



## Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 12V Control

### Electromechanical Relay Switches Technical Data Sheet

PE71S6166

#### Features

- Transfer Relay Switch
- DC to 12.4 GHz Frequency Range
- 1M Cycle Min Operating Life
- Failsafe Actuator
- Insertion Loss 0.4 dB max
- Isolation 60 dB min
- 50 Watts Avg Power Max
- Switching Sequence Break Before Make

#### Applications

- Test & Measurement
- Communications System
- Instrumentation

#### Description

The PE71S6166 is a Transfer Electromechanical Relay Switch that operates from DC to 12.4 GHz and has a rating of 50 Watts input power (CW) in a Break Before Make condition. The design features a Failsafe Actuator and is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min, with +12 Vdc operating voltage and performance is guaranteed over -25°C to +65°C. The package interface uses solder terminals and N Female connectors.

#### Electrical Specifications

Switch Type	Transfer, Reflective
Actuator Type	Failsafe
Switching Sequence	Break Before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		540		mA
VSWR			1.45:1	
Insertion Loss			0.4	dB
Isolation	60			dB
Input Power (CW) (at 12.4 GHz)			50	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 12V Control PE71S6166](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 4	4 to 8	8 to 12.4			GHz
VSWR, Max	1.2:1	1.3:1	1.45:1			
Insertion Loss, Max	0.2	0.3	0.4			dB
Isolation, Min	80	70	60			dB

### Mechanical Specifications

#### Size

Length	2.06 in [52.32 mm]
Width/Diameter	2 in [50.8 mm]
Height	2 in [50.8 mm]
Weight	0.875 lbs [396.89 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	50 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 Pin

### Environmental Specifications

#### Temperature

Operating Range	-25 to +65 deg C
ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:  
Designed to meet MIL-DTL-3928

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

Not RoHS Compliant

### 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: [Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 12V Control PE71S6166](#)

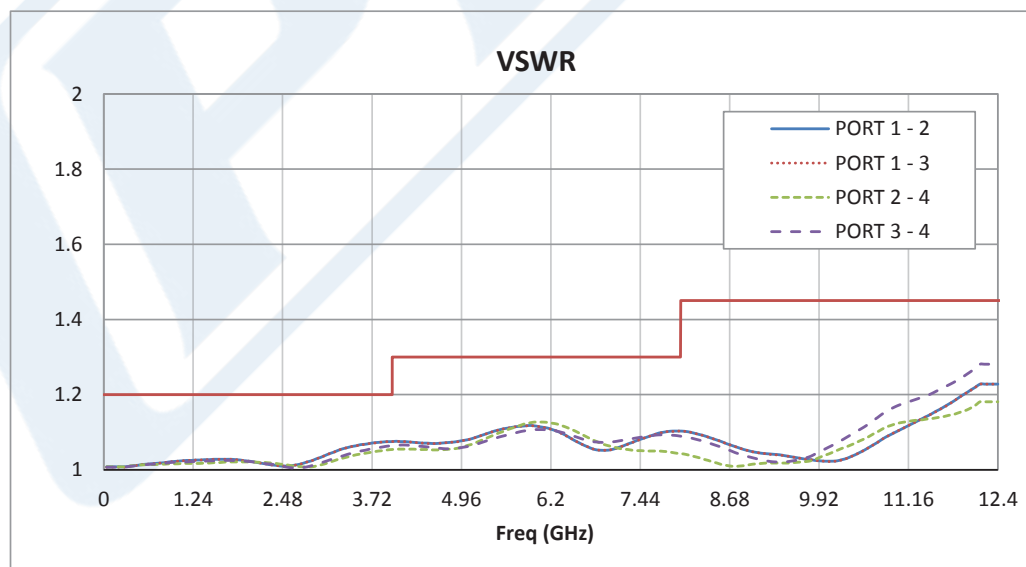
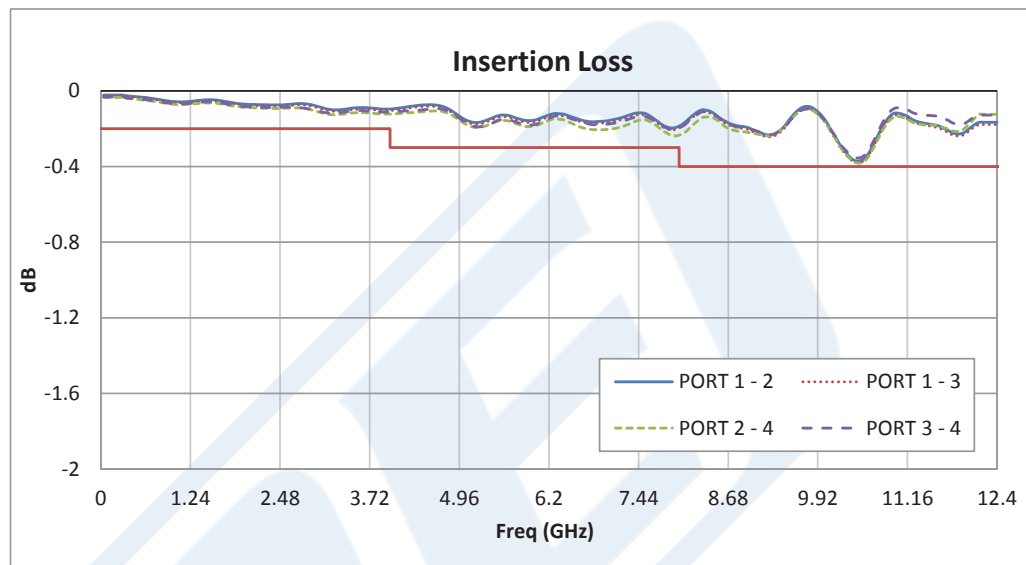


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Typical Performance Data



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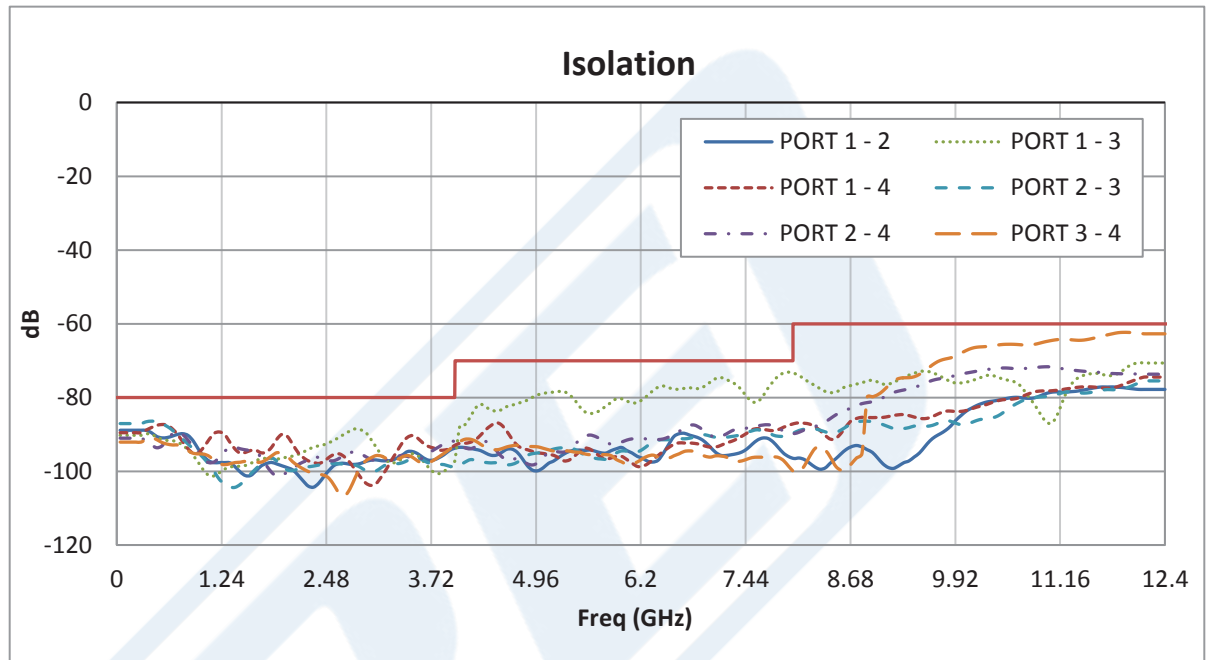




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Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 12V Control from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 12V Control PE71S6166](http://www.pasternack.com/n-transfer-electromechanical-relay-switch-12.4-ghz-failsafe-pe71s6166-p.aspx)

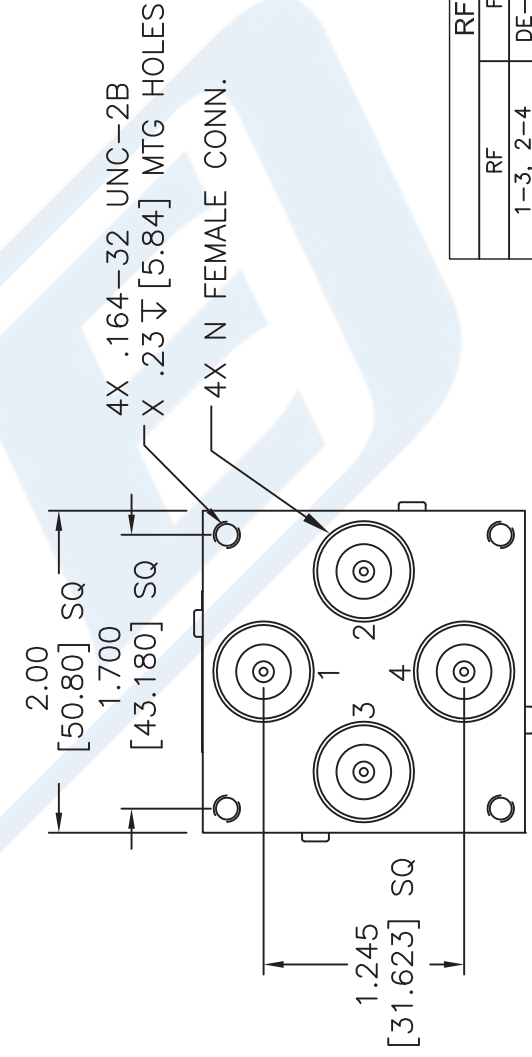
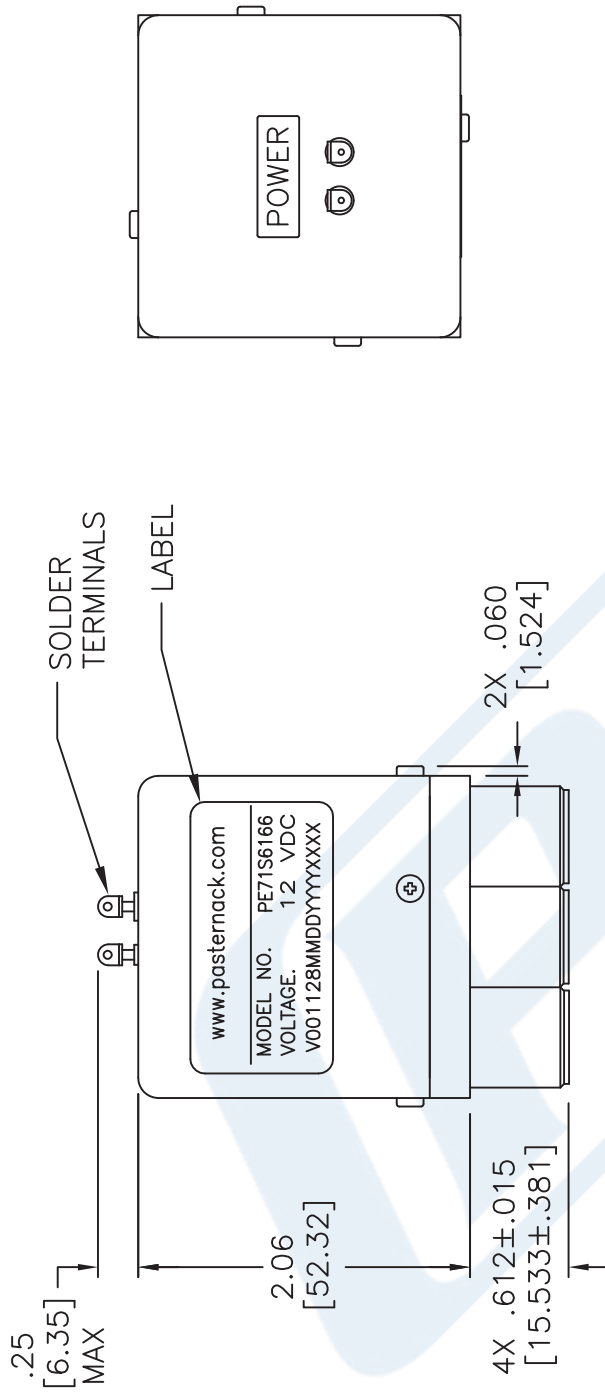
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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



# PE71S6166 CAD Drawing

Transfer Electromechanical Relay Failsafe Switch DC  
to 12.4 GHz, N, 50 Watts, 12V Control



RF STATUS	
RF	FAILSAFE
1-3, 2-4	DE-ENERGIZED
1-2, 3-4	ENERGIZED
	LATCHING
	POSITION 1
	POSITION 2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	
DECIMALS	ANGLES
.XX ± .03 (0.76)	±1'
.XXX ± .010 (0.254)	FRACTIONS
	±1/16
HOLE DIAMETER	
.0135 TO .125	TOLERANCE
(0.343 TO 3.175)	+0.004 TO -0.001
	(+0.102 TO -0.025)
.126 TO .250	+0.005 TO -0.001
(3.200 TO 6.350)	(+0.127 TO -0.025)
.251 TO .500	+0.006 TO -0.001
(6.375 TO 12.700)	(+0.152 TO -0.025)
.501 TO .750	+0.008 TO -0.001
(12.725 TO 19.050)	(+0.203 TO -0.025)
.751 TO 1.000	+0.010 TO -0.001
(19.075 TO 25.400)	(+0.254 TO -0.025)
1.001 TO 2.000	+0.012 TO -0.001
(25.425 TO 50.800)	(+0.305 TO -0.025)

\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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  
**PE71S6166**

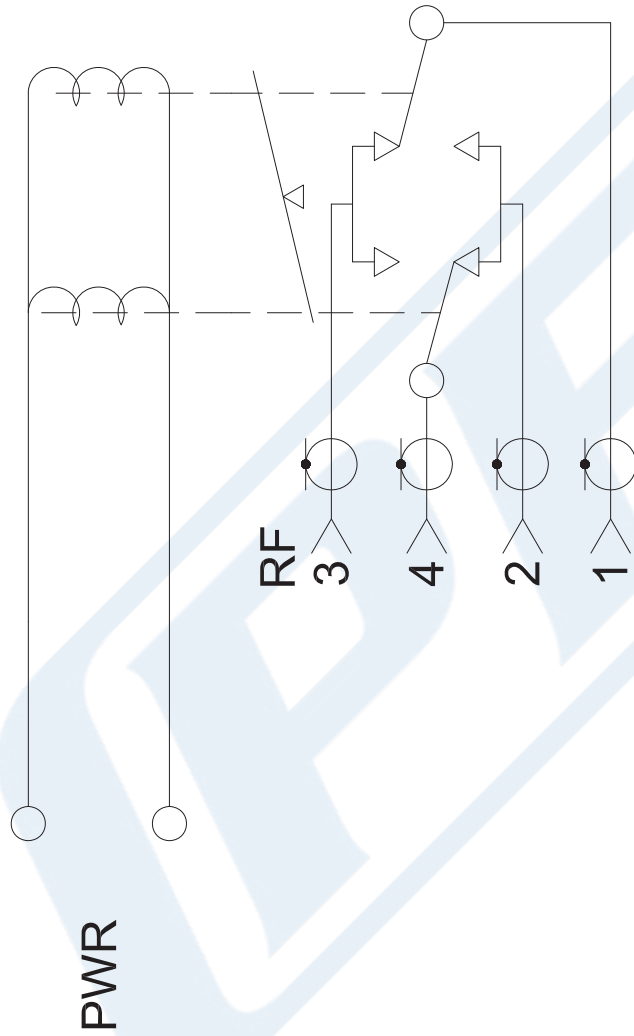
**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE  
Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com

CAD FILE 042715 SCALE N/A SIZE A 2233

FSCM NO. 53919

# PE71S6166 CAD Drawing

Transfer Electromechanical Relay Failsafe Switch DC  
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SCHEMATIC FAILSAFE SHOWN IN DE-ENERGIZED POSITION

DWG TITLE

**PE71S6166**

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FSCM NO. 53919

CAD FILE 042715

SCALE N/A

SIZE A

2233



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