



SPDT Electromechanical Relay Latching Switch, Terminated,
 DC to 18 GHz, up to 90W, 28V, Indicators, TTL, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6407

Features

- Single Pole Double Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 85 dB typical
- 5M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Latching Actuator
- 1 Watt Indicators
- TTL Control
- 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 PE71S6407 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 TTL controlled actuator includes Indicators and 5 Watt Internal Terminations with a +28 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, TTL Logic
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts
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	26	28	30	Volts
Actuating Current @ 28 Volts		90		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.35	dB
Isolation	65	85		dB

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, 28V, Indicators, TTL, SMA PE71S6407](#)



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Input Power (CW)	60	Watts
Termination Input Power (CW)	5	Watts
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:

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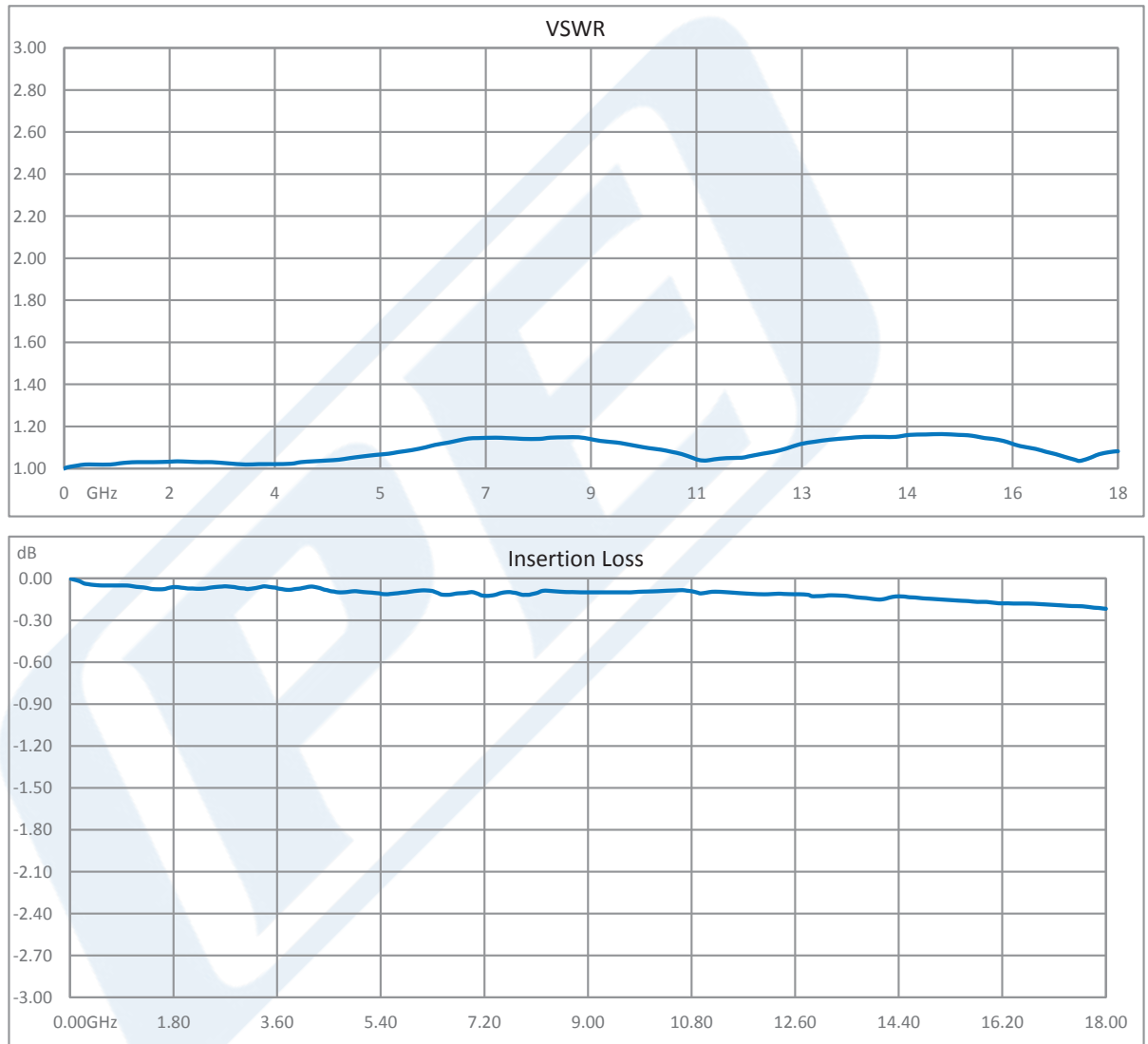


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Typical Performance Data



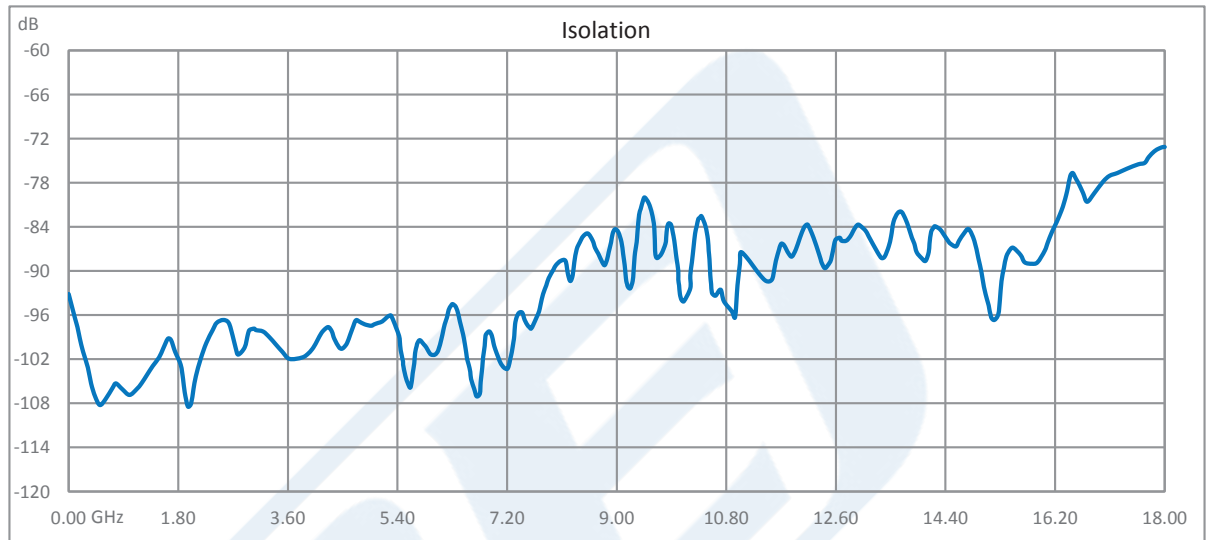
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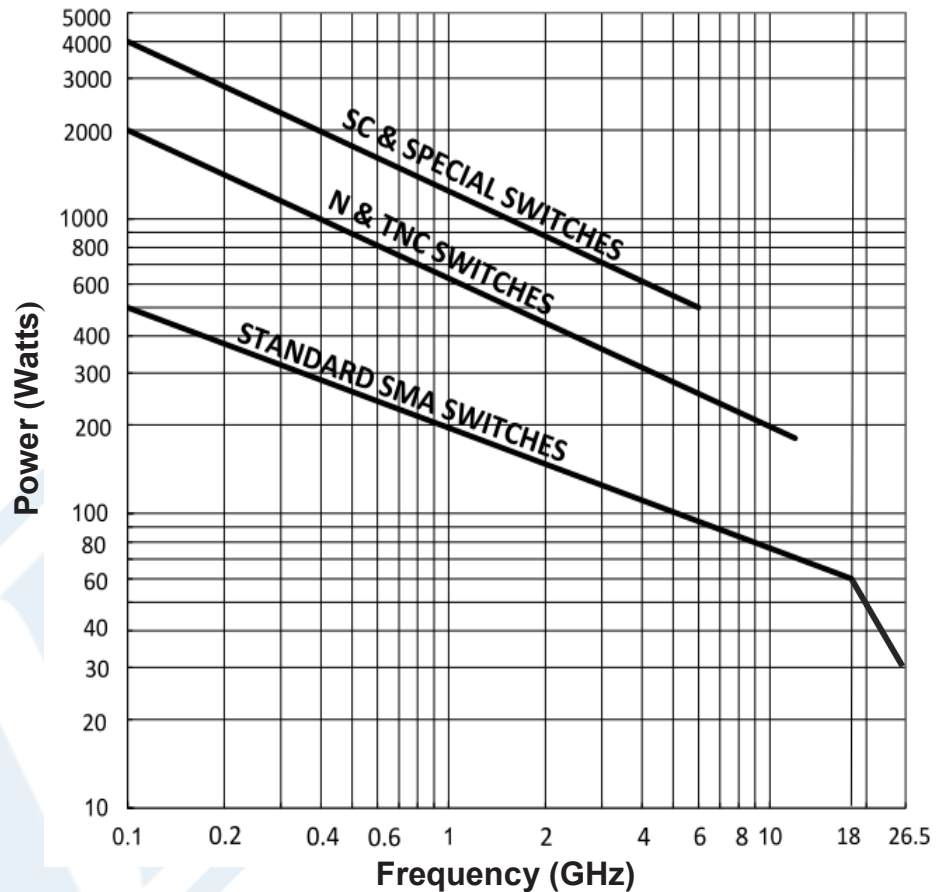


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Power Handling vs. Frequency & Connector Type



Environmental and Test Conditions:

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

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SPDT Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 90W, 28V, Indicators, TTL, 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.

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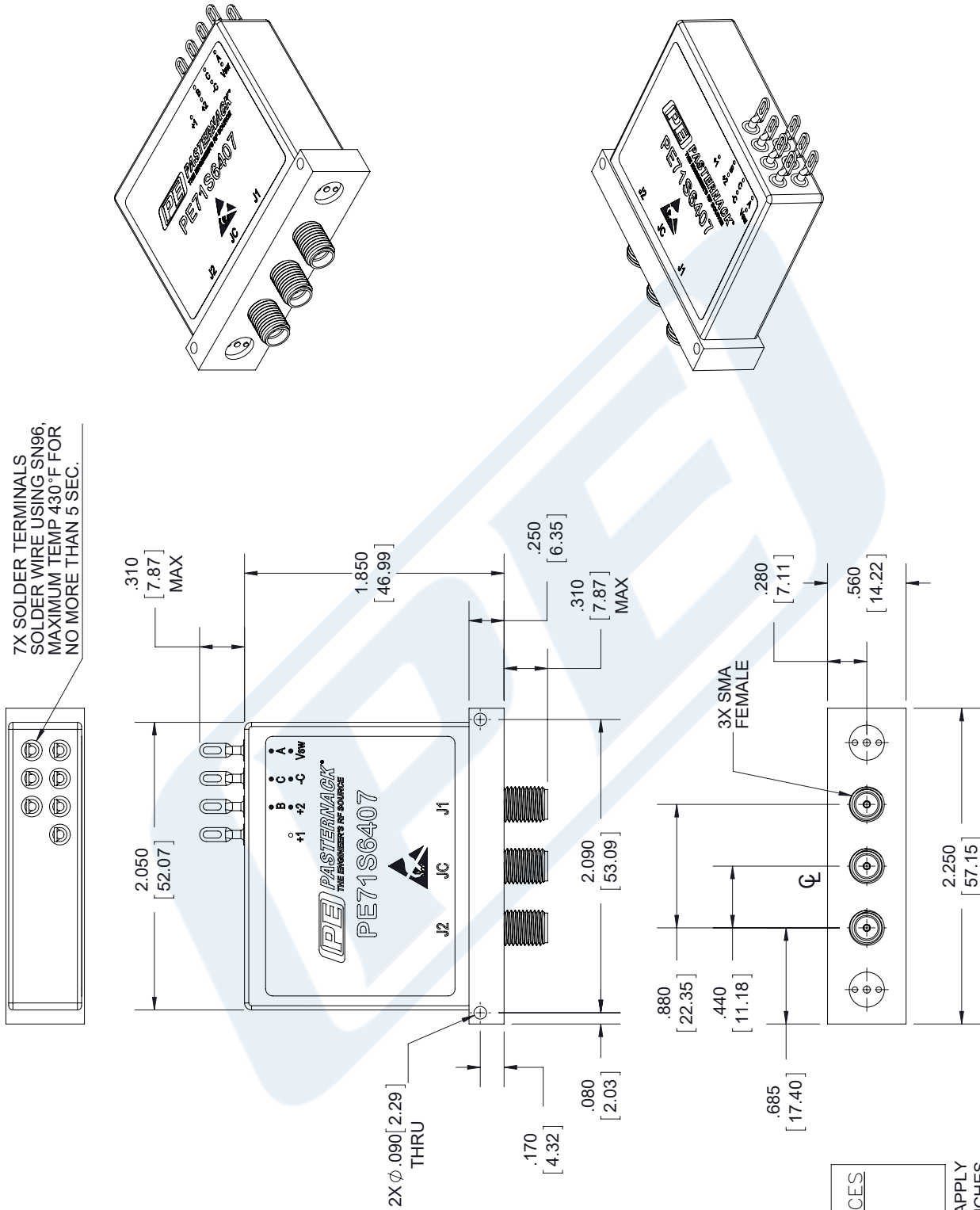
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE71S6407 CAD Drawing

SPDT Electromechanical Relay Latching Switch, Terminated,
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7X SOLDER TERMINALS
SOLDER WIRE USING SN96,
MAXIMUM TEMP 430°F 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

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DWG TITLE
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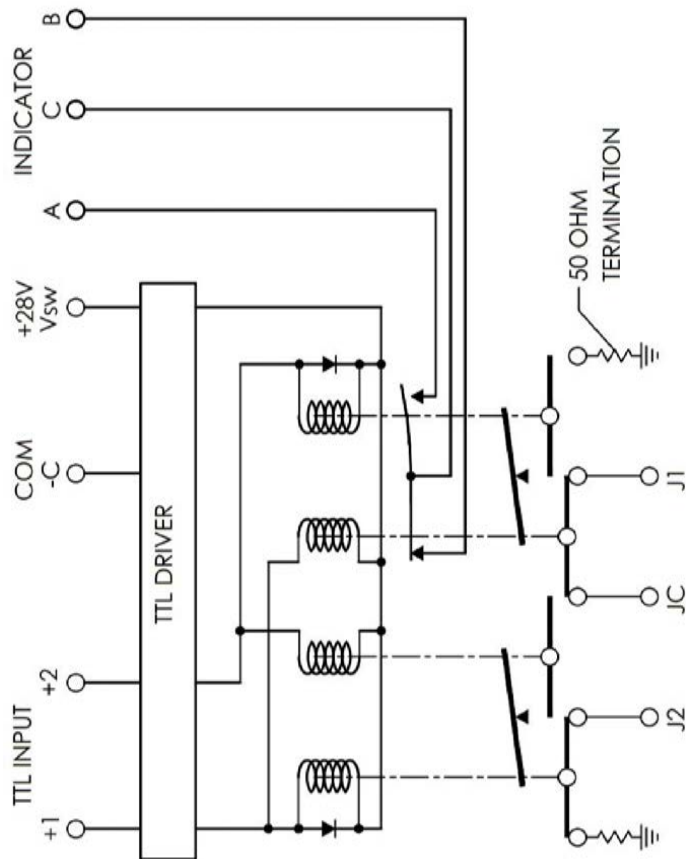
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NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME
3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE 090617 SCALE N/A SIZE A 7361

PE71S6407 CAD Drawing

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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	0	NO CHANGE	NO CHANGE	NO CHANGE
0	0	0	OFF	ON	OFF
0	1	0	ON	OFF	ON
1	0	1	FORBIDDEN	FORBIDDEN	FORBIDDEN
1	1	1	FORBIDDEN	FORBIDDEN	FORBIDDEN

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

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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SCALE N/A

SIZE A