



SPDT Fail-safe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 12V, 2M Lifecycles, Suppression Diodes, Indicators, SMA

## Electromechanical Relay Switches Technical Data Sheet

PE71S6437

### Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Fail-safe Actuator
- TTL Logic Control
- Suppression Diodes
- Indicators
- 2M Lifecycle Rating
- Insertion Loss 0.35 dB typ
- Isolation > 80 dB typ
- VSWR 1.4:1 typ
- +12 Volt DC Bias
- Solder Terminal Pins for Command Control Functions
- 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 PE71S6437 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 26.5 GHz and can handle up to 90 Watts of CW input power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Fail-safe Actuator. Additional features include TTL logic control, suppression diodes which limit voltage spikes or reverse current, and Indicators to monitor the switch position. Impressive typical performance includes 0.35 dB insertion loss and isolation greater than 80 dB. This switch requires +12Vdc 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 all command control functions. 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	Fail-safe
Switching Sequence	Break before Make
Actuator Options	TTL Logic
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		26.5	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current @ 12 Volts At +20°C			200	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Fail-safe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 12V, 2M Lifecycles, Suppression Diodes, Indicators, SMA PE71S6437](#)



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VSWR		1.4:1	1.7:1	
Insertion Loss		0.35	0.6	dB
Isolation	50	80		dB
Input Power (CW)			90	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	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

Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	2,000,000 Cycles

#### Connectors

RF Connector Type	SMA Female
Control Connector	Solder Terminals

### Environmental Specifications

#### Temperature

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

Humidity	Moisture Resistance
Shock	MIL-STD-202 Method 213, Cond. D 500G Non Operating
Vibration	MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

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

### Plotted and Other Data

Notes:

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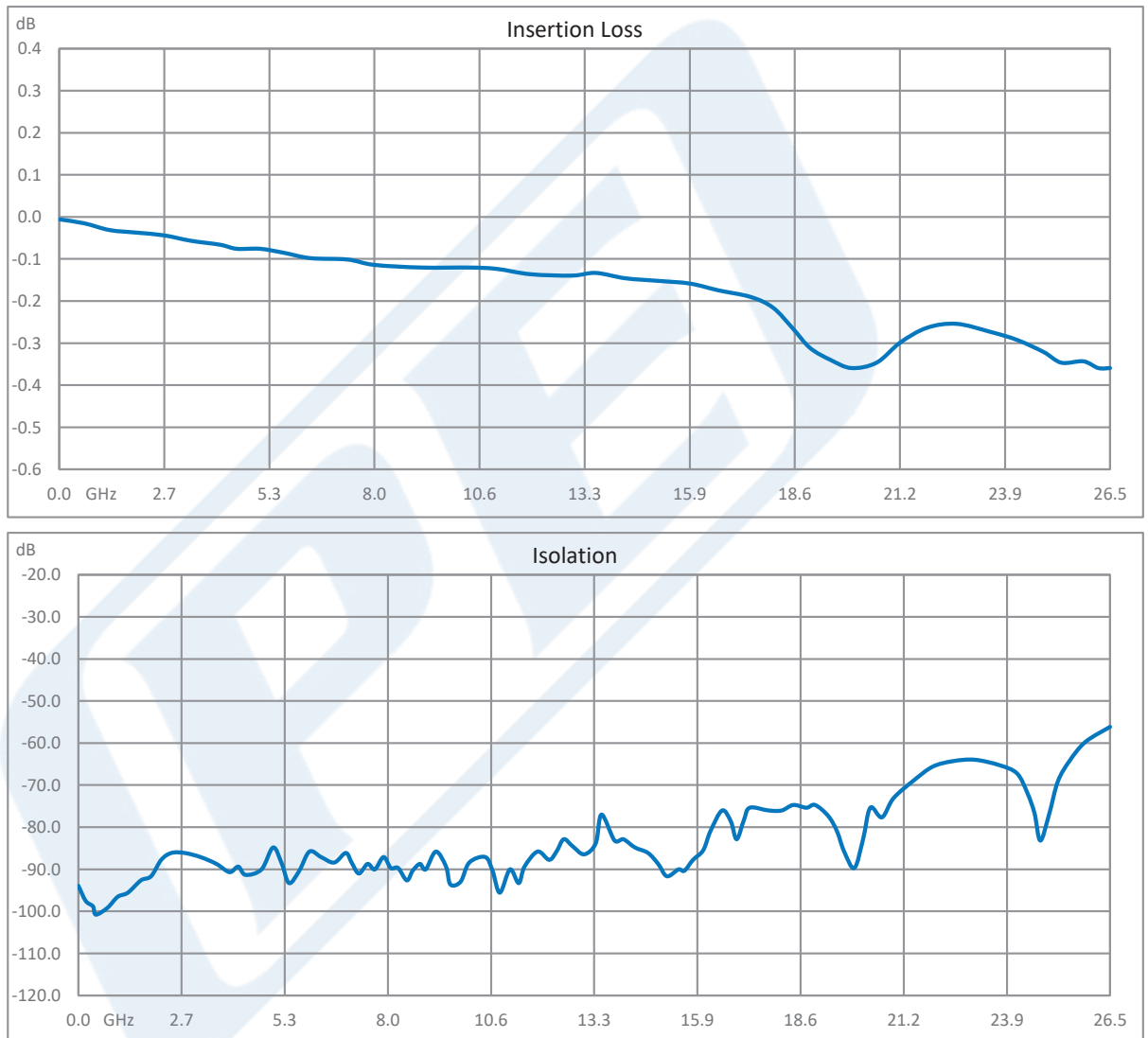


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Electromechanical Relay Switches Technical Data

PE71S6437

Typical Performance Data



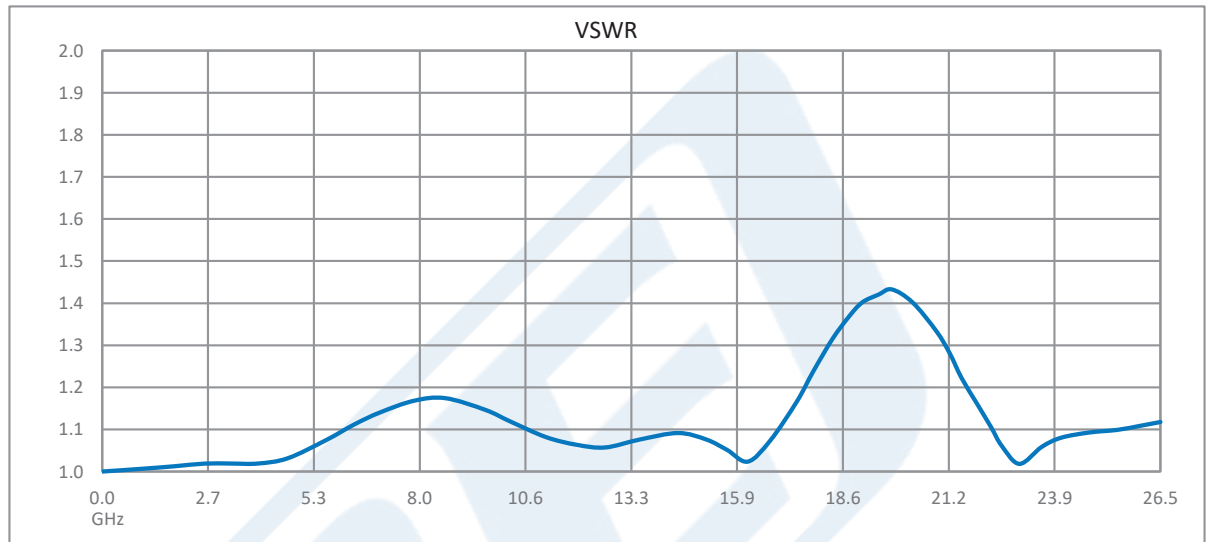
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SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 12V, 2M Lifecycles, Suppression Diodes, Indicators, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter 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 Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 12V, 2M Lifecycles, Suppression Diodes, Indicators, SMA PE71S6437](https://www.pasternack.com/spdt-failsafe-dc-to-26.5-ghz-electro-mechanical-relay-switch-ttl-90w-12v-2m-lifecycles-suppression-diodes-indicators-sma-pe71s6437)

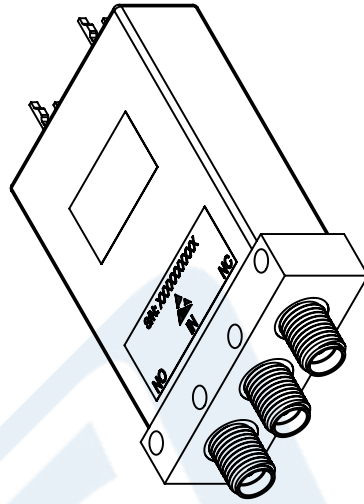
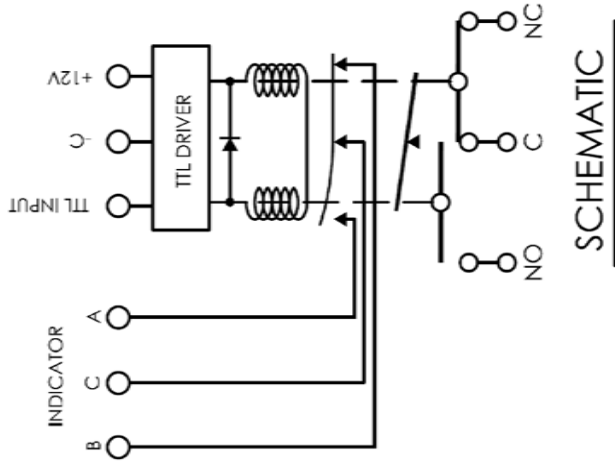
URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-26.5-ghz-90w-12v-ttl-sma-pe71s6437-p.aspx>

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# PE71S6437 CAD Drawing

SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL,  
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/14/2020	T.GALLA



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SHEET 1 OF 1	SCALE N/A
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SIZE A CAGE CODE 53919 DRAWN BY K.DANG

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

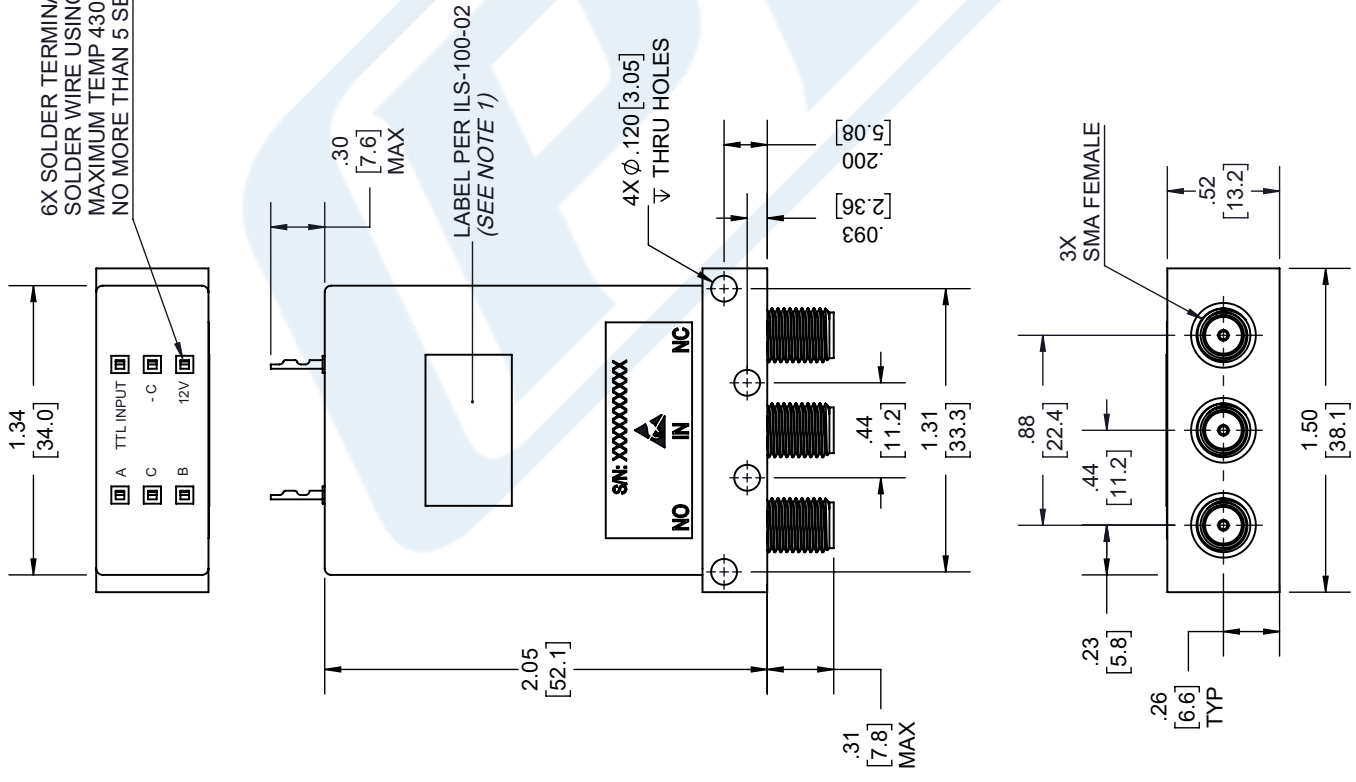
TOLERANCES:

.X = ±.2 [5.08] FRACTIONS  
.XX = ±.02 [ .51] ±.1/32  
.XXX = ±.005 [ .13] ANGLES ± 1°

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.

6X SOLDER TERMINALS,  
SOLDER WIRE USING SN96  
MAXIMUM TEMP 430°F FOR  
NO MORE THAN 5 SEC.



NOTES:  
1. LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY.  
LABEL LOCATION FOR REFERENCE ONLY.

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