



SPDT Electromechanical Relay Latching Switch, Terminated,  
 DC to 18 GHz, up to 90W, 24V, Indicators, SMA

## Electromechanical Relay Switches Technical Data Sheet

PE71S6406

### Features

- Single Pole Double Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 85 dB typical
- 5M Cycle Min Operating Life
- +24 Volt DC
- 90 Watt average Power
- Latching Actuator
- 1 Watt Indicators
- Internally Terminated
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.15 dB Max
- VSWR as low as 1.2:1 max
- SMA Female RF connectors
- Solder Pins for DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

### Applications

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

### Description

The PE71S6406 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 18 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The design features a Latching actuator and is rated for 5M life cycles for high reliability operation. Impressive performance includes insertion loss less than 0.15 dB typical and isolation greater than 85 dB typical. The Latching actuator includes Indicators and a +24 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports SMA Female connectors and Solder Pins 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

Switch Type	SPDT, Terminated
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators
Indicator Rating	1 Watts / 32 Volts / 125 mA

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Termination Impedance		50		Ohms
Operating Voltage	22	24	26	Volts
Actuating Current @ 24 Volts		110		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.35	dB
Isolation	65	85		dB
Input Power (CW)			60	Watts
Termination Input Power (CW)			5	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, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](#)



SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

## Electromechanical Relay Switches Technical Data

PE71S6406

Switching Time 20 ms Max

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.15	0.25	0.35			dB
Isolation, Min	85	70	65			dB
Input Power, Typ (CW)	90	75	60			Watts

### Mechanical Specifications

#### Size

Package Type Connectorized  
Operating Life 5,000,000 Cycles

#### Connectors

RF Connector Type SMA Female  
Control Connector Solder Pin

### Environmental Specifications

#### Temperature

Operating Range -25 to +70 deg C  
Storage Range -55 to +100 deg C

#### Shock

MIL-STD-202 Method 213, Cond. D 500G Non Operating

#### Vibration

MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating

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

### 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: [SPDT Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](#)

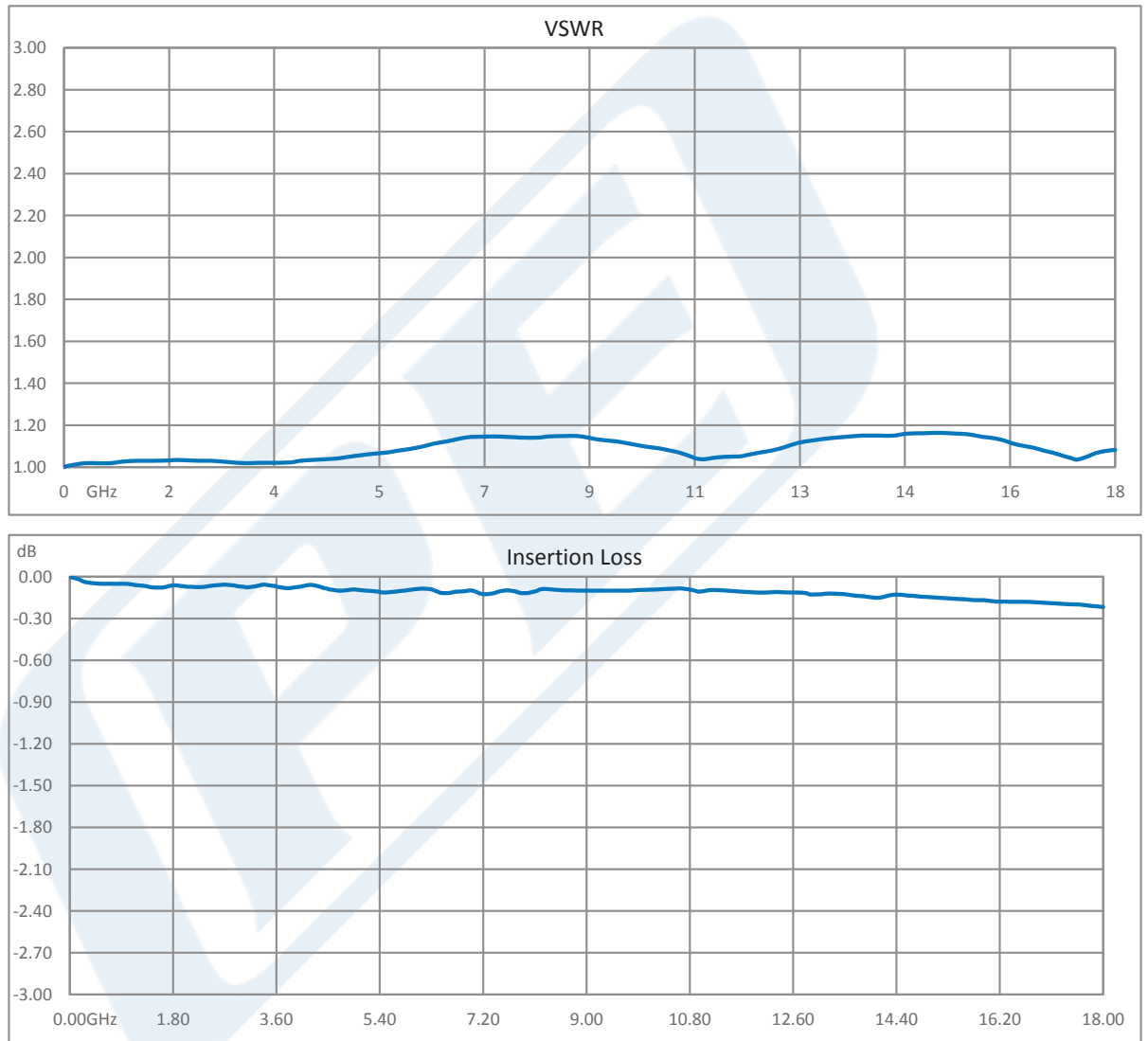


SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

Electromechanical Relay Switches Technical Data

PE71S6406

Typical Performance Data



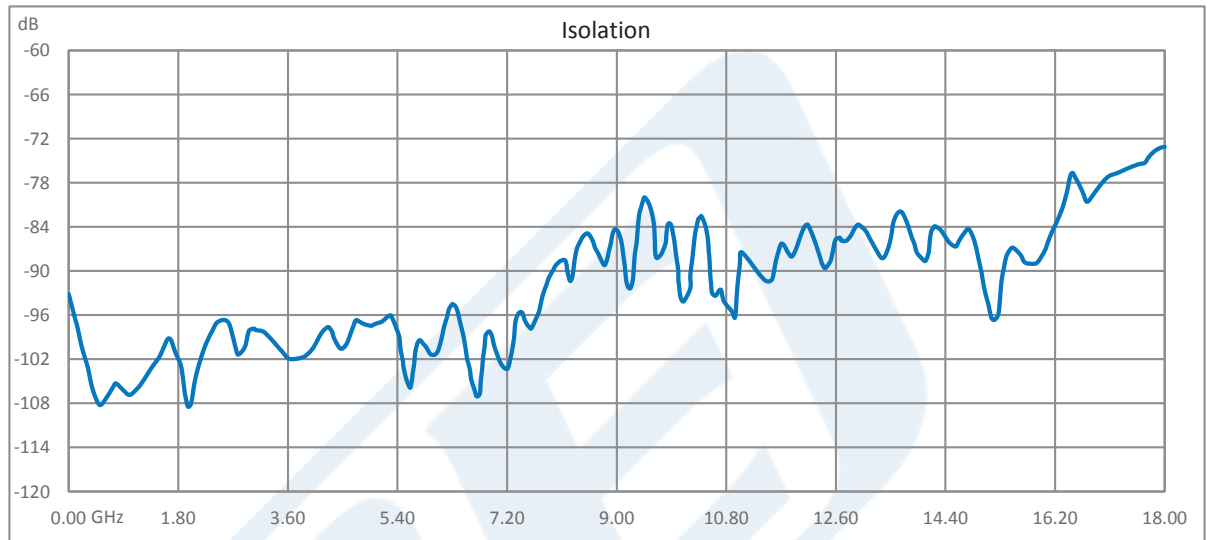
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](#)



SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

Electromechanical Relay Switches Technical Data

PE71S6406



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, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](#)

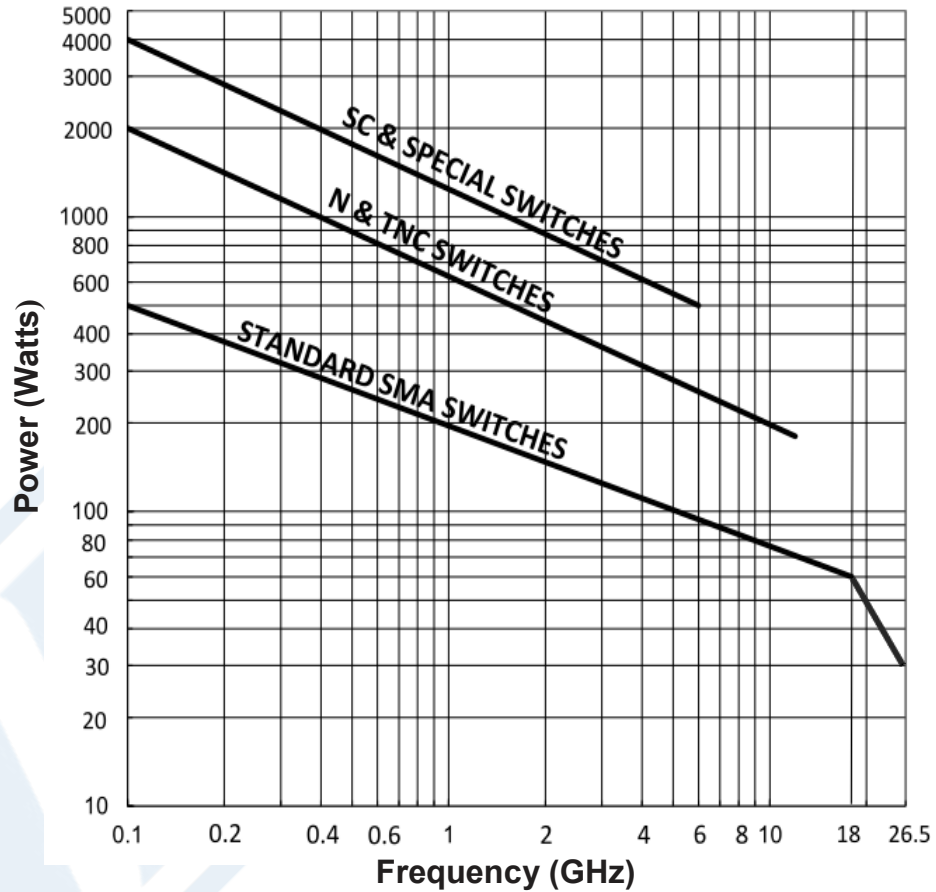


SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

Electromechanical Relay Switches Technical Data

PE71S6406

Power Handling vs. Frequency & Connector Type



**Environmental and Test Conditions:**

- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

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, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](#)



SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

## Electromechanical Relay Switches Technical Data

PE71S6406

SPDT Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA 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, Terminated, DC to 18 GHz, up to 90W, 24V, Indicators, SMA PE71S6406](https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-terminated-18-ghz-60w-24v-indicators-sma-pe71s6406-p.aspx)

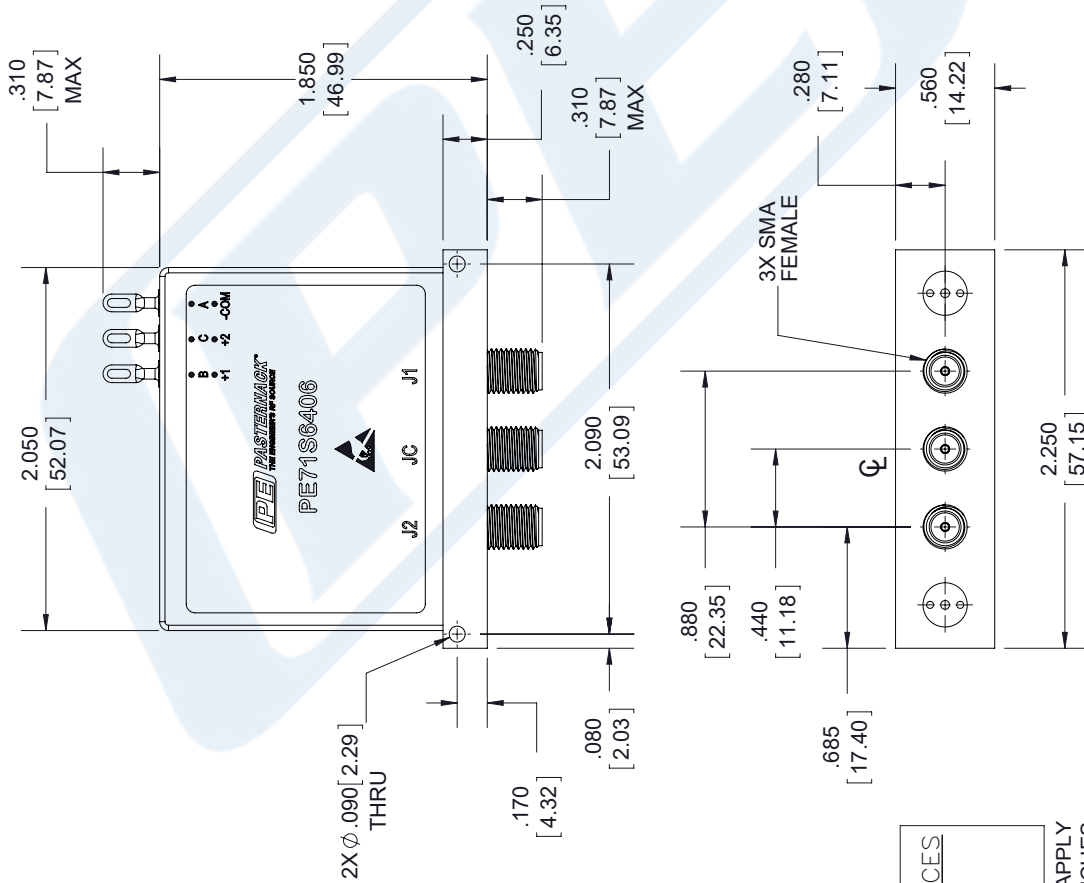
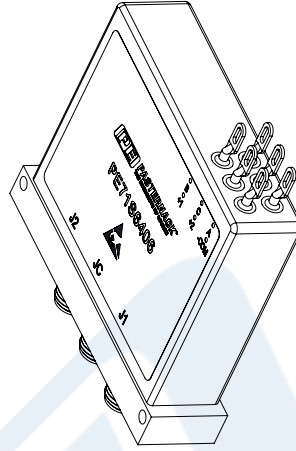
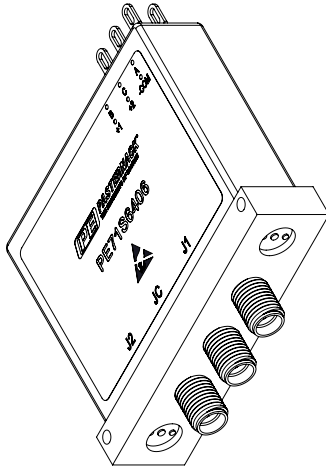
URL: <https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-terminated-18-ghz-60w-24v-indicators-sma-pe71s6406-p.aspx>

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.

# PE71S6406 CAD Drawing

SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA

6X SOLDER TERMINALS  
SOLDER WIRE USING SN96,  
MAXIMUM TEMP 250°C FOR  
NO MORE THAN 5 SEC.



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES

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  
**PE71S6406**

**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

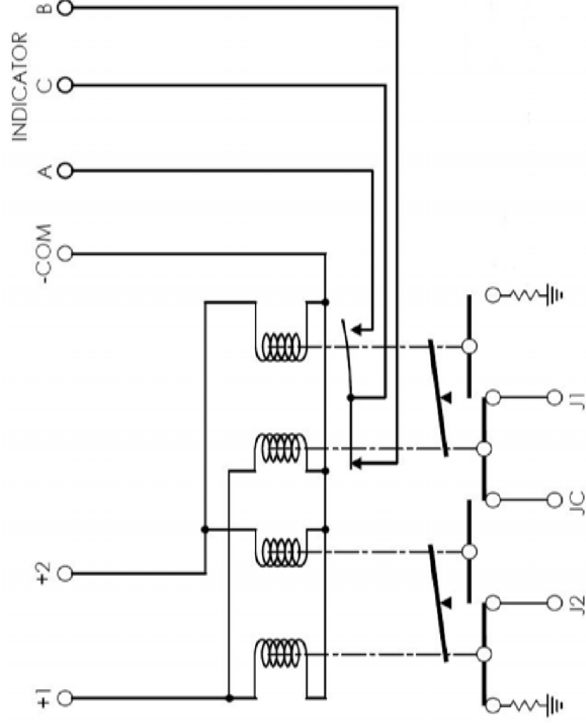
CAD FILE 090617 SCALE N/A SIZE A 7361

CAGE CODE **53919**



# PE71S6406 CAD Drawing

SPDT Electromechanical Relay Latching Switch, Terminated,  
DC to 18 GHz, up to 90W, 24V, Indicators, SMA



**SCHEMATIC SHOWN IN LATCHING POSITION**

OPERATIONAL LOGIC TABLE						
TERMINALS	RF PORTS		INDICATOR		TERMINATION	
	J1-JC	J2-JC	B-C	A-C	J2 TERMINATED	J1 TERMINATED
1 2	NO CHANGE	NO CHANGE	NO CHANGE	NO CHANGE	NO CHANGE	NO CHANGE
0 0	OFF	ON	OFF	ON	OFF	ON
1 0	ON	OFF	ON	OFF	ON	OFF
1 1	FORBIDDEN	FORBIDDEN	FORBIDDEN	FORBIDDEN	FORBIDDEN	FORBIDDEN

**STANDARD TOLERANCES**

.X ±0.2  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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

DWG TITLE

PE71S6406

CAGE CODE 53919

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].

CAD FILE 090617

SCALE N/A

SIZE A

7361