



SP4T Electromechanical Relay Normally Open Switch  
DC to 22 GHz, SMA, 20 Watts, 12V Control

Electromechanical Relay Switches Technical Data Sheet

PE71S6301

**Features**

- Single Pole Four Throw Terminated Relay Switch
- DC to 22 GHz Frequency Range
- 1M Cycle Min Operating Life
- Normally Open Actuator
- Insertion Loss 0.6 dB max
- Isolation 60 dB min
- 20 Watts Avg Power Max
- Switching Sequence Break Before Make

**Applications**

- Test & Measurement
- Communications System
- Instrumentation

**Description**

The PE71S6301 is a Single Pole Four Throw Terminated Electromechanical Relay Switch that operates from DC to 22 GHz and has a rating of 20 Watts input power (CW) in a Break Before Make condition. The design features a Normally Open Actuator with Internal Terminations and is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.3 dB max and Isolation from 75 dB min, with +12 Vdc operating voltage. Performance is guaranteed over -25°C to +65°C and the switch assembly is RoHS compliant. The package interface uses solder terminals and SMA Female connectors.

**Electrical Specifications**

Switch Type SP4T, Absorptive  
 Actuator Type Normally Open  
 Switching Sequence Break Before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		22	GHz
Impedance		50		Ohms
Operating Voltage		12		Volts
Actuating Current @ 12 Volts		380		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW) (at 22 GHz)			20	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP4T Electromechanical Relay Normally Open Switch DC to 22 GHz, SMA, 20 Watts, 12V Control PE71S6301](#)



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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	12 to 18	18 to 22	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1	1.6:1	
Insertion Loss, Max	0.3	0.35	0.4	0.5	0.6	dB
Isolation, Min	75	70	65	60	60	dB

### Mechanical Specifications

#### Size

Length	2.13 in [54.1 mm]
Width/Diameter	2.13 in [54.1 mm]
Height	2.08 in [52.83 mm]
Weight	0.625 lbs [283.5 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	15 ms Max

#### Connectors

RF Connector Type	SMA 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)

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: [SP4T Electromechanical Relay Normally Open Switch DC to 22 GHz, SMA, 20 Watts, 12V Control PE71S6301](#)

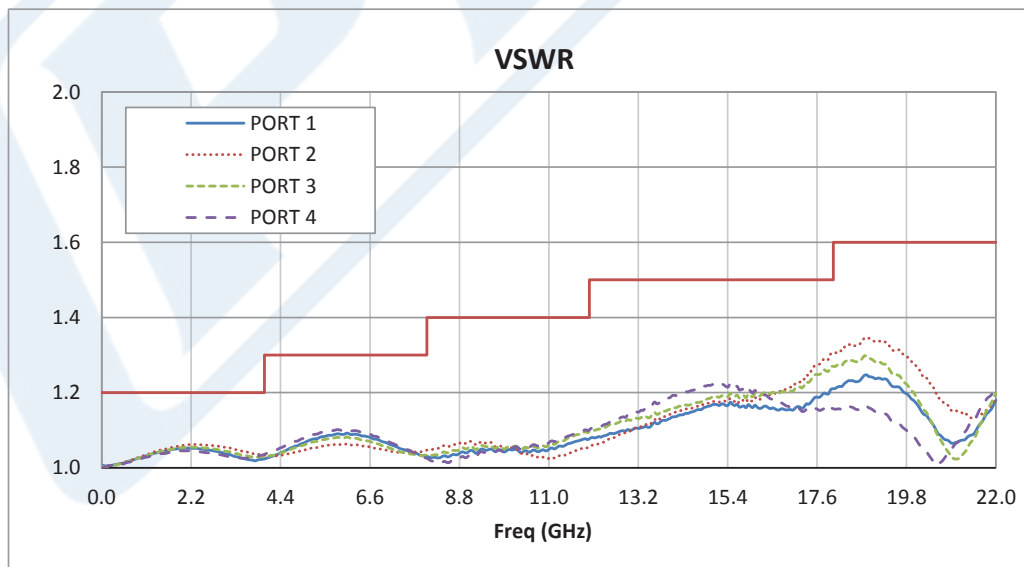
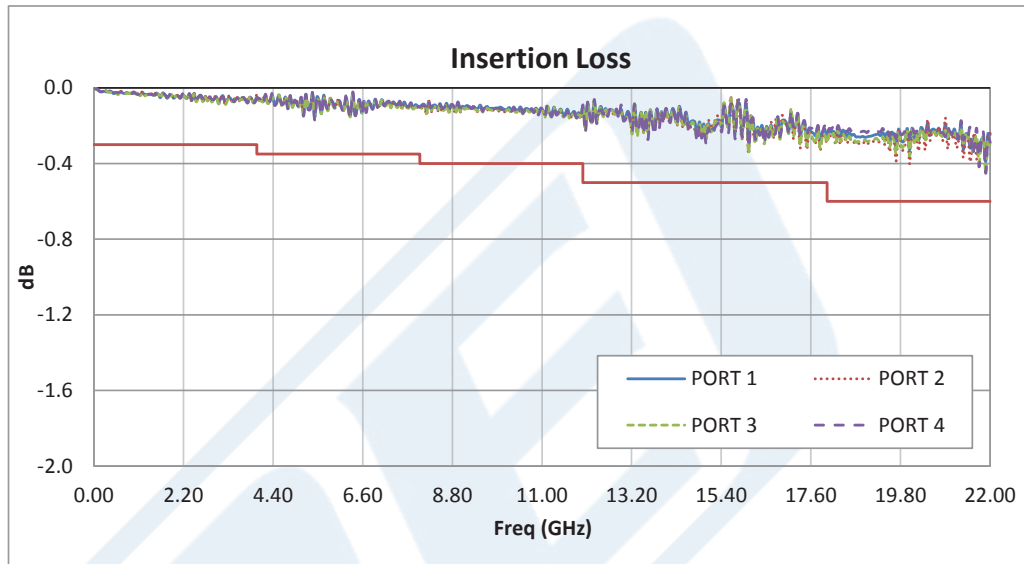


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Typical Performance Data



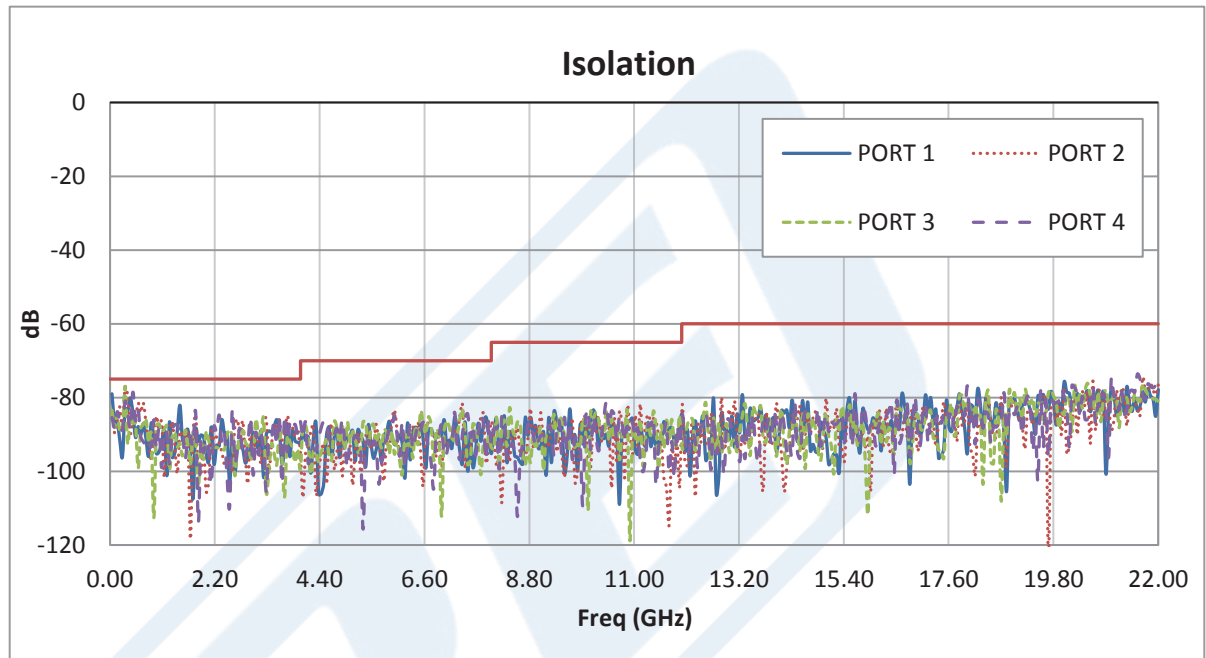
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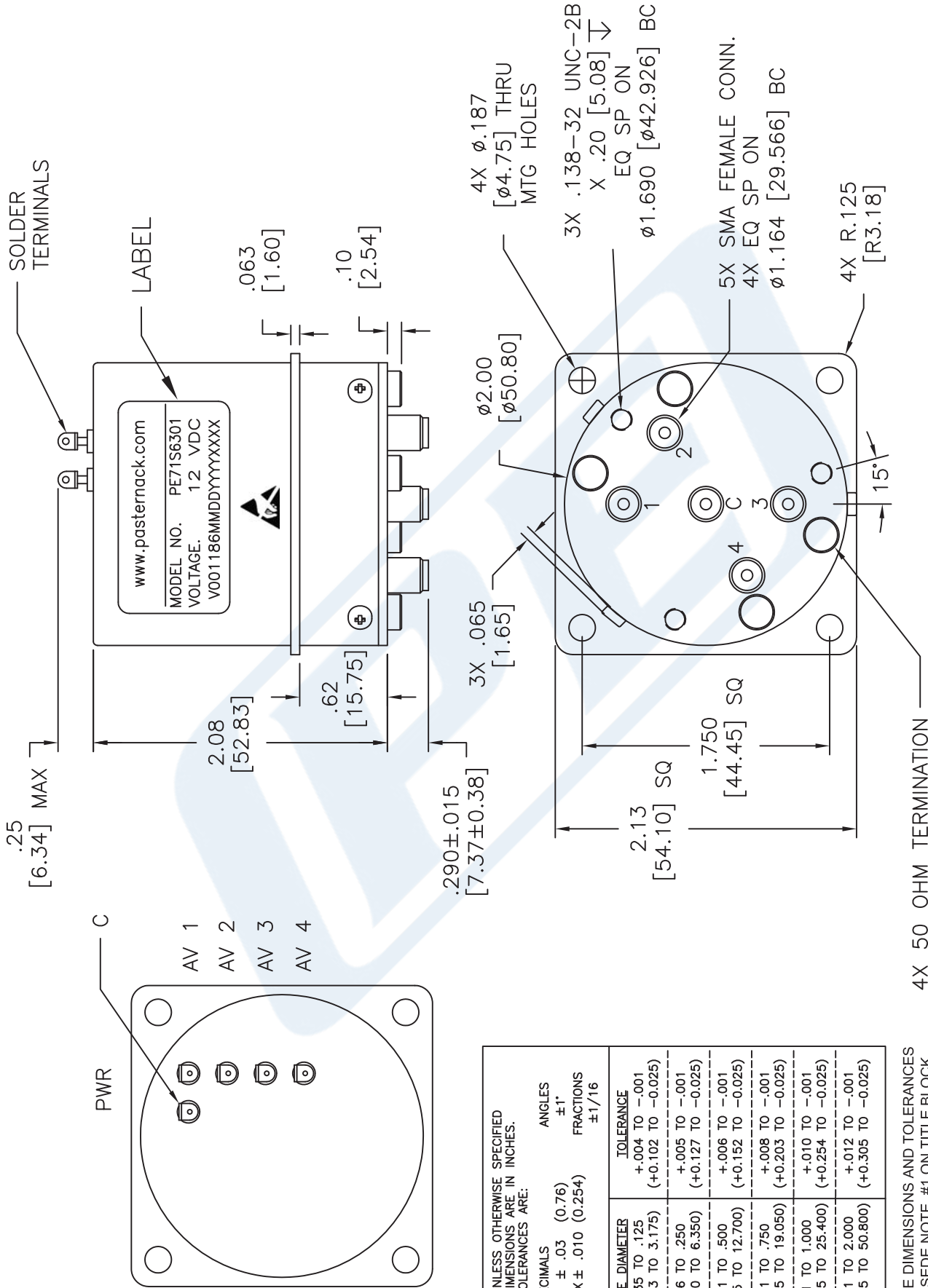
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE71S6301 CAD Drawing

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		ANGLES
DECIMALS	.XX ± .03 (0.76)	±1°
FRACTIONS	.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.

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DWG TITLE  
**PE71S6301**

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 090115

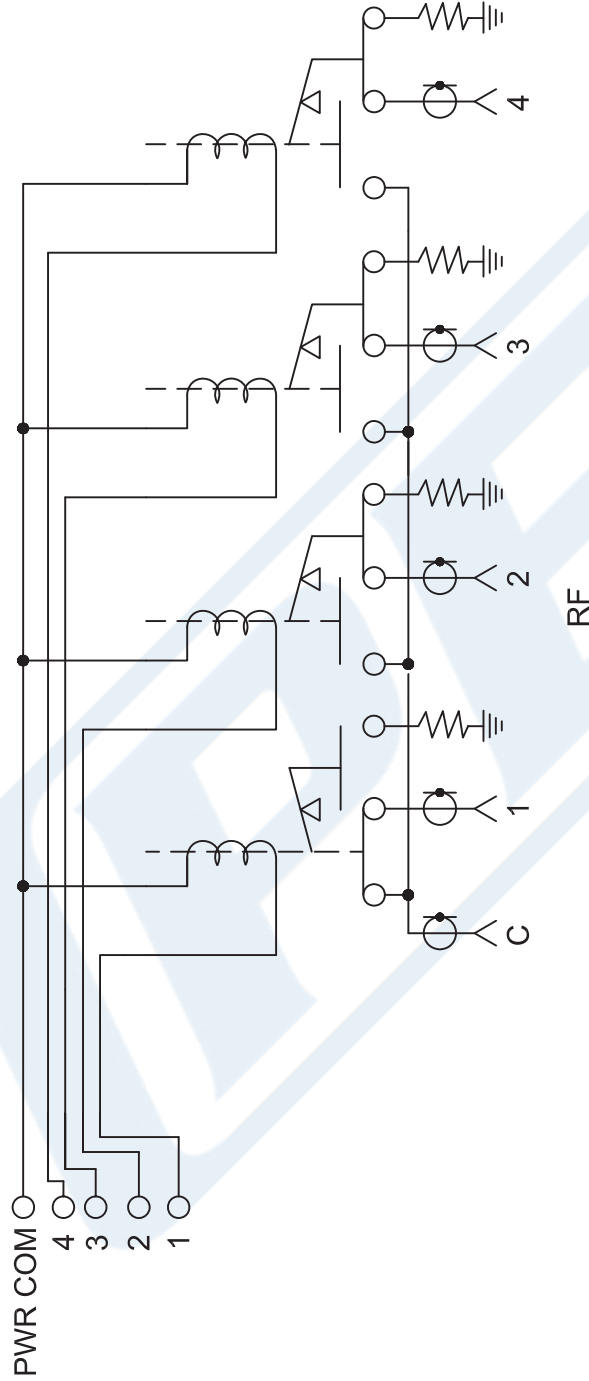
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SIZE A

2233

# PE71S6301 CAD Drawing

SP4T Electromechanical Relay Normally Open Switch  
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SCHEMATIC NORMALLY OPEN SHOWN IN DE-ENERGIZED POSITION

DWG TITLE

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2233



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