



SPDT Fail-safe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6422

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
- TTL Logic Control
- Suppression Diodes
- Indicators
- Insertion Loss 0.35 dB typ
- Isolation > 80 dB typ
- VSWR 1.4:1 typ
- +28 Volt DC Bias
- Terminal Solder 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 PE71S6422 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 features a Fail-safe Actuator and is rated for 2 million lifecycles. 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 +28Vdc 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 terminal solder 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	26	28	30	Volts
Actuating Set Current @ 28 Volts			90	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, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA PE71S6422](#)



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At +20°C

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
Shock

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

Vibration

MIL-STD-202 Method 204, Cond. D 10G RMS Non Operating

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Electromechanical Relay Switches Technical Data

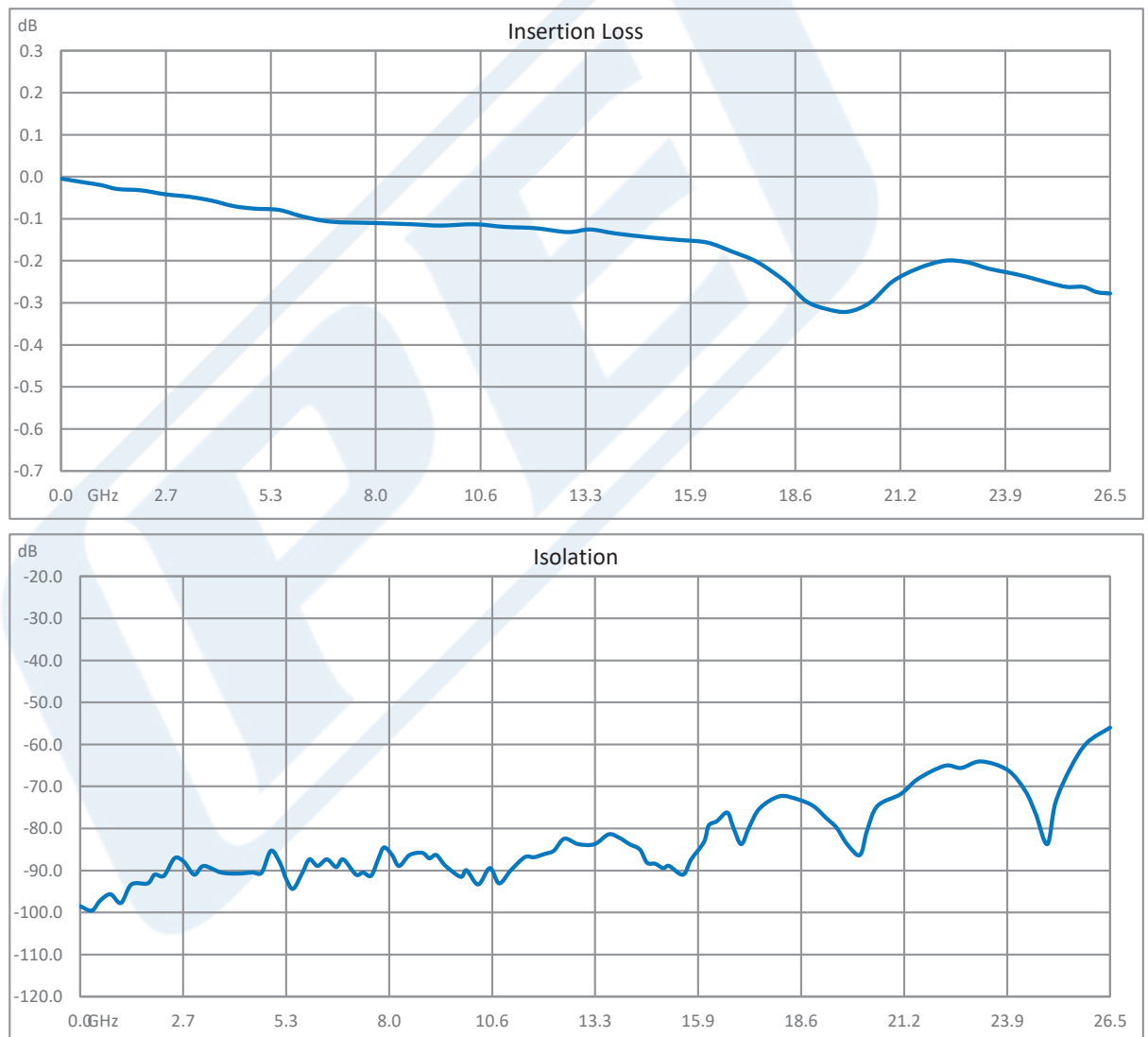
PE71S6422

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

Plotted and Other Data

Notes:

Typical Performance Data



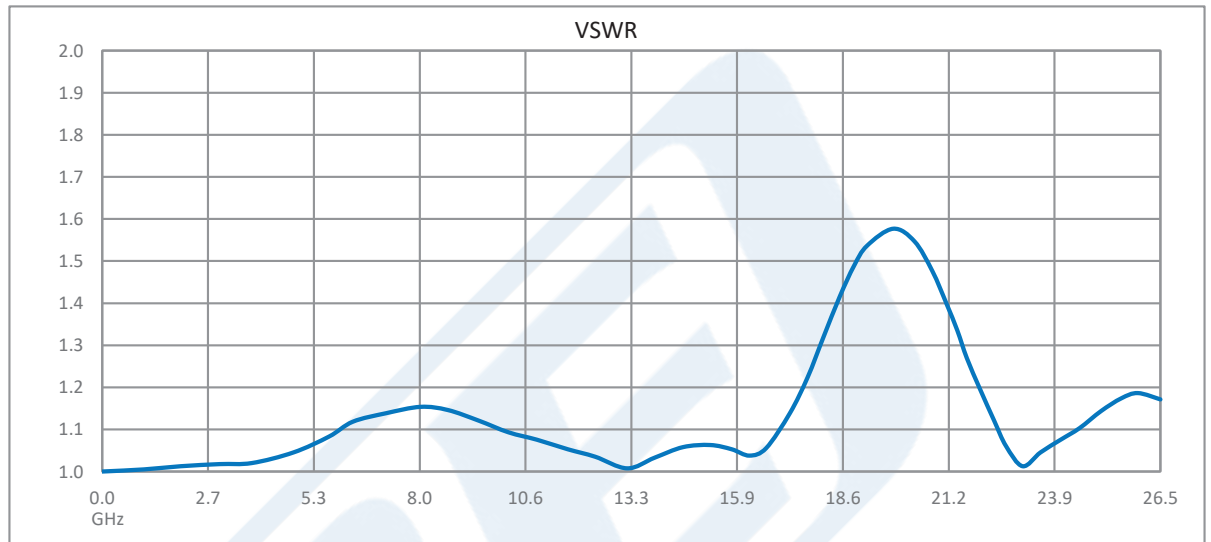
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Relay Switch, TTL, 90W, 28V, 2M Lifecycles,
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SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA from Pasternack Enterprises 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, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA PE71S6422](https://www.pasternack.com/spdt-failsafe-dc-to-26.5-ghz-electro-mechanical-relay-switch-ttl-90w-28v-2m-lifecycles-suppression-diodes-indicators-sma-pe71s6422)

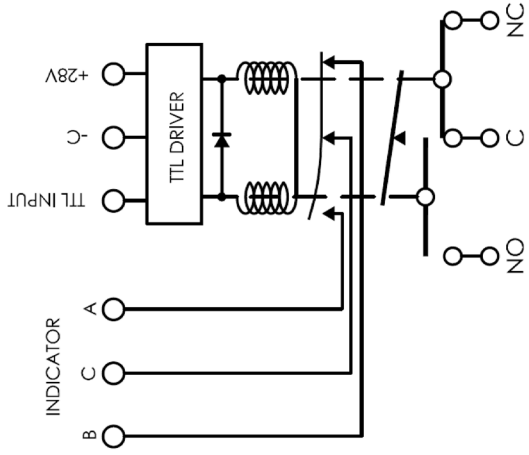
URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-26.5-ghz-90w-28v-ttl-sma-pe71s6422-p.aspx>

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.

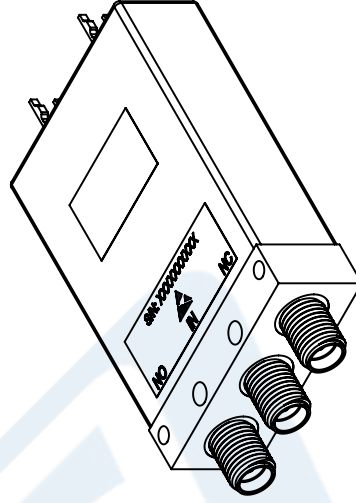
PE71S6422 CAD Drawing

SPDT Failsafe DC to 26.5 GHz Electro-Mechanical Relay Switch, TTL, 90W, 28V, 2M Lifecycles, Suppression Diodes, Indicators, SMA

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	9/30/2020	T.GALLA



SCHMATIC



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SHEET 1 OF 1	SCALE N/A
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SIZE A | CAGE CODE 53919 | DRAWN BY K.DANG | ITEM NO. PE71S6422

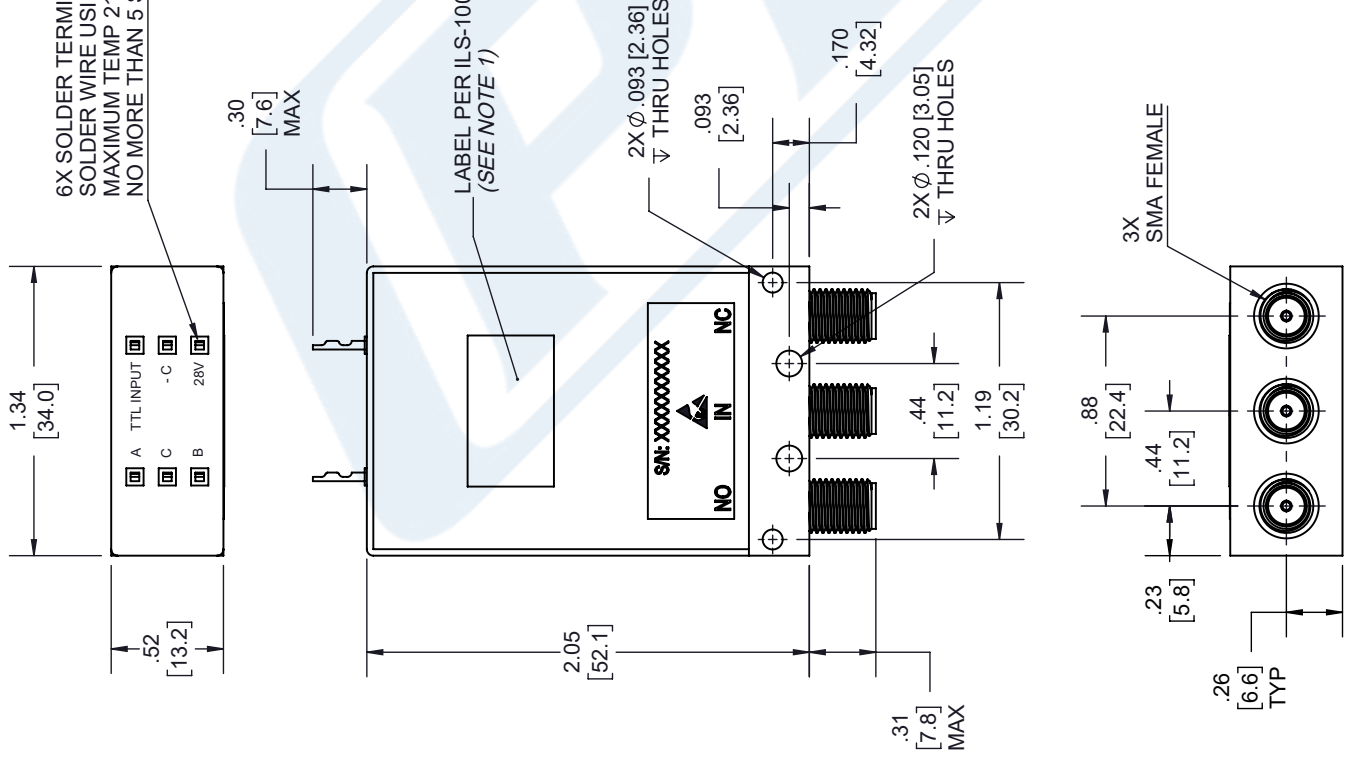
UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
 .X = ±.2 [5.08] | FRACTIONS ± 1/32
 .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 210°C 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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