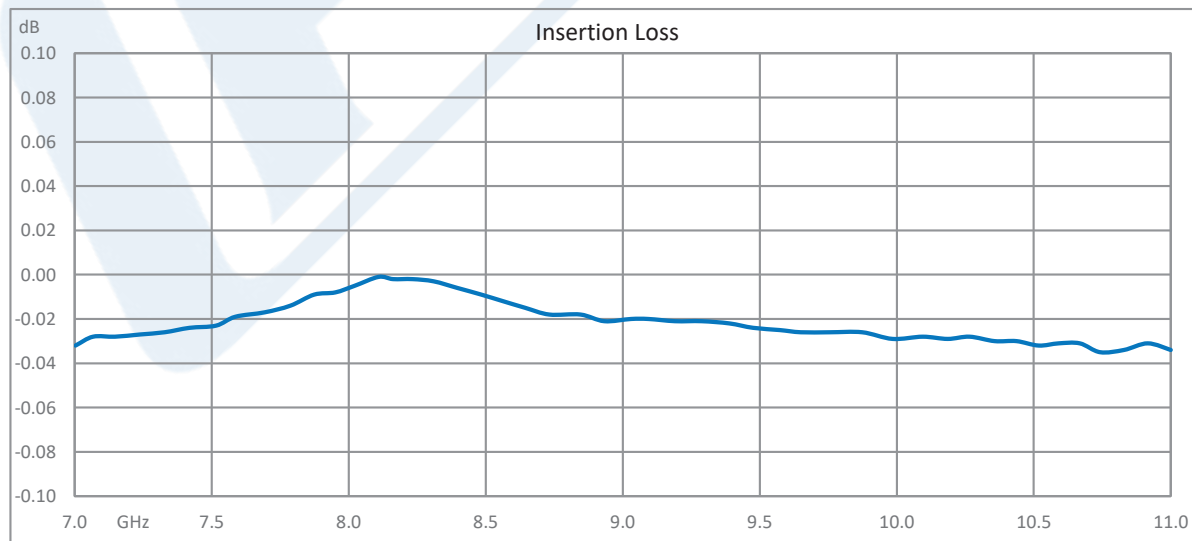
0 to 100%, Fully Weatherized

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

Plotted and Other Data

Notes:

Typical Performance Data



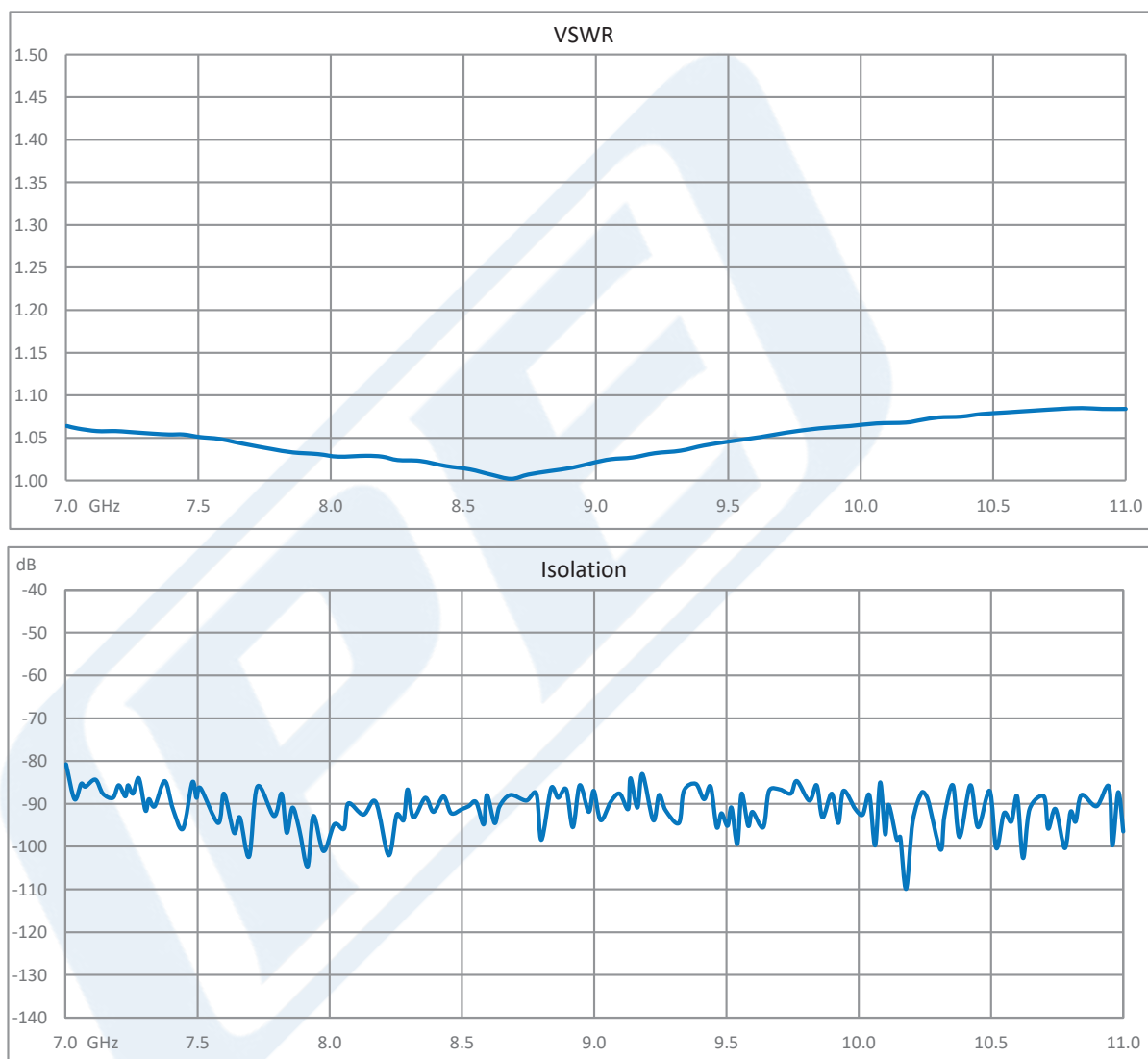
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off PEWGS6039](#)

WR-102 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, X Band 11 GHz Max. Freq.,
6,000 Watts, UG Cover, 12V, TTL, Self Cut Off



Waveguide Electromechanical Relay Switches Technical

PEWGS6039



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off PEWGS6039](#)



WR-102 Waveguide Electromechanical Relay SPDT/
DPDT Latching Switch, X Band 11 GHz Max. Freq.,
6,000 Watts, UG Cover, 12V, TTL, Self Cut Off

Waveguide Electromechanical Relay Switches Technical

PEWGS6039

WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off PEWGS6039](https://www.pasternack.com/wr-102-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-11-ghz-pewgs6039-p.aspx)

URL: <https://www.pasternack.com/wr-102-waveguide-electromechanical-relay-spdt-dpdt-latching-switch-11-ghz-pewgs6039-p.aspx>

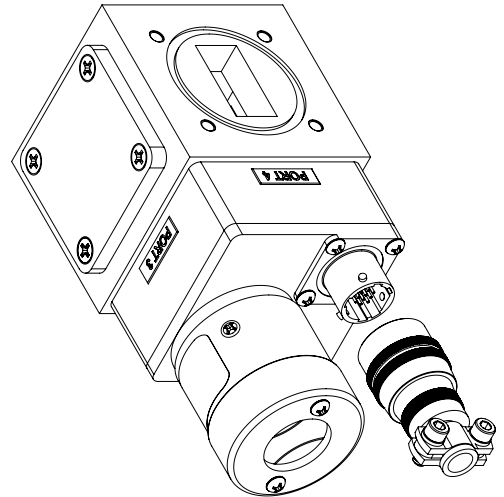
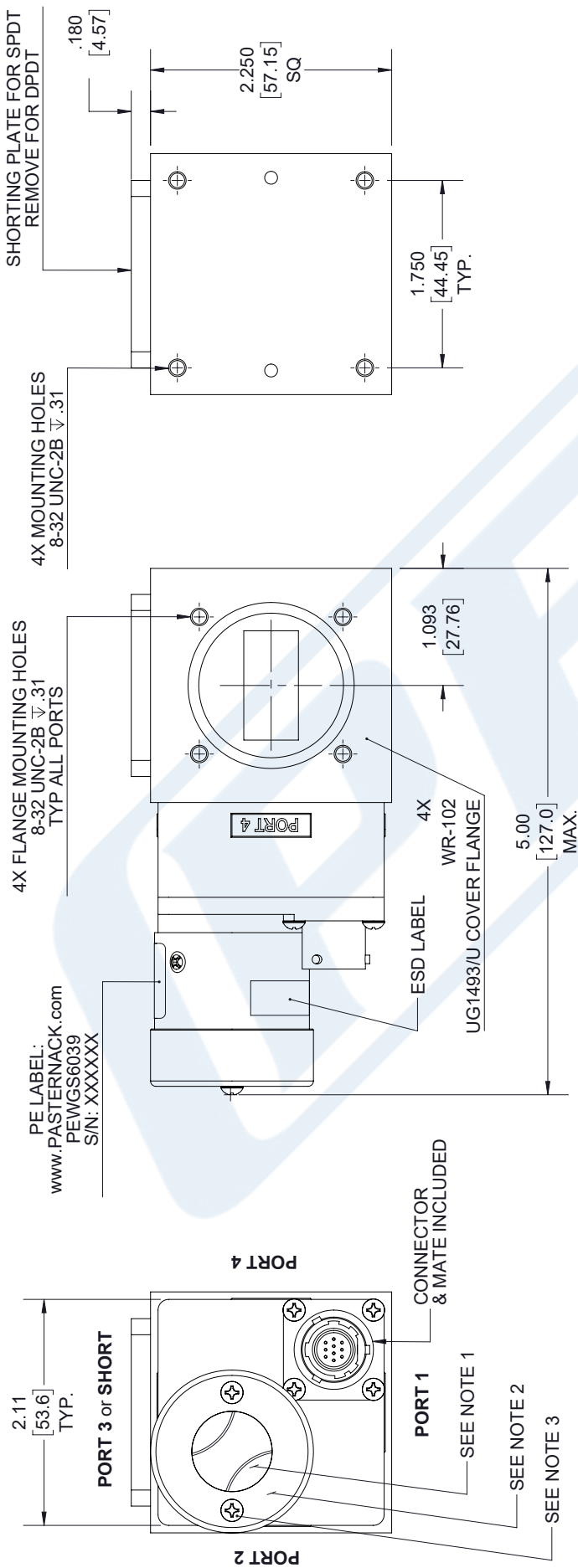
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

PEWGS6039 CAD Drawing

WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X
Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off

NOTES:

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



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

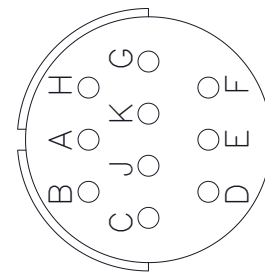
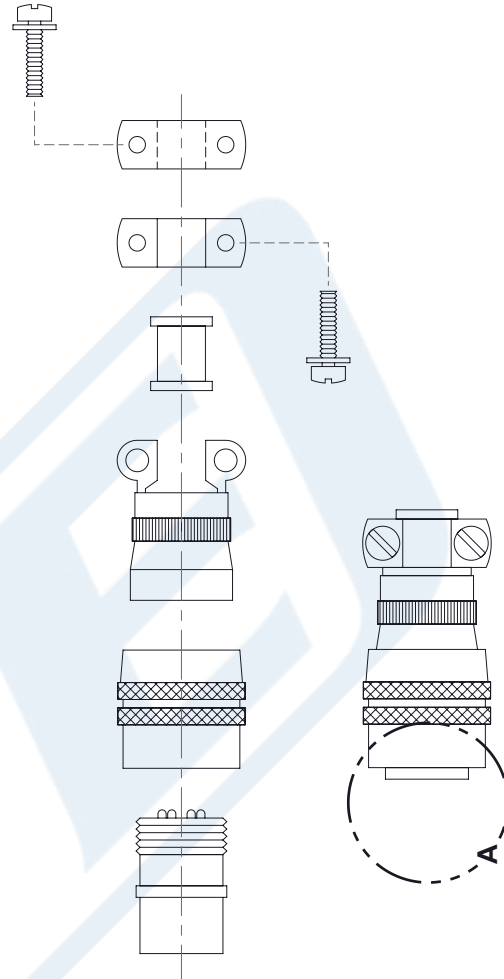
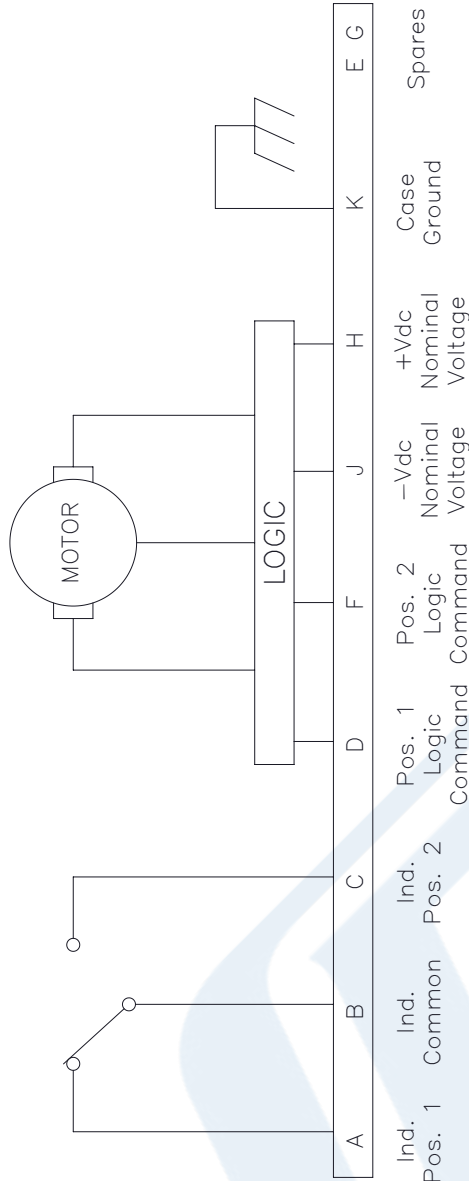
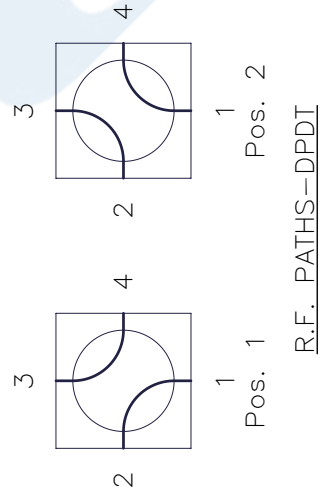
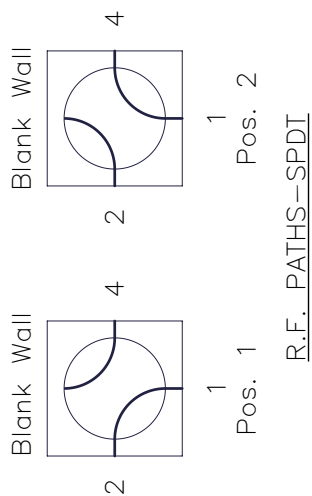
PE PASTERNAK an INFINITE brand Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 www.pasternack.com e-mail: sales@pasternack.com	
SIZE	A
CAGE	53919
DRAWN BY	K.DANG
PART NUMBER	PEWGS6039
REV	A

THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.	
SHEET	1 OF 2
SCALE	N/A

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT
ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

PEWGS6039 CAD Drawing

WR-102 Waveguide Electromechanical Relay SPDT/DPDT Latching Switch, X
Band 11 GHz Max. Freq., 6,000 Watts, UG Cover, 12V, TTL, Self Cut Off



VIEW A

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
X±.2 [5.08]	±.132
.XX±.01 [.25]	±.132
.XXX±.005 [.13]	±.132
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	
THIRD-ANGLE PROJECTION	

PE PASTERNAK an INFINITI brand	
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	
SIZE	A
CAGE	53919
DRAWN BY	K.DANG
PART NUMBER	PEWGS6039
REV	A

THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.	
SHEET	2 OF 2
SCALE	N/A

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT
ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.