



SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 28V Control, Indicators, TTL, Diodes

Electromechanical Relay Switches Technical Data Sheet

PE71S6153

**Features**

- Single Pole Double Throw Relay Switch
- DC to 12.4 GHz Frequency Range
- 1M Cycle Min Operating Life
- Failsafe Actuator
- TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 50 Watts Avg Power Max
- Switching Sequence Break Before Make

**Applications**

- Test & Measurement
- Communications System
- Instrumentation

**Description**

The PE71S6153 is a Single Pole Double Throw 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 with TTL Logic Driver, Position Indicators, Suppression Diodes 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 +28 Vdc operating voltage and performance is guaranteed over -55°C to +85°C. The package interface uses solder terminals and N Female connectors.

**Electrical Specifications**

Switch Type	SPDT, Reflective
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic, Diodes
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage		28		Volts
Actuating Current @ 28 Volts		130		mA
VSWR			1.6:1	
Insertion Loss			0.6	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: [SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 28V Control, Indicators, TTL, Diodes PE71S6153](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 2	2 to 4	4 to 12.4			GHz
VSWR, Max	1.15:1	1.2:1	1.6:1			
Insertion Loss, Max	0.2	0.25	0.6			dB
Isolation, Min	80	80	60			dB

### Mechanical Specifications

#### Size

Length	2.2 in [55.88 mm]
Width/Diameter	2.46 in [62.48 mm]
Height	0.9 in [22.86 mm]
Weight	0.53 lbs [240.4 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	-55 to +85 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:

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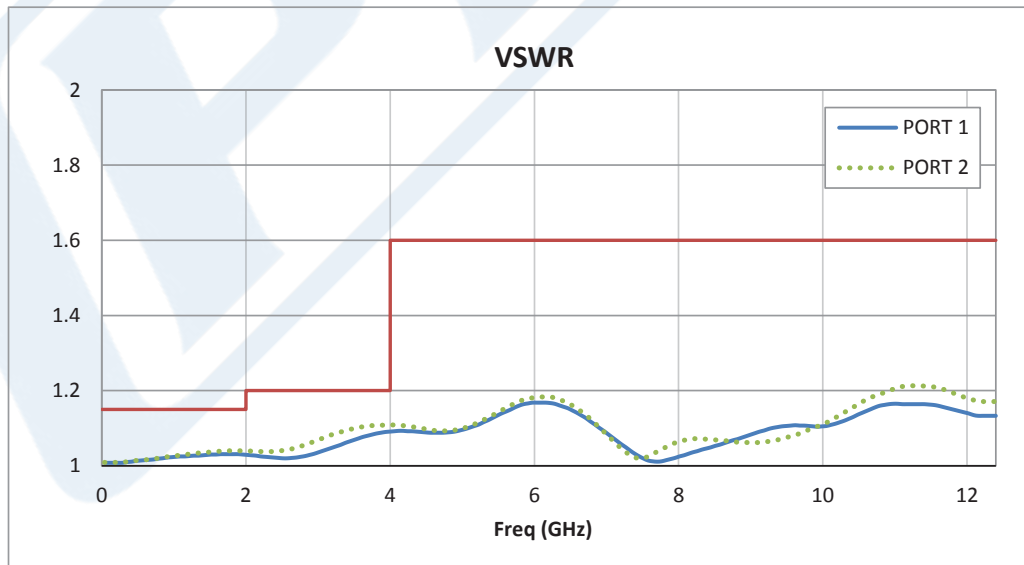
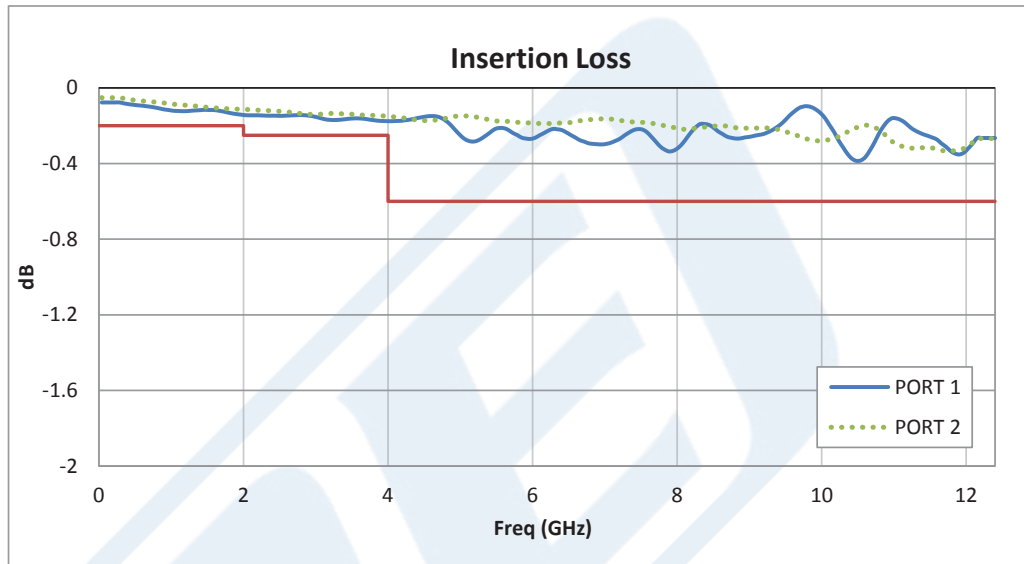


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Electromechanical Relay Switches Technical Data

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Typical Performance Data



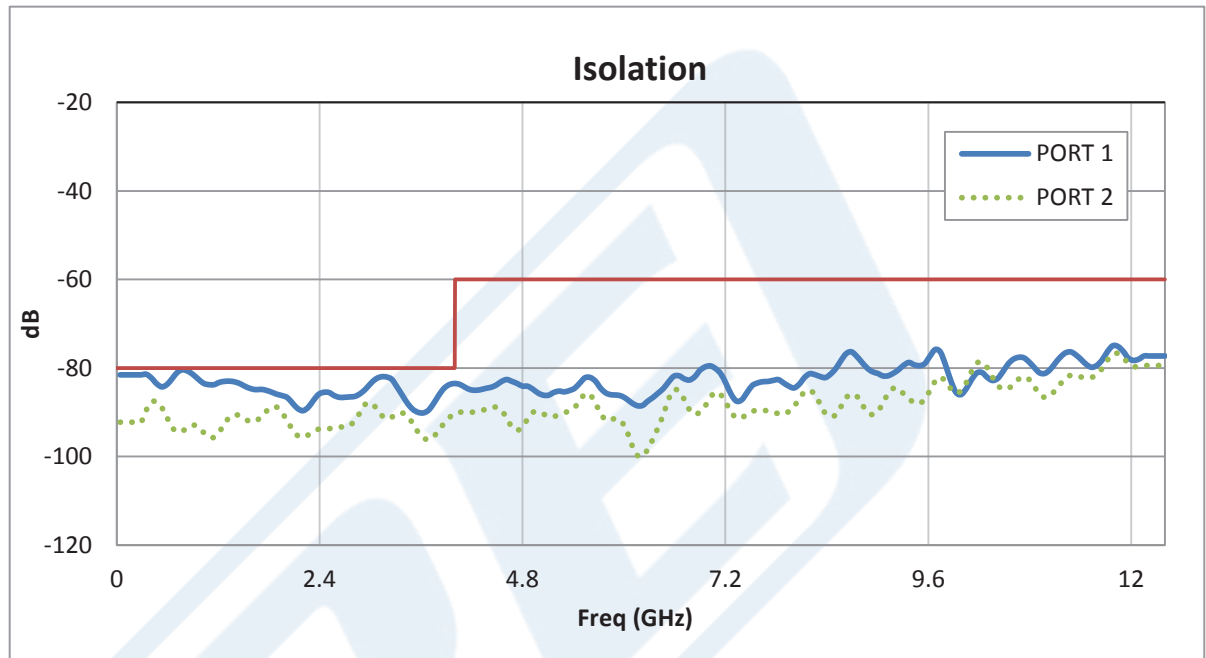
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SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz, N, 50 Watts, 28V Control, Indicators, TTL, Diodes from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

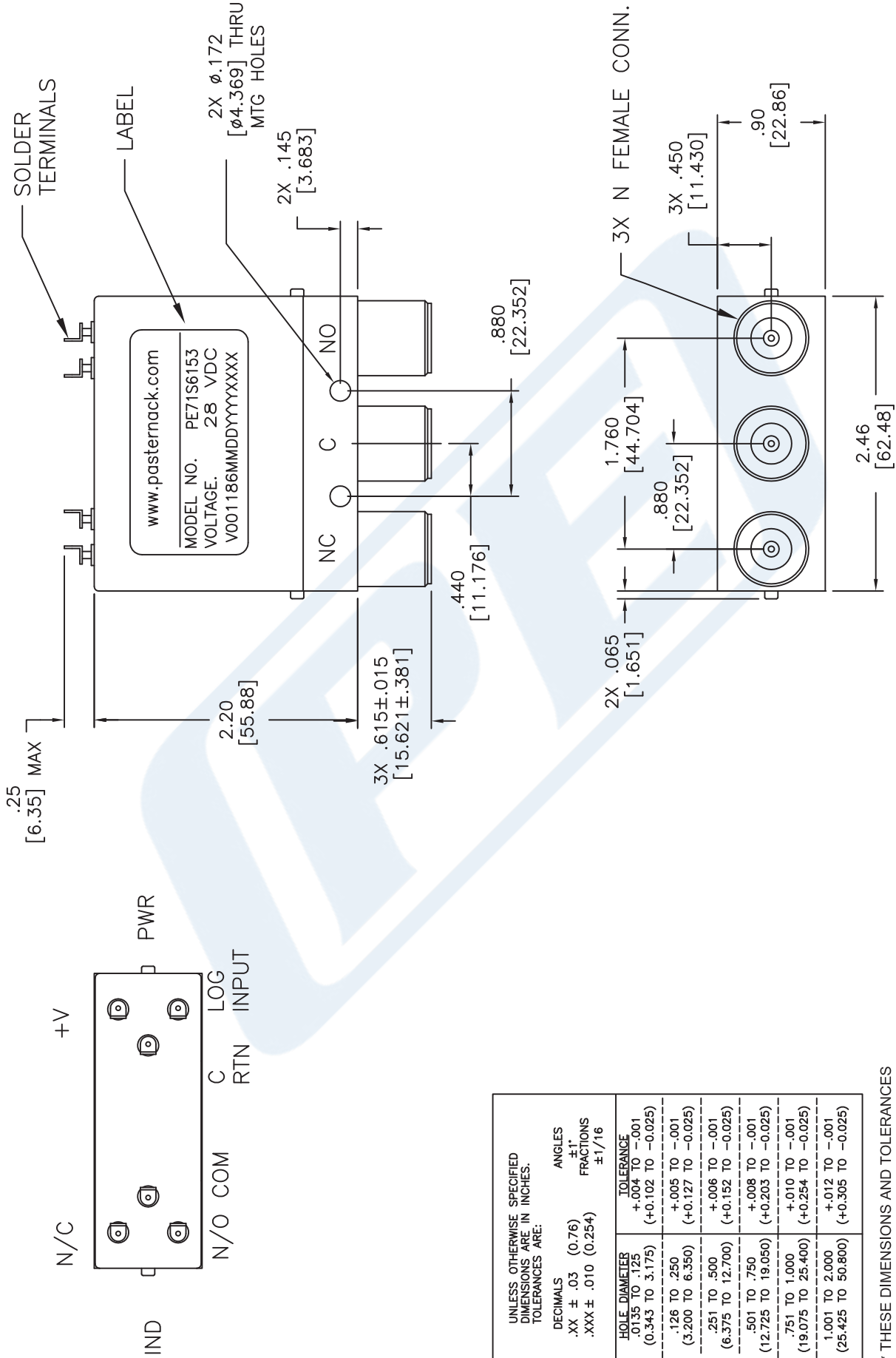
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S6153 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch DC to 12.4 GHz,  
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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	TOLERANCE
.0135 TO .125 (0.343 TO 3.175)	+0.004 TO -0.001 (+0.102 TO -0.025)
.126 TO .250 (3.200 TO 6.350)	+0.005 TO -0.001 (+0.127 TO -0.025)
.251 TO .500 (6.375 TO 12.700)	+0.006 TO -0.001 (+0.152 TO -0.025)
.501 TO .750 (12.725 TO 19.050)	+0.008 TO -0.001 (+0.203 TO -0.025)
.751 TO 1.000 (19.075 TO 25.400)	+0.010 TO -0.001 (+0.254 TO -0.025)
1.001 TO 2.000 (25.425 TO 50.800)	+0.012 TO -0.001 (+0.305 TO -0.025)

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

DWG TITLE

**PE71S6153**

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].

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FSCM NO. 53919

CAD FILE 051315

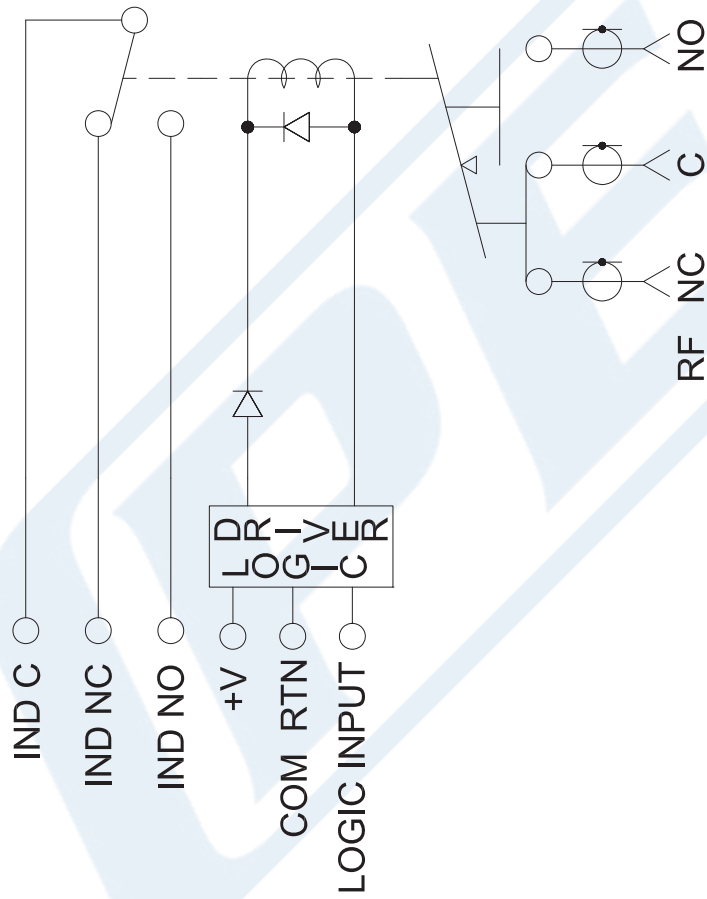
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SIZE A

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SCHEMATIC FAILSAFE IN NORMALLY CLOSED POSITION

DWG TITLE

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