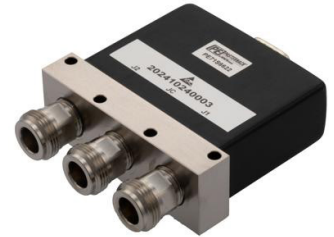


## SPDT Electromechanical Relay Latching Switch, DC to 12 GHz, up to 200W, 12V, Self Cut Off, TTL, Diodes, N, 5M Lifecycles



### PE71S6622

#### Features

- Single Pole Double Throw
- DC to 12 GHz Frequency Range
- Isolation greater than 60 dB minimum
- 5M Cycle Min Operating Life
- +12 Volt DC
- 200 Watt average Power
- Latching Self Cut Off Actuator
- TTL Logic Control
- Suppression Diodes
- Indicators
- -25 to +65°C Operating Temperature
- Insertion Loss as low as 0.5 dB Max
- VSWR as low as 1.4:1 max
- N-Type Female RF connectors
- 9 Pin D-Sub connector for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

#### Applications

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IOT

#### Description

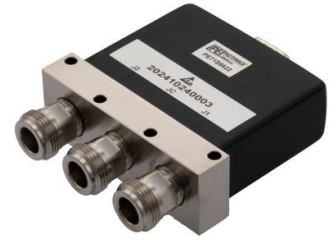
The PE71S6622 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 200 Watts of CW input power in a break before make condition. The 50 Ohm design is rated for 5M life cycles for high reliability operation and features a Latching Self Cut Off actuator, which maintains its position without continuous power, reducing power consumption and ensuring stable operation even during power loss. Additional features include TTL control logic, suppression diodes which limit voltage spikes or reverse current, and indicators. Impressive performance includes insertion loss less than 0.5 dB maximum and isolation greater than 60 dB minimum. The Latching actuator requires +12 Vdc bias voltage, and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports N-Type Female connectors and a 9 Pin D-Sub connector for DC Control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

#### Electrical Specifications (TA = +25°C, DC Voltage = 12 Vdc)

|                     |   |
|---------------------|---|
| Switch Type         | SPDT                                      |
| Actuator Type       | Latching                                  |
| Switching Sequence  | Make Before Break                         |
| Actuator Options    | Self Cut Off, TTL Logic, Diodes           |
| TTL Control         | on: 2.4 to 5 Volts<br>off: 0 to 0.8 Volts |
| TTL Control Current | 200 mA at 5 Volts<br>5 mA at 0.8 Volts    |

| Description                  | Min | Typ | Max | Units |
|------------------------------|-----|-----|-----|-------|
| Frequency Range              | DC  |     | 12  | GHz   |
| Impedance                    |     | 50  |     | Ohms  |
| Operating Voltage            |     | 12  |     | Volts |
| Actuating Current @ 12 Volts |     |     | 200 | mA    |
| 200mA max @ 12Vdc and 20°C   |     |     |     |       |

SPDT Electromechanical Relay Latching  
Switch, DC to 12 GHz, up to 200W, 12V, Self  
Cut Off, TTL, Diodes, N, 5M Lifecycles



## PE71S6622

| Description  | Min | Typ | Max   | Units |
|--|-----|-----|-------|-------|
| VSWR   |     |     | 1.4:1 |       |
| Insertion Loss   |     |     | 0.5   |       |
| Isolation  | 60  |     |       | dB    |
| Input Power (CW)<br>(Average Power for Cold Switching (Reference<br>RF Power Rating Table for Cold Switching)) |     | 200 |       | Watts |
| Switching Time   |     | 20  |       | ms    |

### Performance by Frequency

| Description         | F1      | F2     | F3     | F4      | F5 | Units |
|---------------------|---------|--------|--------|---------|----|-------|
| Frequency Range     | DC to 1 | 1 to 4 | 4 to 8 | 8 to 12 |    | GHz   |
| VSWR, Max           | 1.25:1  | 1.3:1  | 1.4:1  | 1.4:1   |    |       |
| Insertion Loss, Max | 0.3     | 0.4    | 0.4    | 0.5     |    | dB    |
| Isolation, Min      | 90      | 80     | 70     | 60      |    | dB    |

### Mechanical Specifications

#### Size

|                |                      |
|----------------|----------------------|
| Length         | 2.2 in [55.88 mm]    |
| Width/Diameter | 2.36 in [59.94 mm]   |
| Height         | 0.92 in [23.37 mm]   |
| Weight         | 0.379 lbs [171.91 g] |
| Finish         | Electroless Nickel   |
| Package Type   | Connectorized        |
| Operating Life | 5,000,000 Cycles     |

#### Connectors

|                   |                |
|-------------------|----------------|
| RF Connector Type | N Female       |
| Control Connector | D-Subminiature |

### Environmental Specifications

#### Temperature

|                 |  |
|-----------------|--|
| Operating Range | -25 to +65 deg C   |
| Shock           | MIL-STD-202 Method 213, Condition D (500G Non Operating)     |
| Vibration       | MIL-STD-202 Method 214, Condition D (100G RMS Non Operating) |

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

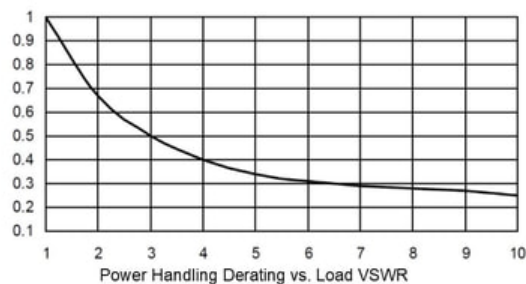
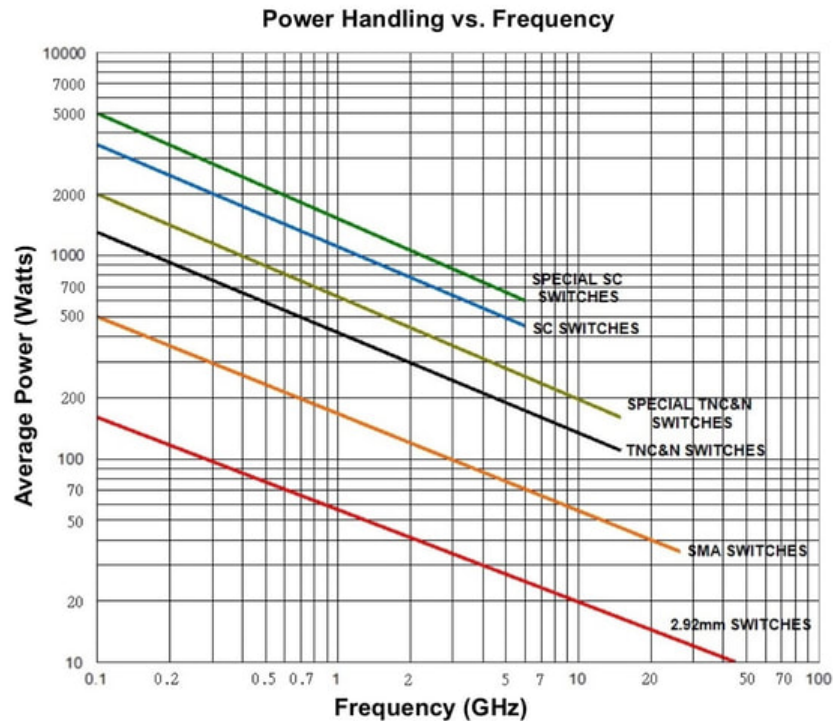
Notes:

SPDT Electromechanical Relay Latching  
Switch, DC to 12 GHz, up to 200W, 12V, Self  
Cut Off, TTL, Diodes, N, 5M Lifecycles

**PE71S6622**



#### Typical Performance Data



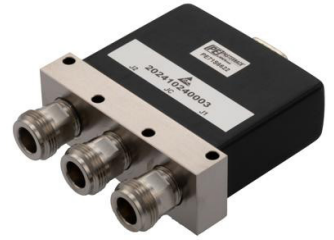
Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

## SPDT Electromechanical Relay Latching Switch, DC to 12 GHz, up to 200W, 12V, Self Cut Off, TTL, Diodes, N, 5M Lifecycles

### PE71S6622



SPDT Electromechanical Relay Latching Switch, DC to 12 GHz, up to 200W, 12V, Self Cut Off, TTL, Diodes, N, 5M Lifecycles from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% 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: [SPDT Electromechanical Relay Latching Switch, DC to 12 GHz, up to 200W, 12V, Self Cut Off, TTL, Diodes, N, 5M Lifecycles PE71S6622](https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-12-ghz-12v-ttl-diodes-n-pe71s6622-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-12-ghz-12v-ttl-diodes-n-pe71s6622-p.aspx>

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE71S6622 CAD Drawing

SPDT Electromechanical Relay Latching Switch, DC to 12 GHz, up to 200W, 12V, Self Cut Off, TTL, Diodes, N, 5M Lifecycles

