



**SPDT Electromechanical Relay Latching Switch with Self Cut-Off, DC to 26.5 GHz, up to 90W, 5M Lifecycles, 28V, Suppression Diodes, SMA**

**Electromechanical Relay Switches Technical Data Sheet**

**PE71S6440**

**Features**

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- Suppression Diodes
- 5M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 max
- Solder Terminal Pins for DC Control
- +28 Volt DC Bias
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 90 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions

**Applications**

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

**Description**

The PE71S6440 is a Single Pole Double Throw (SP2T) electromechanical relay switch that operates across a wide frequency range of DC to 26.5 GHz and can handle up to 90 Watts of average power in a break before make condition. The 50 Ohm design is rated for 5 million lifecycles and features a Latching Self Cut-Off Actuator that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Additional features include suppression diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.3 dB insertion loss and isolation greater than 80 dB. This switch requires +28 Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports SMA female connectors and solder terminal 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
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	Self Cut Off, Diodes

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		26.5	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts			65	mA
VSWR		1.3:1	1.7:1	
Insertion Loss		0.3	0.6	dB
Isolation	50	80		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 with Self Cut-Off, DC to 26.5 GHz, up to 90W, 5M Lifecycles, 28V, Suppression Diodes, SMA PE71S6440](#)



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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	18 to 26.5		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.7:1		
Insertion Loss, Max	0.15	0.25	0.35	0.6		dB
Isolation, Min	80	70	60	50		dB

### Mechanical Specifications

#### Size

Length 2.05 in [52.07 mm]  
Width/Diameter 1.5 in [38.1 mm]  
Height 0.52 in [13.21 mm]

Finish NICKEL  
Package Type Connectorized

Operating Life 5,000,000 Cycles

#### Connectors

RF Connector Type SMA Female

### Environmental Specifications

#### Temperature

Operating Range -25 to +65 deg C  
Storage Range -55 to +100 deg C

Humidity Shock Moisture resistant or immersion sealing available  
MIL-STD-202 Method 213, Condition D, 500G (non oper)  
Vibration MIL-STD-202 Method 214, Condition D, 10G RMS (non oper)

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

### Plotted and Other Data

Notes:

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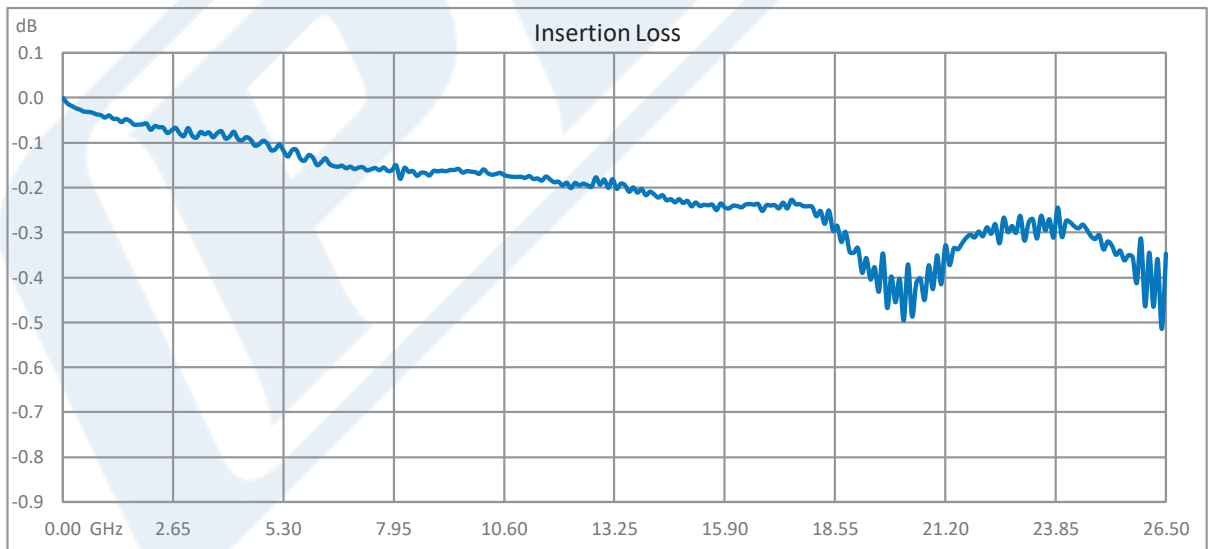
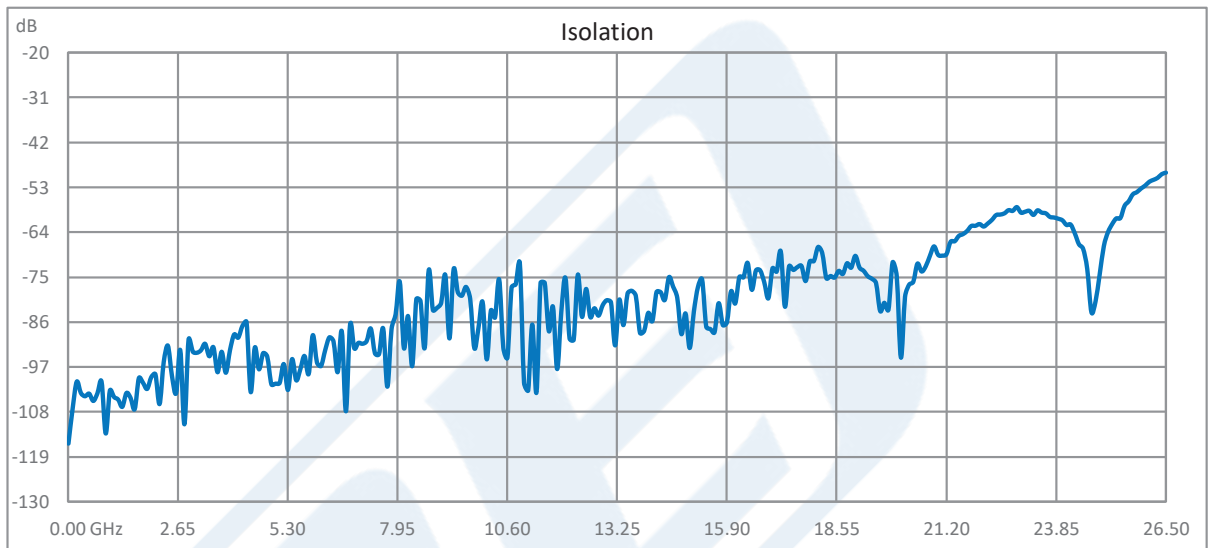


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Typical Performance Data



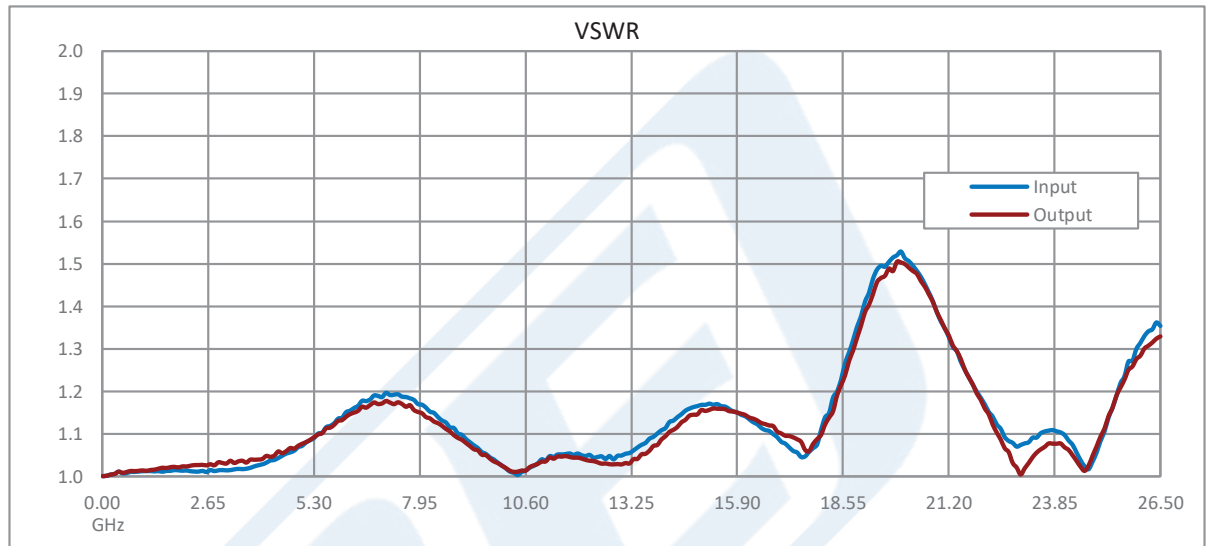
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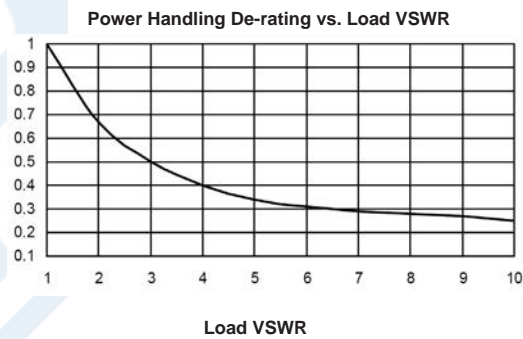
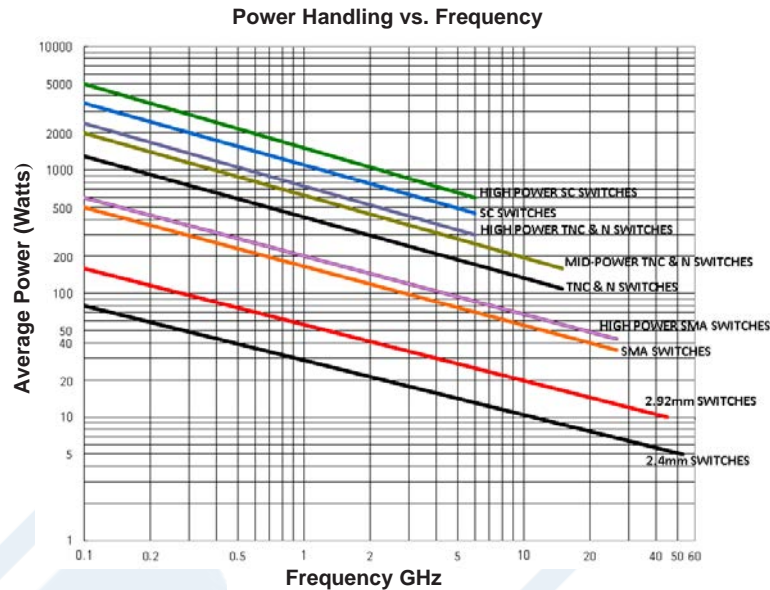
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Power Handling Chart and Derating Curves based on the following Test and Environmental Conditions:  
Ambient temperature: 20 - 25°C  
Altitude: Sea Level to 1,000 feet  
Relative Humidity: 50 - 55%  
Load VSWR:  $\leq 1.20:1$   
Operation: Cold Switching

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SPDT Electromechanical Relay Latching Switch with Self Cut-Off, DC to 26.5 GHz, up to 90W, 5M Lifecycles, 28V, Suppression Diodes, 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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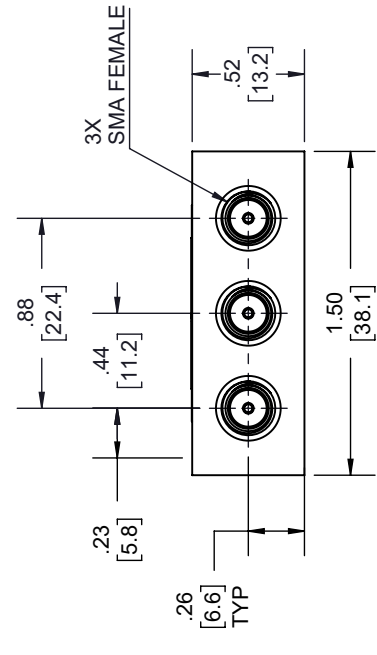
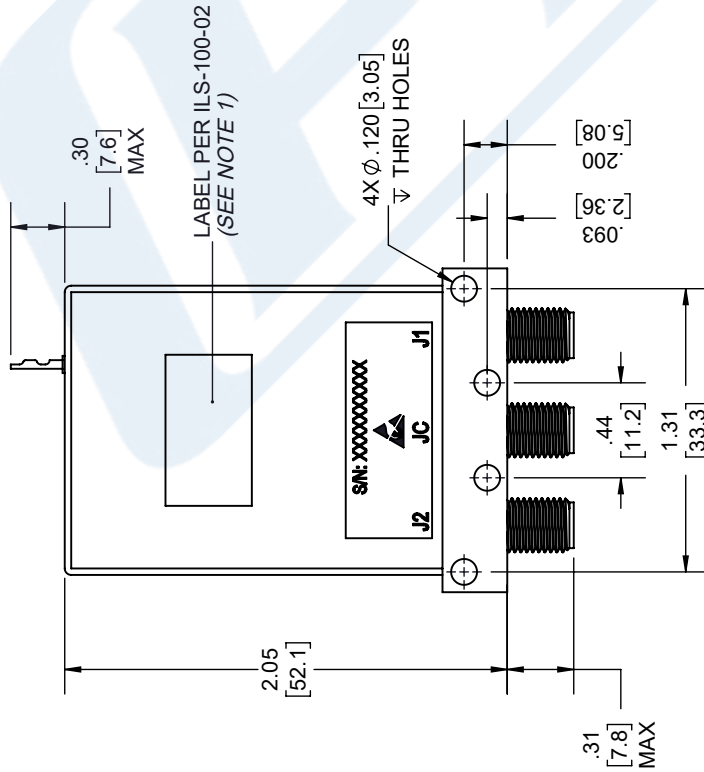
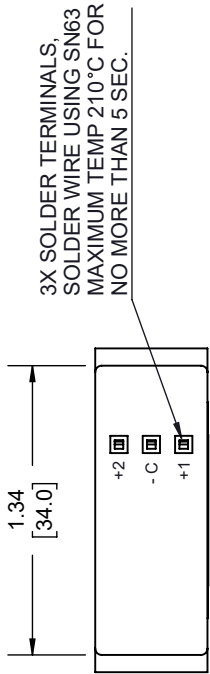
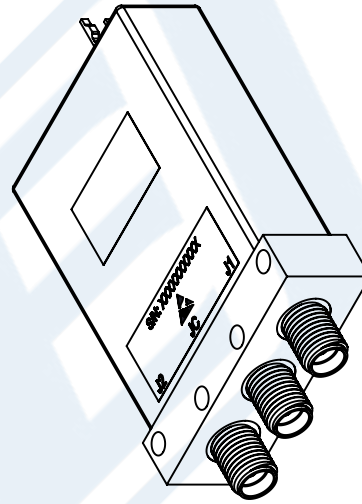
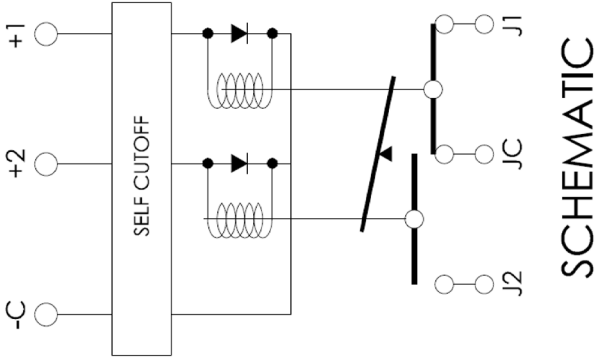
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# PE71S6440 CAD Drawing

SPDT Electromechanical Relay Latching Switch with Self Cut-Off, DC to 26.5 GHz, up to 90W, 5M Lifecycles, 28V, Suppression Diodes, SMA

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	1/26/2021
		APPROVED
		T.GALLA



UNLESS OTHERWISE SPECIFIED  
LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:  
 .X = ±.2 [5.08] FRACTIONS ±.1/32  
 .XX = ±.02 [51] ANGLES ± 1°  
 .XXX = ±.005 [13] CABLE LENGTH (L) TOLERANCES:  
 L ≤ 12 [305] = +1 [25] / -0  
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
 300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN  
ARE FOR REFERENCE ONLY.

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Pasternack Enterprises, Inc.  
P. O. Box 16759, Irvine, CA 92623.  
Phone: 1.949.261.1920 | 1.866.727.8376  
Fax: 1.949.261.7451  
Website: www.pasternack.com  
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SHEET 1 OF 1

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