



SPDT Latching Self Cut-Off DC to 12 GHz Electro-Mechanical Relay Switch, TTL, Up To 600W, 5M Lifecycles, Suppression Diodes, 28V, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6425

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Latching Self Cut-Off Actuator
- 5M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 90 dB typ
- VSWR 1.2:1 typ
- Terminal Solder Pins for DC Bias
- Suppression Diodes
- +28 Volt DC Control
- N Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 600 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 PE71S6425 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 600 Watts of CW input 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 90 dB isolation. 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 N female connectors and terminal 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 (TA = +25°C, DC Voltage = +28 Vdc)

Switch Type	SPDT
Actuator Type	Latching
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		12	GHz
Impedance		50		Ohms
Operating Voltage	+26	+28	+30	Volts
Actuating Set Current @ +28 Volts At +20°C			160	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Latching Self Cut-Off DC to 12 GHz Electro-Mechanical Relay Switch, TTL, Up To 600W, 5M Lifecycles, Suppression Diodes, 28V, N PE71S6425](#)



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VSWR		1.2:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	70	90		dB
Input Power (CW)			600	Watts
Switching Time			20	ms Max

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1	1 to 4	4 to 8	8 to 12		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.4:1		
Insertion Loss, Max	0.3	0.4	0.4	0.5		dB
Isolation, Min	90	80	80	70		dB

Mechanical Specifications

Size

Weight	0.5 lbs [226.8 g]
Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	5,000,000 Cycles

Connectors

RF Connector Type	N 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
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Vibration

	MIL-STD-202 Method 214, Cond. D 10G RMS Non Operating
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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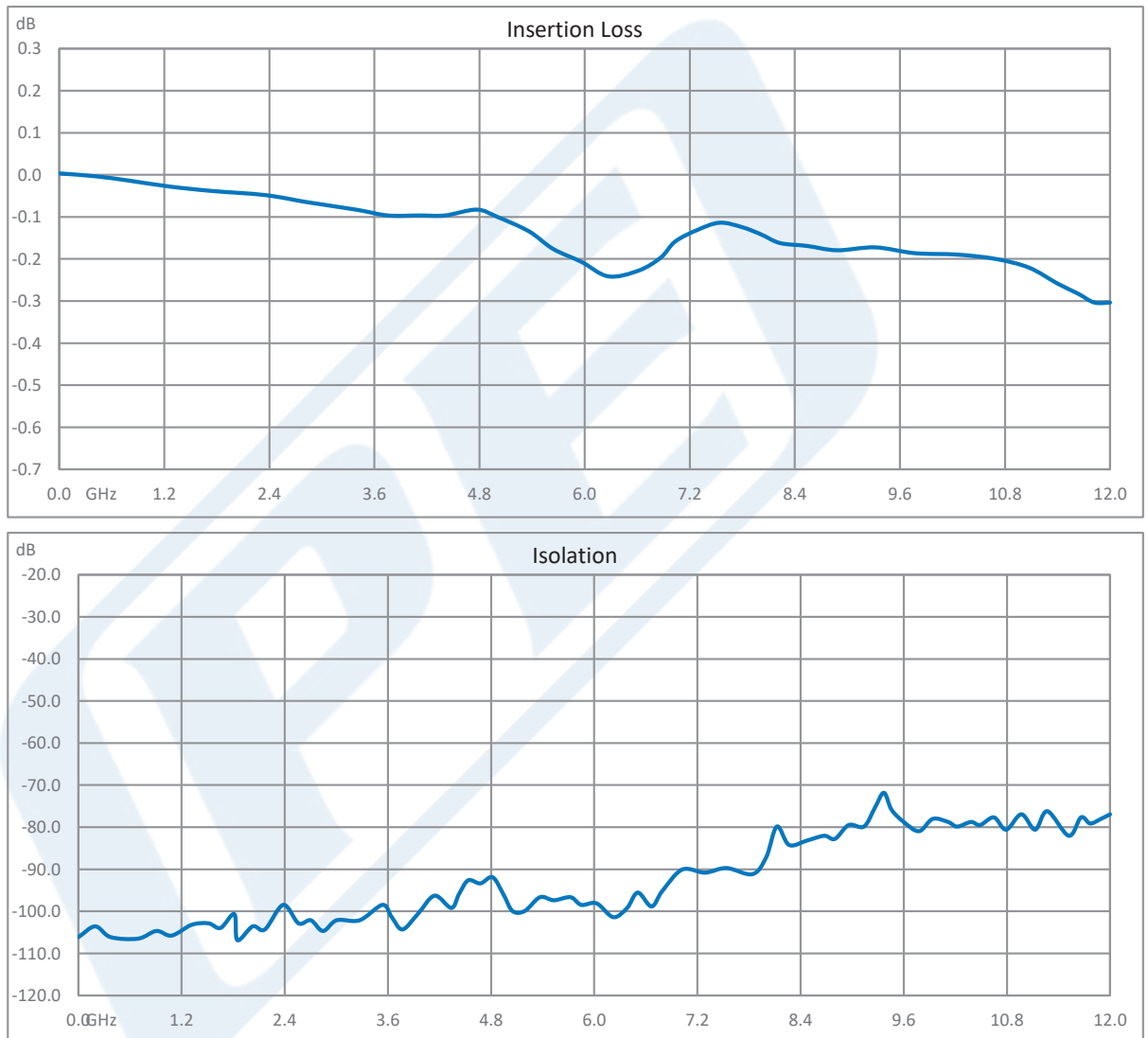


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Typical Performance Data



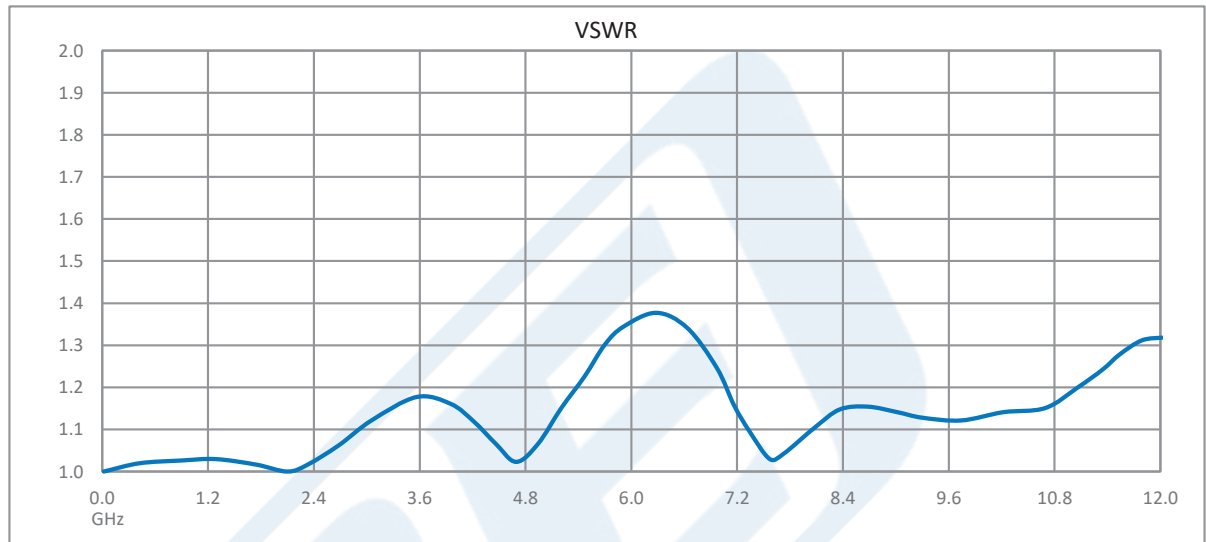
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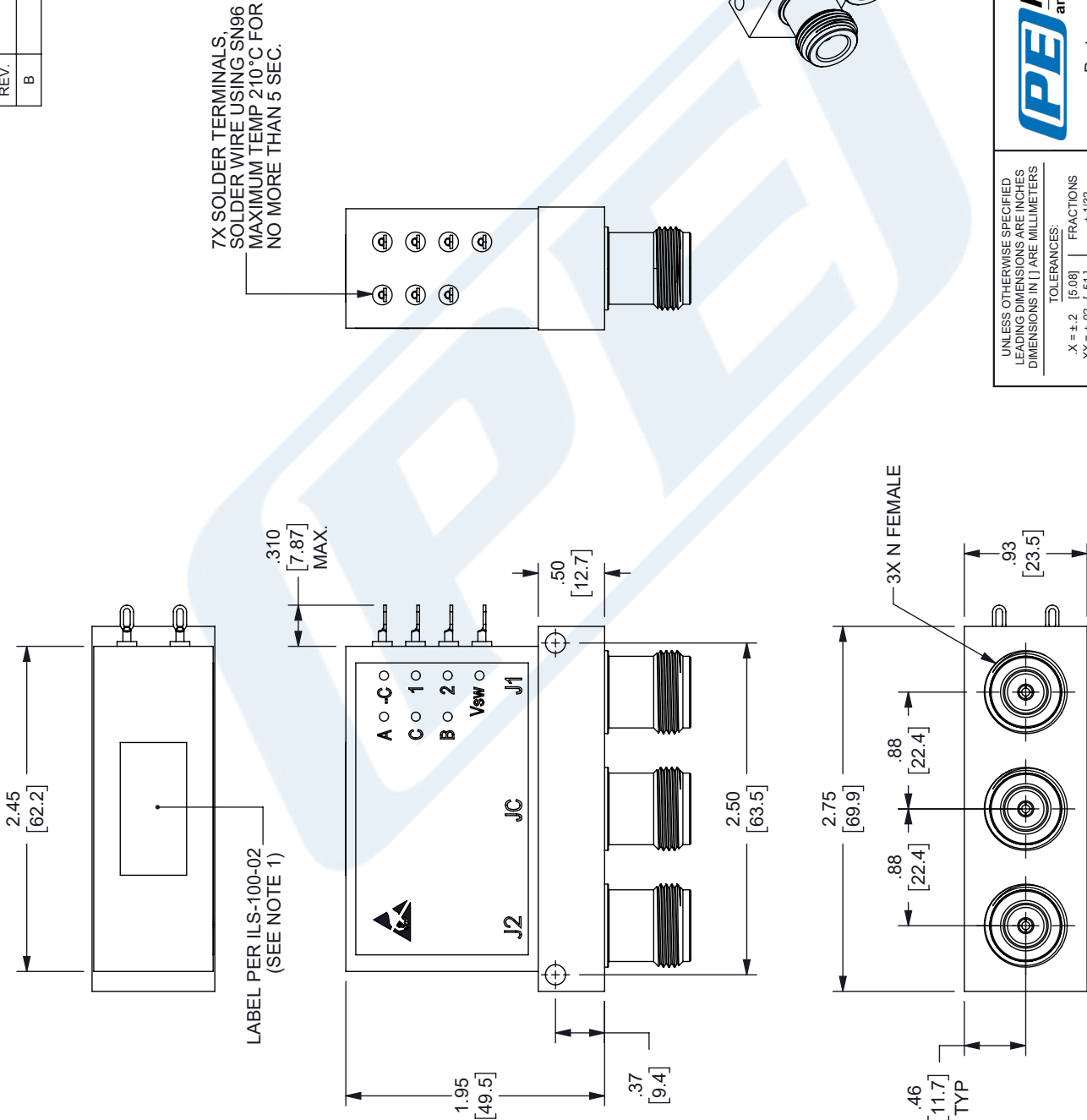
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PE71S6425 CAD Drawing

SPDT Latching Self Cut-Off DC to 12 GHz Electro-Mechanical Relay Switch,
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	PCR PE71S6425	2/22/2022	TGALLA



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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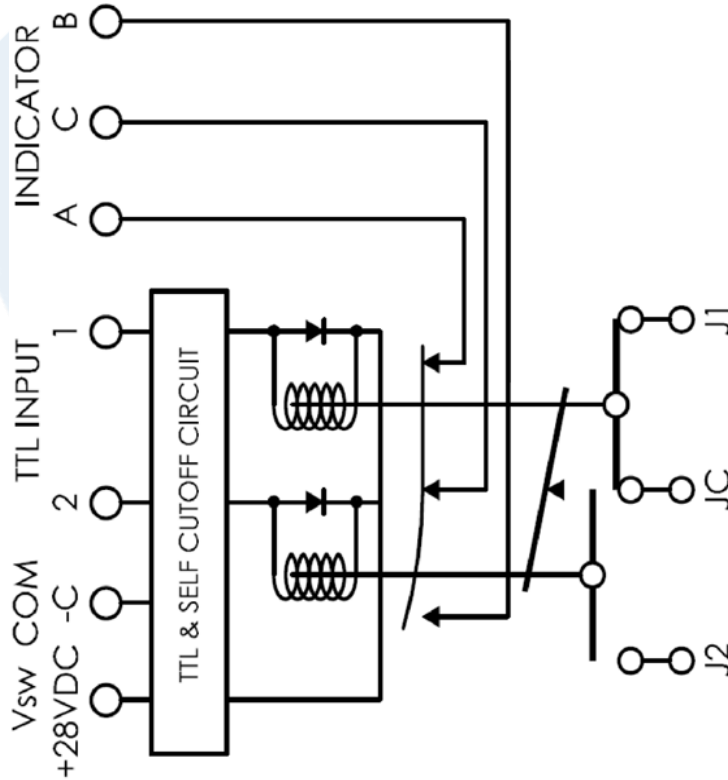
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PE71S6425 CAD Drawing

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SCHEMATIC

OPERATIONAL				
LOGIC TABLE				
TERMINALS	J1	J2	INDICATOR	
1	2	J1	A-C	B-C
0	0	NO CHANGE	NO CHANGE	NO CHANGE
0	1	OFF	OFF	ON
1	0	ON	ON	OFF
1	1	FORBIDDEN	FORBIDDEN	FORBIDDEN

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TOLERANCES:
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