



## SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control

### Electromechanical Relay Switches Technical Data Sheet

PE7147

#### Features

- SPDT Switch
- DC to 4GHz Frequency Range
- 1M Cycles Min Lifetime
- Failsafe Switch
- Break before Make
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 0.25 dB Max
- VSWR 1.3:1 Max
- +28 Vdc Operating Voltage
- Power Handling 275 Watts

#### Applications

- Test & Measurement
- Instrumentation

#### Description

The PE7147 is a Single Pole Double Throw Electromechanical Relay Switch that operates from DC to 4 GHz and can handle up to 550 Watts of CW input power in a Break before Make condition. This design features a Failsafe Actuator and is rated for 1M Life Cycles. Insertion loss is specified from 0.1 dB max and Isolation from 80 dB min, with +20 Vdc operating voltage. Performance is guaranteed over -40 deg C to +85 deg C, and the switch assembly is RoHS and REACH compliant. The package interface uses solder terminals and N female connectors.

#### Electrical Specifications

Switch Type	SPDT, Reflective
Actuator Type	Failsafe
Switching Sequence	Break before Make
Pickup Voltage	20 Volts
Dropout Voltage	2 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		4	GHz
Impedance		50		Ohms
Operating Voltage	22	28	32	Volts
Actuating Current @ 28 Volts			82	mA
VSWR			1.3:1	
Insertion Loss			0.25	dB
Isolation	70			dB
Third Order Intermodulation			95	dBc
Input Power (CW)			275	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control PE7147](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1	1 to 2	2 to 3	3 to 4		GHz
VSWR, Max	1.1:1	1.15:1	1.25:1	1.3:1		
Insertion Loss, Max	0.1	0.15	0.2	0.25		dB
Isolation, Min	80	80	80	70		dB
Input Power, Typ (CW)	550	400	325	275		Watts

#### Electrical Specification Notes:

Intermodulation measured with two 250 Watt signals (F1 = 825 MHz, F2 = 850 MHz)

### Mechanical Specifications

#### Size

Length	2.5 in [63.5 mm]
Width/Diameter	2.34 in [59.44 mm]
Height	1 in [25.4 mm]
Weight	0.41 lbs [185.97 g]
Body Material and Plating	Aluminum, Black Anodized
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	20 ms Max

#### Connectors

RF Connector Type	N Female
RF Connector Contact Material and Plating	Beryllium Copper, Gold
RF Connector Body Material and Plating	Passivated Stainless Steel
Control Connector	Solder Terminals

#### Mechanical Specification Notes:

RF Connector mating requirements per MIL-C-39012

### Environmental Specifications

#### Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +100 deg C

### Compliance Certifications (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant	
REACH Compliant	12/17/2014

### Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control PE7147](#)

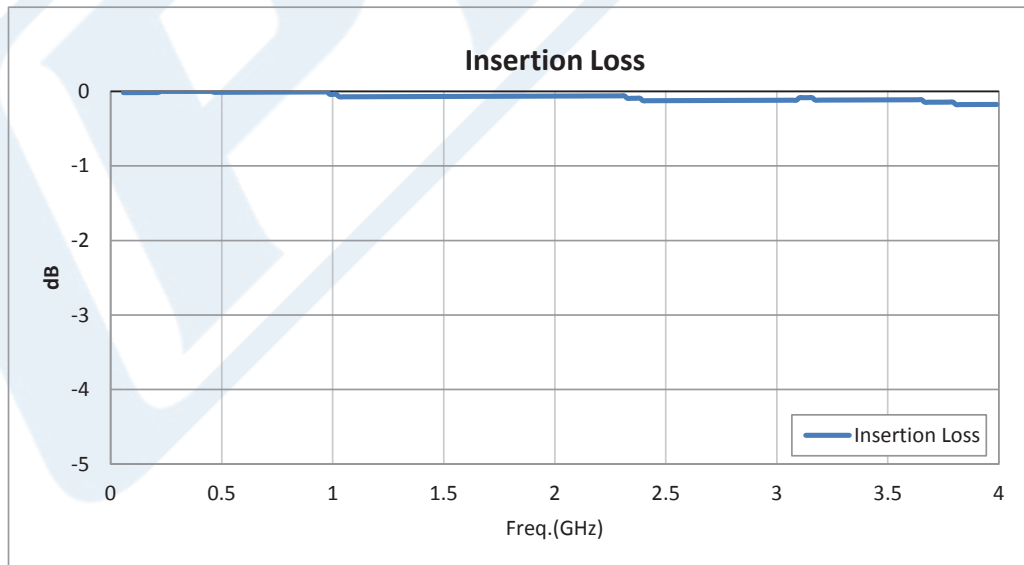
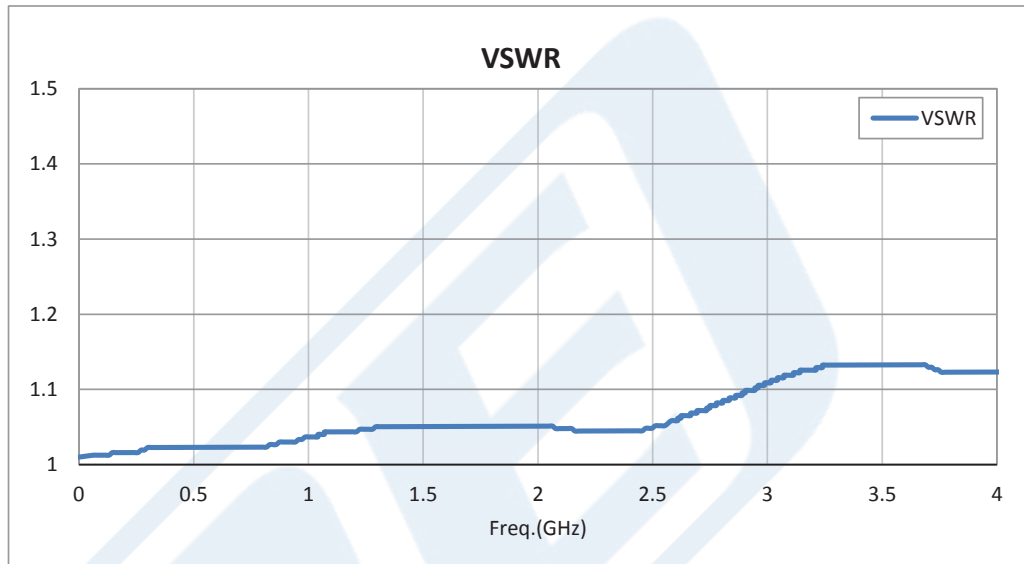


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Typical Performance Data



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SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

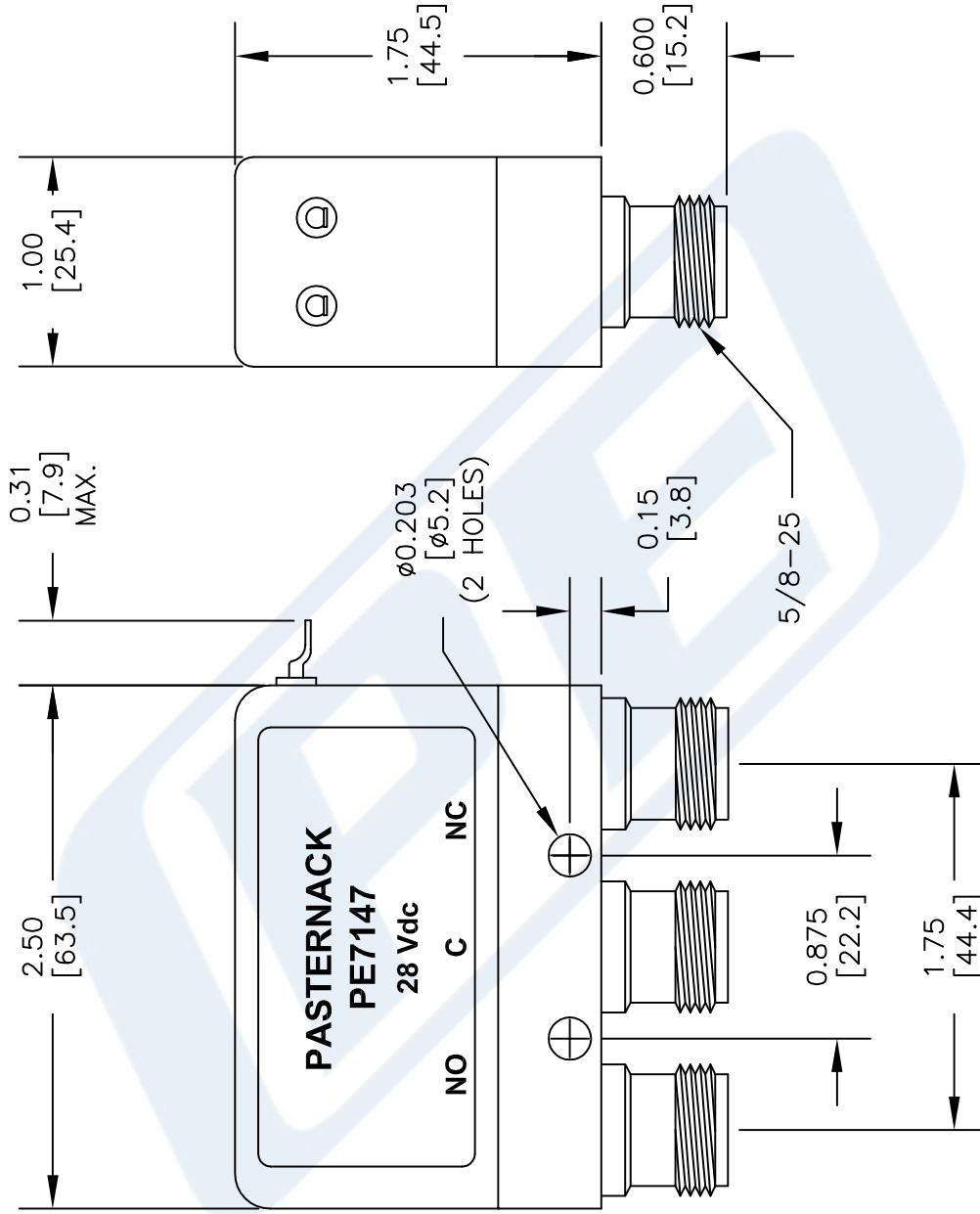
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URL: <http://www.pasternack.com/n-electromechanical-spd-switch-4ghz-275watts-22-32volts-f-pe7147-p.aspx>

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.

# PE7147 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control



DWG TITLE

**PE7147**

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].

FSCM NO. 53919

CAD FILE 090815

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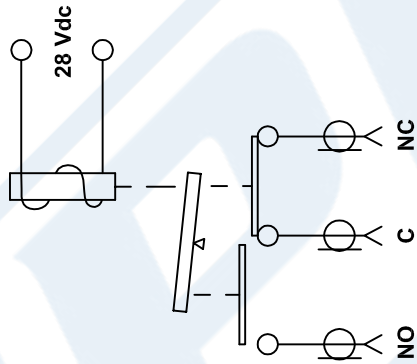
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# PE7147 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch DC to 4 GHz, N, 275 Watts, 28V Control



SCHEMATIC SHOWN IN  
DE-ENERGIZED POSITION

DWG TITLE

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