

SPDT Electromechanical Relay Latching Switch DC to 26.5 GHz,  
SMA, 20 Watts, 12V Control, Indicators, TTL, Self Cut Off, Diodes

## Electromechanical Relay Switches Technical Data Sheet

**PE71S6100**

### Features

- Single Pole Double Throw Relay Switch
- DC to 26.5 GHz Frequency Range
- 1M Cycle Min Operating Life
- Latching Actuator
- Self Cut Off, TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 0.5 dB max
- Isolation 50 dB min
- 20 Watts Avg Power Max
- Switching Sequence Break Before Make

### Applications

- Test & Measurement
- Communications System
- Instrumentation

### Description

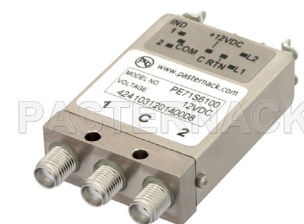
The PE71S6100 is a Single Pole Double Throw Electromechanical Relay Switch that operates from DC to 26.5 GHz and has a rating of 20 Watts input power (CW) in a Break Before Make condition. The design features a Latching Actuator with Self Cut Off circuitry, TTL Logic Driver, Position Indicators, Suppression 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 +12 Vdc operating voltage. Performance is guaranteed over -25°C to +85°C and the switch assembly is RoHS compliant. The package interface uses solder terminals and SMA Female connectors.

### Electrical Specifications

|                    |   |
|--------------------|---|
| Switch Type        | SPDT, Reflective                            |
| Actuator Type      | Latching                                    |
| Switching Sequence | Break Before Make                           |
| Actuator Options   | Indicators, TTL Logic, Self Cut Off, Diodes |
| TTL Control        | on: 2.4 to 5 Volts<br>off: 0 to 0.8 Volts   |

| Description                       | Minimum | Typical | Maximum | Units |
|-----------------------------------|---------|---------|---------|-------|
| Frequency Range                   | DC      |         | 26.5    | GHz   |
| Impedance                         |         | 50      |         | Ohms  |
| Operating Voltage                 |         | 12      |         | Volts |
| Actuating Current @ 12 Volts      |         | 200     |         | mA    |
| VSWR                              |         |         | 1.5:1   |       |
| Insertion Loss                    |         |         | 0.5     | dB    |
| Isolation                         | 50      |         |         | dB    |
| Input Power (CW)<br>(at 26.5 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: [SPDT Electromechanical Relay Latching Switch DC to 26.5 GHz, SMA, 20 Watts, 12V Control, Indicators, TTL, Self Cut Off, Diodes PE71S6100](#)



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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 26.5 | GHz   |
| VSWR, Max           | 1.25:1  | 1.25:1 | 1.3:1   | 1.35:1   | 1.5:1      |       |
| Insertion Loss, Max | 0.2     | 0.25   | 0.3     | 0.4      | 0.5        | dB    |
| Isolation, Min      | 80      | 75     | 70      | 60       | 50         | dB    |

### Mechanical Specifications

#### Size

|                           |                      |
|---------------------------|----------------------|
| Length                    | 1.83 in [46.48 mm]   |
| Width/Diameter            | 1.27 in [32.26 mm]   |
| Height                    | 0.5 in [12.7 mm]     |
| Weight                    | 0.148 lbs [67.13 g]  |
| Body Material and Plating | Aluminum             |
| Package Type              | Connectorized Module |
| Operating Life            | 1,000,000 Cycles     |
| Switching Time            | 20 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 +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)  
RoHS Compliant

### Plotted and Other Data

Notes:

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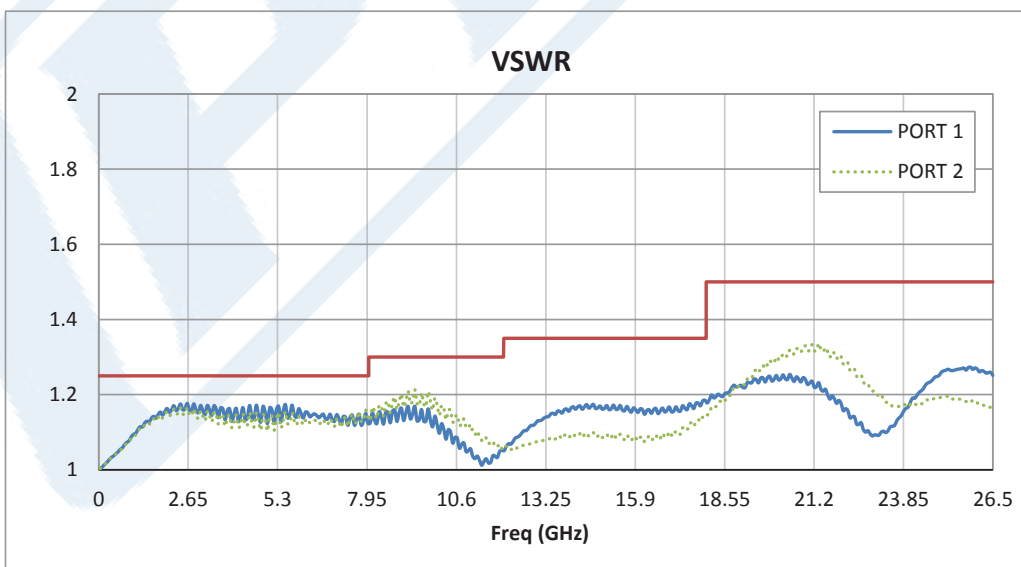
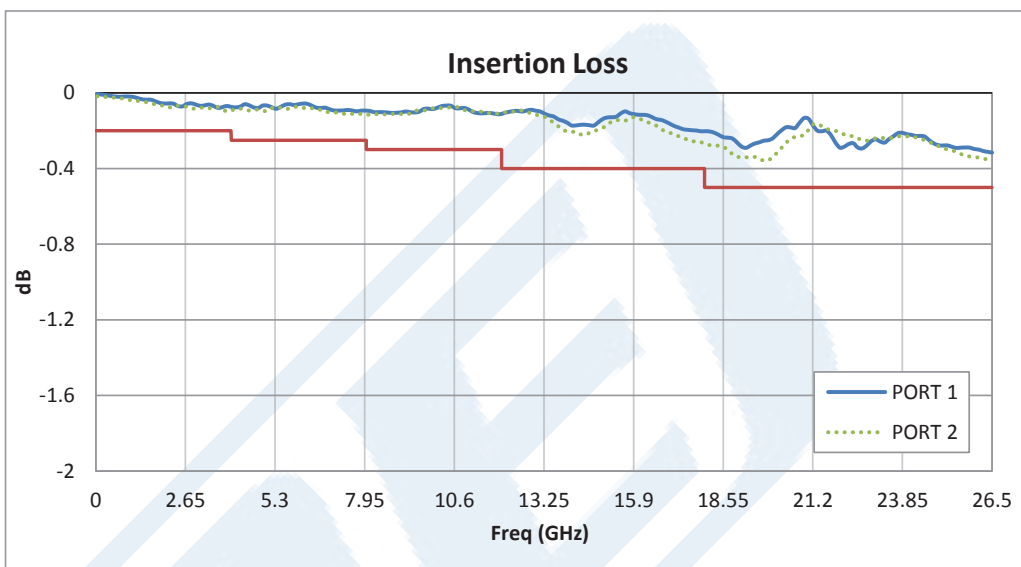
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## Electromechanical Relay Switches Technical Data

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### Typical Performance Data



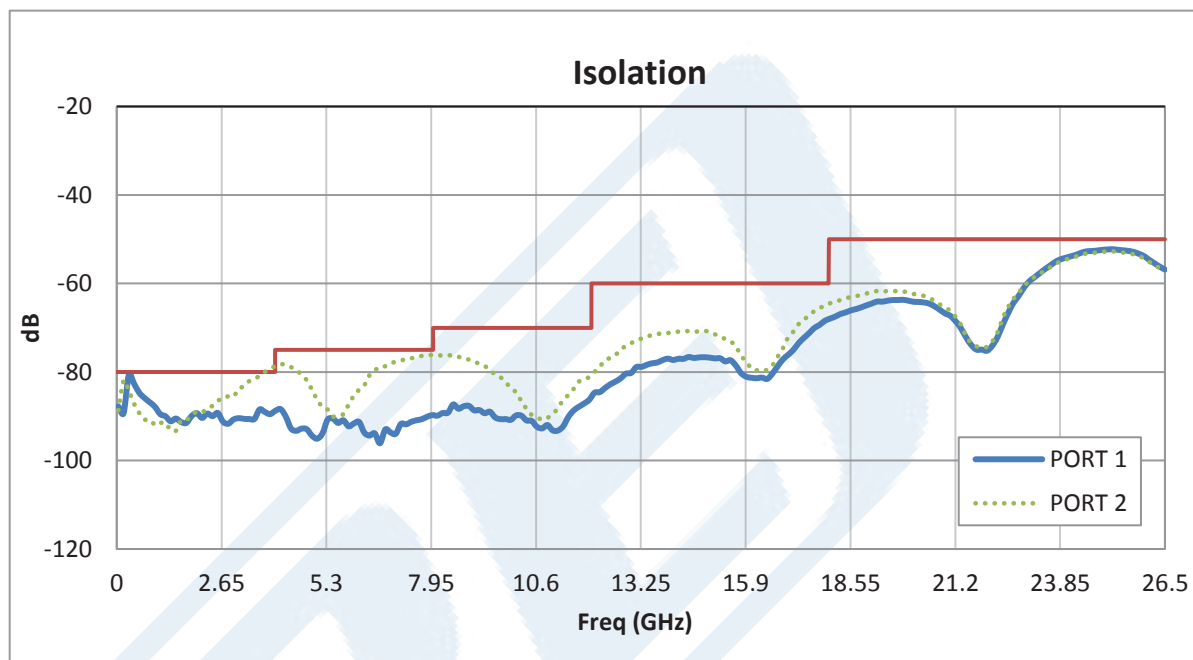
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SPDT Electromechanical Relay Latching Switch DC to 26.5 GHz, SMA, 20 Watts, 12V Control, Indicators, TTL, Self Cut Off, Diodes from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

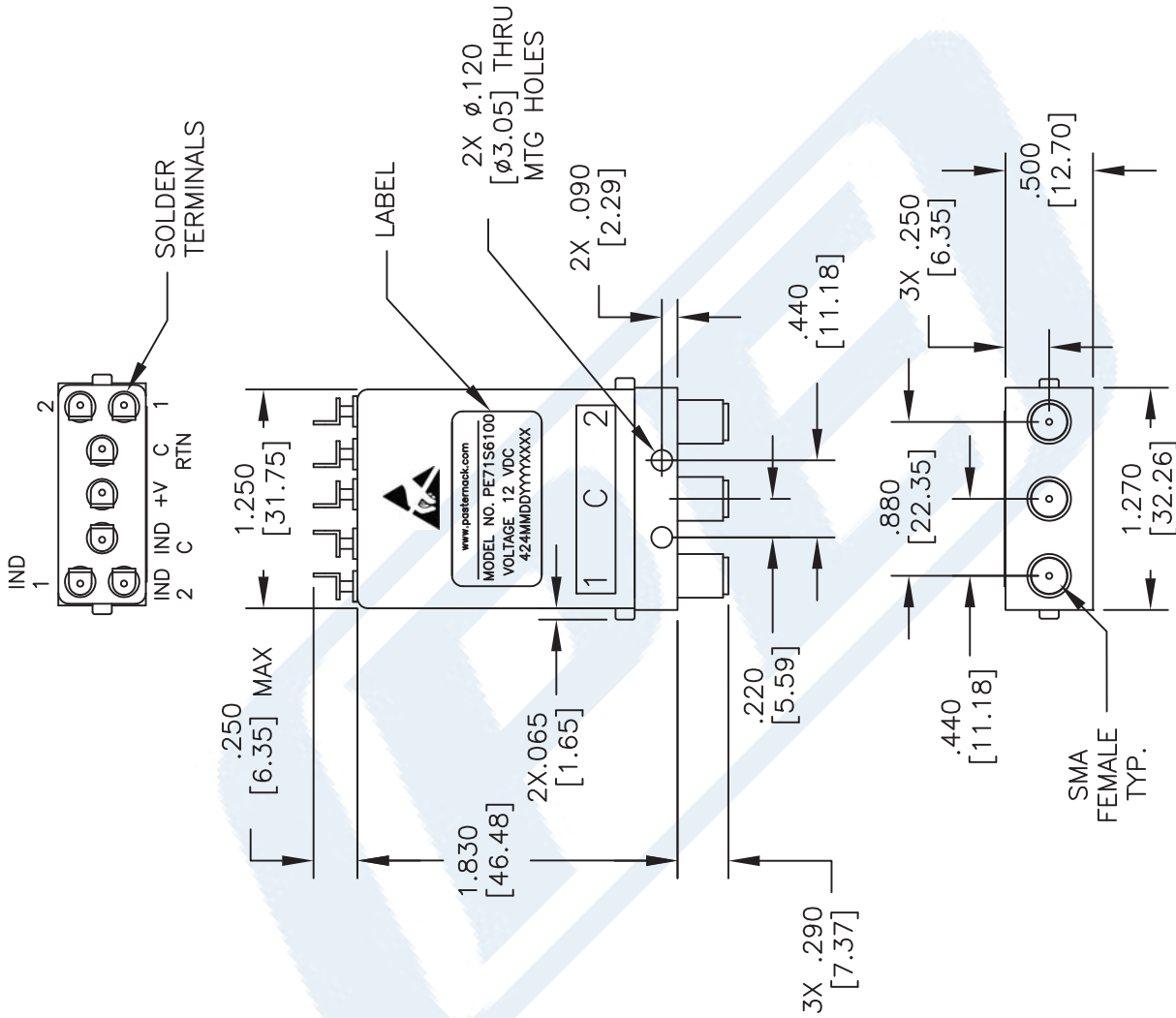
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URL: <http://www.pasternack.com/sma-spdt-electromechanical-relay-switch-26.5-ghz-indicators-latching-pe71s6100-p.aspx>

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.

# PE71S6100 CAD Drawing

SPDT Electromechanical Relay Latching Switch DC to 26.5 GHz, SMA,  
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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
TOLERANCES ARE:

DECIMALS ANGLES FRACTIONS  
.XX ±.03 ± 1° ± 1/16  
.XXX ±.010

| HOLE DIAMETER  | TOLERANCE     |
|----------------|---------------|
| .0135 TO .125  | + .004/- .001 |
| .126 TO .250   | + .005/- .001 |
| .251 TO .500   | + .006/- .001 |
| .501 TO .750   | + .008/- .001 |
| .751 TO 1.000  | + .010/- .001 |
| 1.001 TO 2.000 | + .012/- .001 |

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

**PE PASTERNAK**  
THE ENGINEER'S RF SOURCE

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DWG TITLE

**PE71S6100**

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

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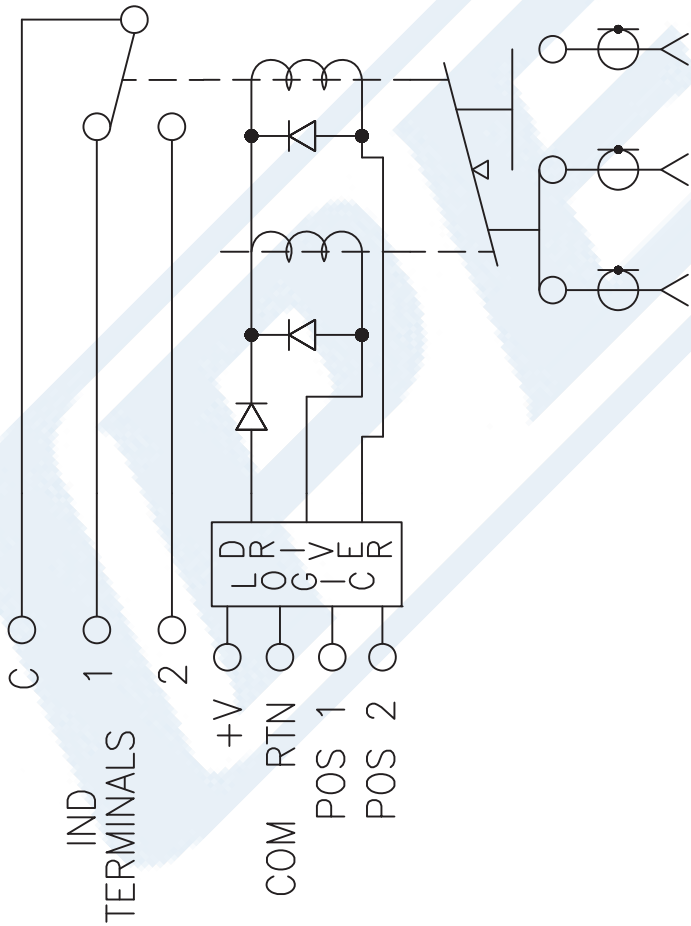
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SIZE A

200

PE71S6100 CAD Drawing

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SCHEMATIC LATCHING SHOWN IN POSITION 1

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200

SIZE A

SCALE N/A

CAD FILE 030415

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