



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

Electromechanical Relay Switches Technical Data Sheet

PE71S6404

Features

- Single Pole Double Throw
- DC to 18 GHz Frequency Range
- Isolation greater than 85 dB typical
- 2M Cycle Min Operating Life
- +28 Volt DC
- 90 Watt average Power
- Failsafe Actuator
- Internally Terminated
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.4 dB Max
- VSWR as low as 1.4:1 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 PE71S6404 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 Failsafe actuator and is rated for 2M 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 Failsafe actuator 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	Failsafe
Switching Sequence	Break before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Termination Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts		90		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.4	dB
Isolation	65	85		dB
Input Power (CW)			60	Watts
Termination Input Power (CW)			5	Watts
Switching Time			20	ms Max

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 Failsafe Switch, Terminated, DC to 18 GHz, up to 90W, 28V, SMA PE71S6404](#)



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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	0.4			dB
Isolation, Min	85	70	65			dB
Input Power, Typ (CW)	90	75	60			Watts

Mechanical Specifications

Size

Body Material and Plating
Package Type

Aluminum
Connectorized

Operating Life

2,000,000 Cycles

Connectors

RF Connector Type
RF Connector Contact Material and Plating
RF Connector Body Material and Plating
Control Connector

SMA Female
Beryllium Copper, Gold
Aluminum, Nickel
Solder Pin

Environmental Specifications

Temperature

Operating Range
Storage Range

-25 to +70 deg C
-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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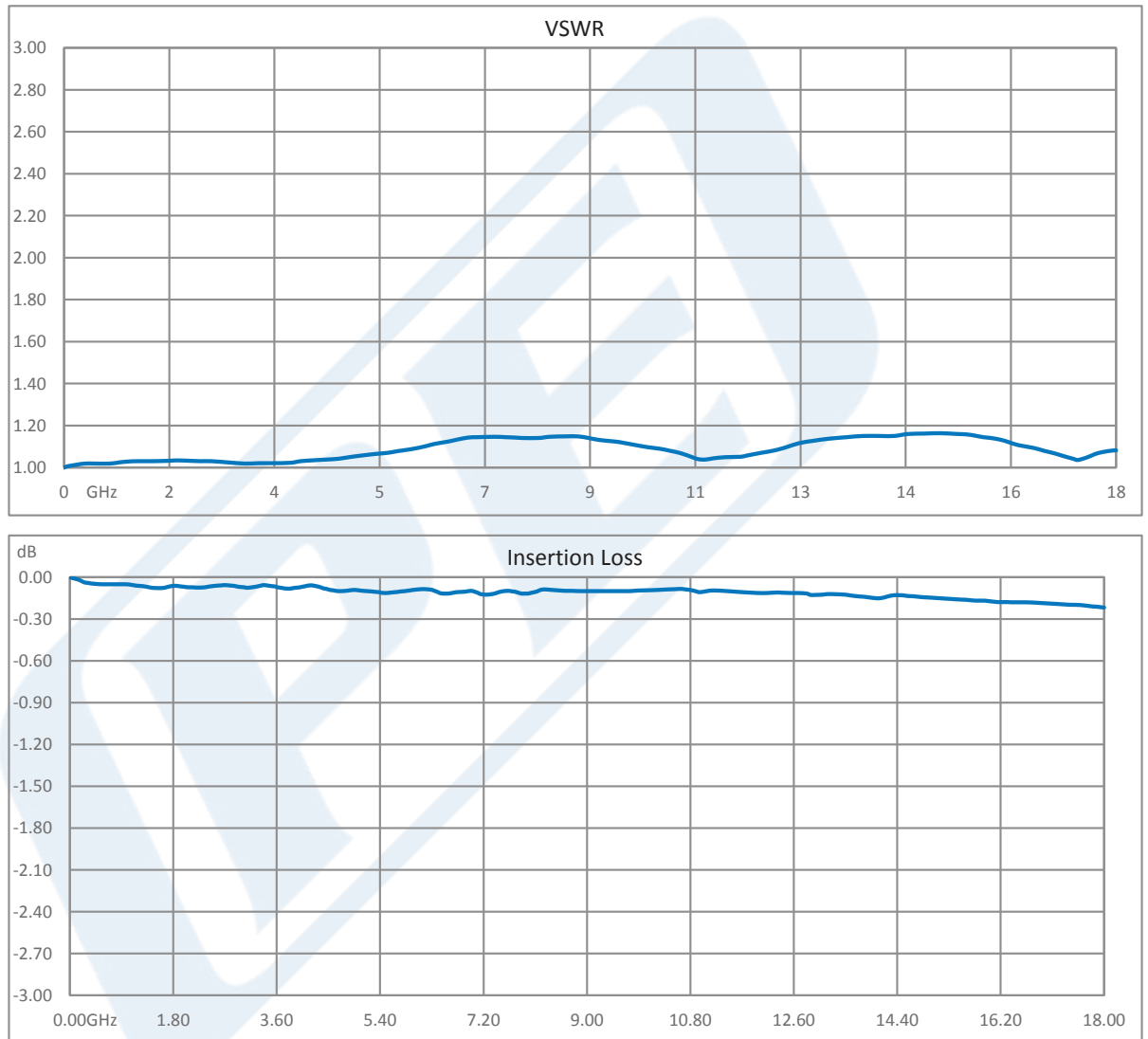


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Typical Performance Data



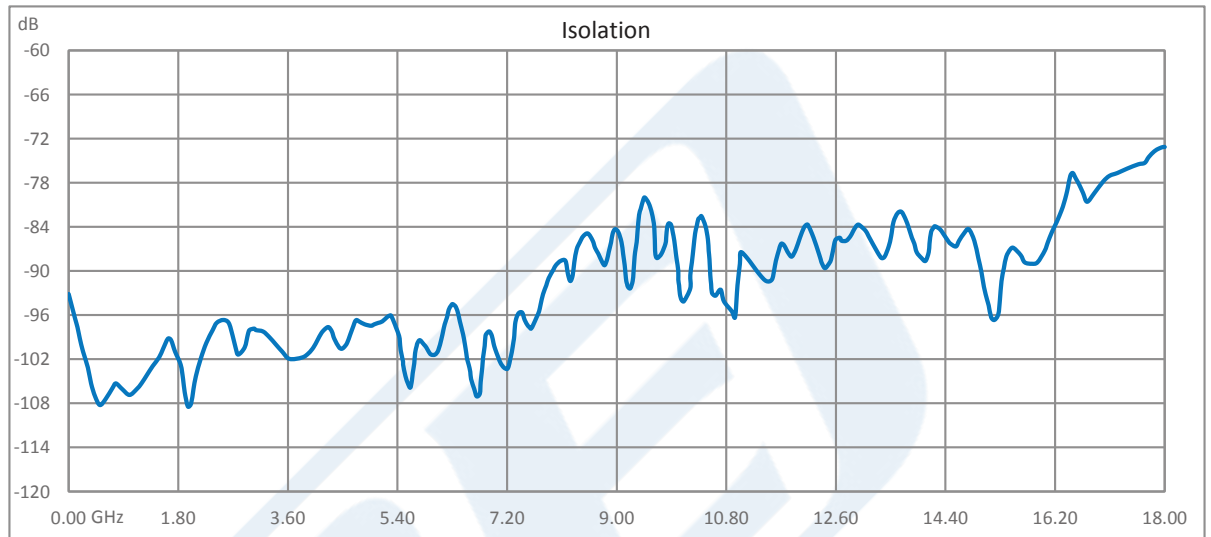
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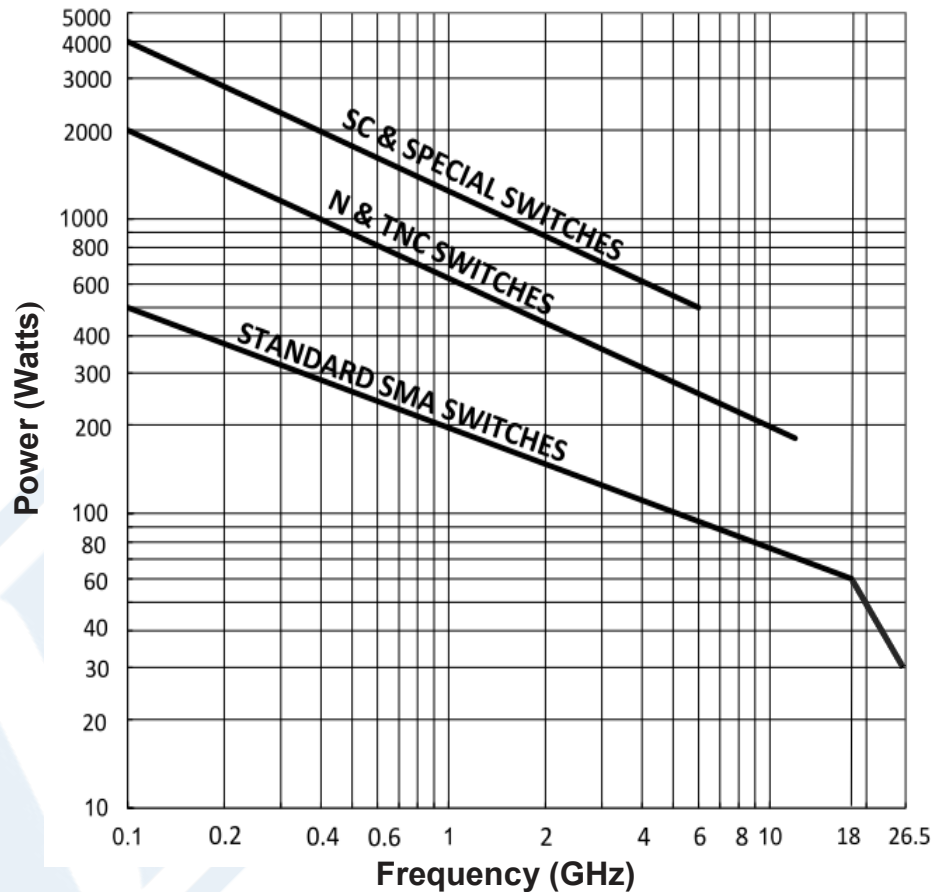


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Power Handling vs. Frequency & Connector Type



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 Failsafe Switch, Terminated, DC to 18 GHz, up to 90W, 28V, 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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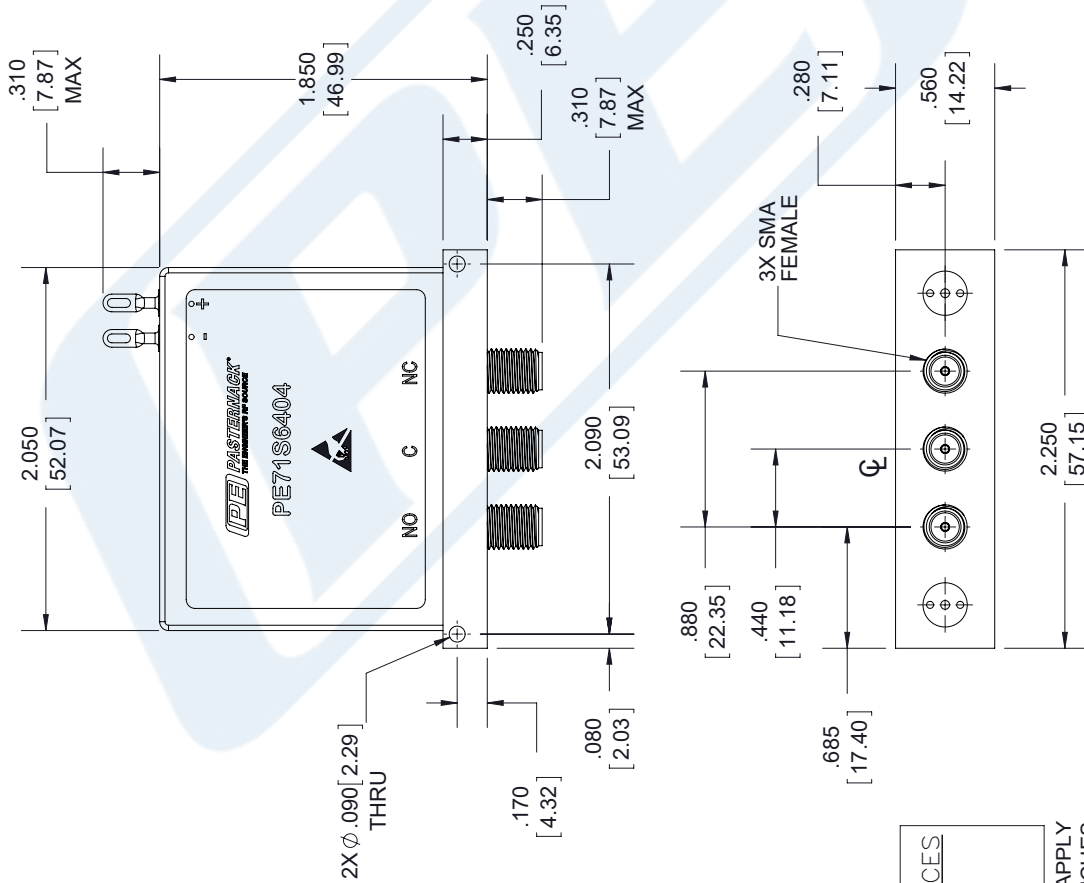
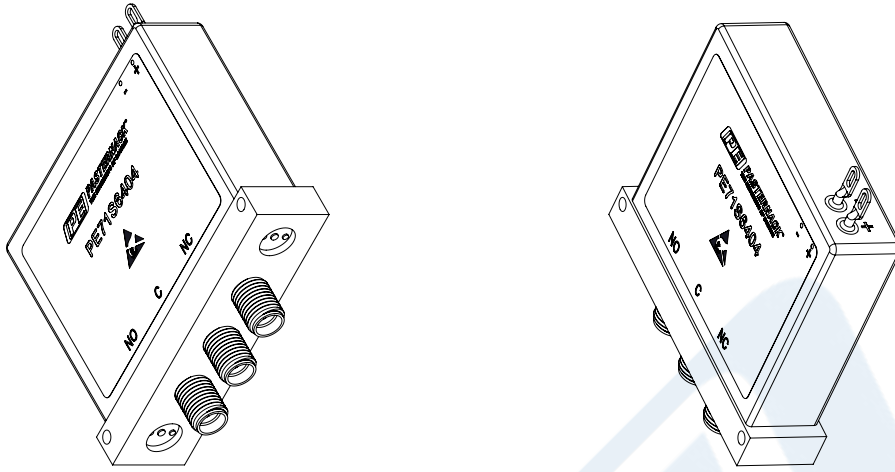
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PE71S6404 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, Terminated,
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2X 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



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DWG TITLE

PE71S6404

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].

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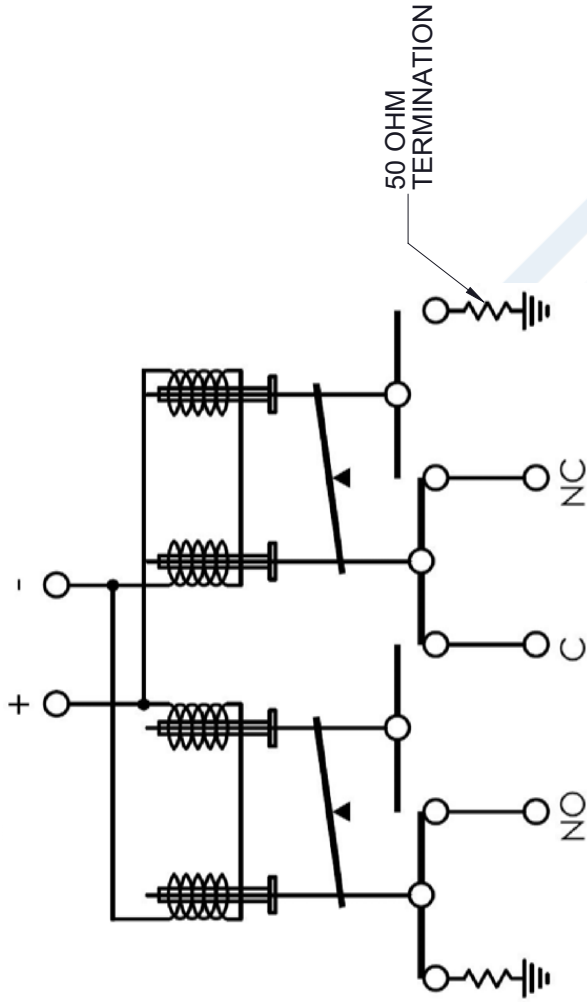
SCALE N/A

SIZE A

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PE71S6404 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, Terminated,
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SCHEMATIC SHOWN IN FAILSAFE POSITION

STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES



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