



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

Electromechanical Relay Switches Technical Data Sheet

PE71S6435

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 18 GHz Frequency Range
- Latching Self Cut-Off Actuator
- Suppression Diodes
- 5M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 90 dB typ
- VSWR 1.25:1 typ
- +12 Volt DC Bias
- Solder Terminal Pins for DC Control
- N Type 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 PE71S6435 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 5M 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 90 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 N Type 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 (TA = 25°C, DC Voltage = 12 Vdc)

Switch Type	SPDT
Actuator Type	Failsafe
Switching Sequence	Break before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current At +20°C			200	mA
VSWR		1.25:1	1.4:1	
Insertion Loss		0.3	0.5	dB

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, Up To 600W, 5M Lifecycles, Suppression Diodes, 12V, N PE71S6435](#)



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Isolation	70	90		dB
Input Power			600	Watts
Switching Time			20,000,000	ms

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	1.25:1	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

Length	0 in [0 mm]
Width/Diameter	0 in [0 mm]
Height	0 in [0 mm]
Weight	0.5 lbs [226.8 g]
Body Material and Plating	Aluminum
Package Type	Connectorized
Operating Life	2,000,000 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

Vibration

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

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Electromechanical Relay Switches Technical Data

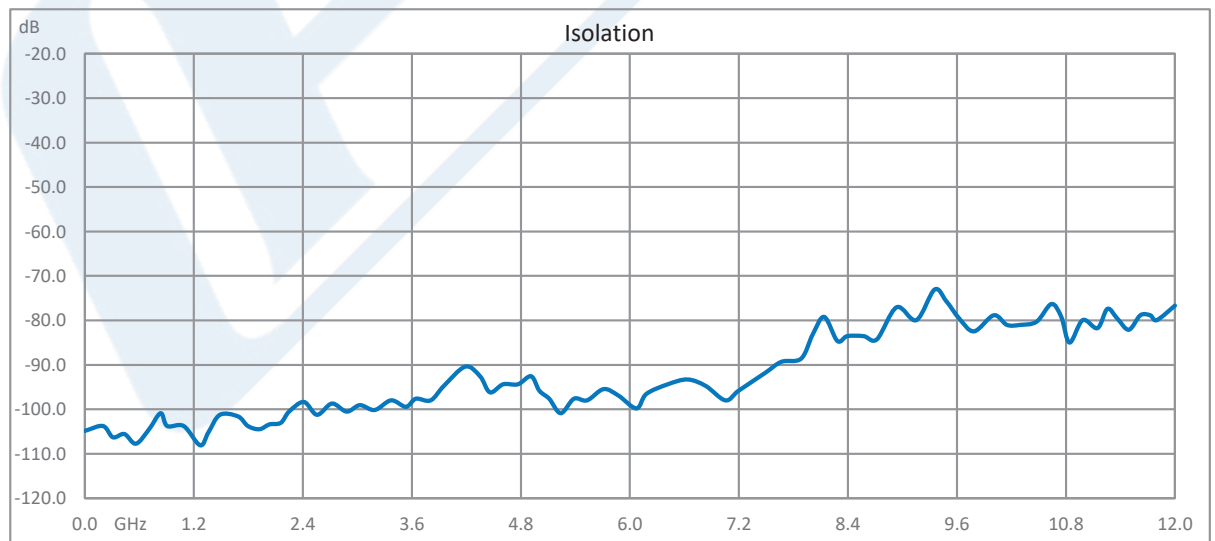
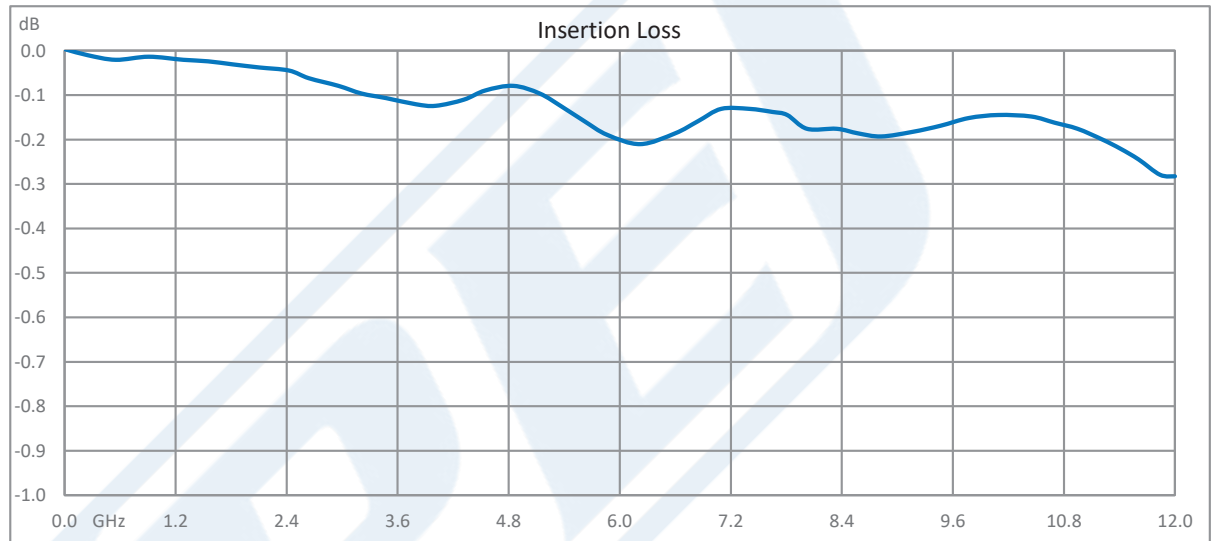
PE71S6435

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

Plotted and Other Data

Notes:

Typical Performance Data



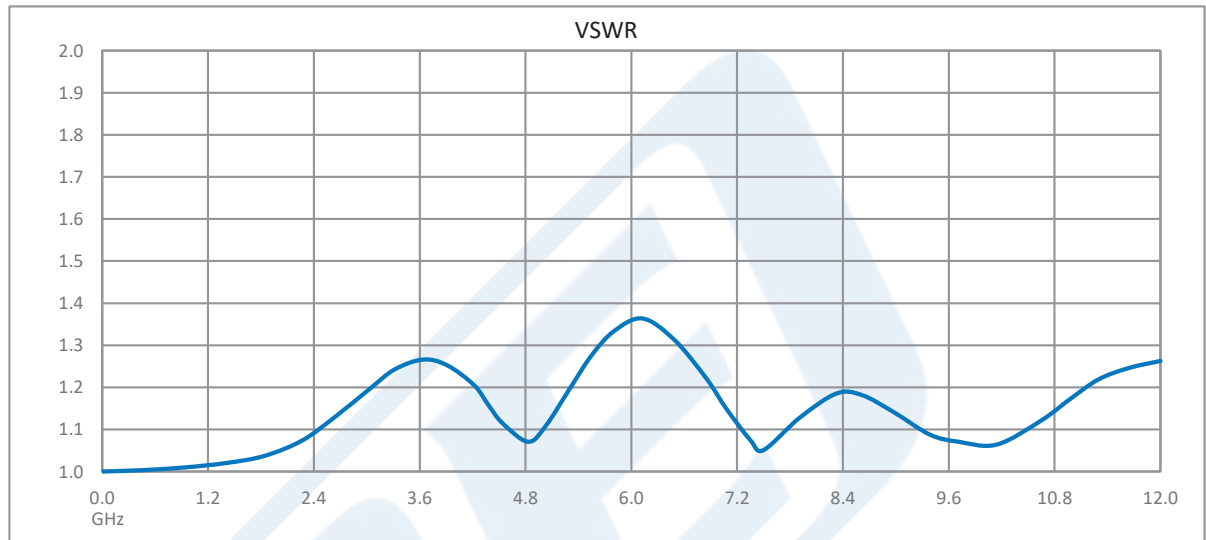
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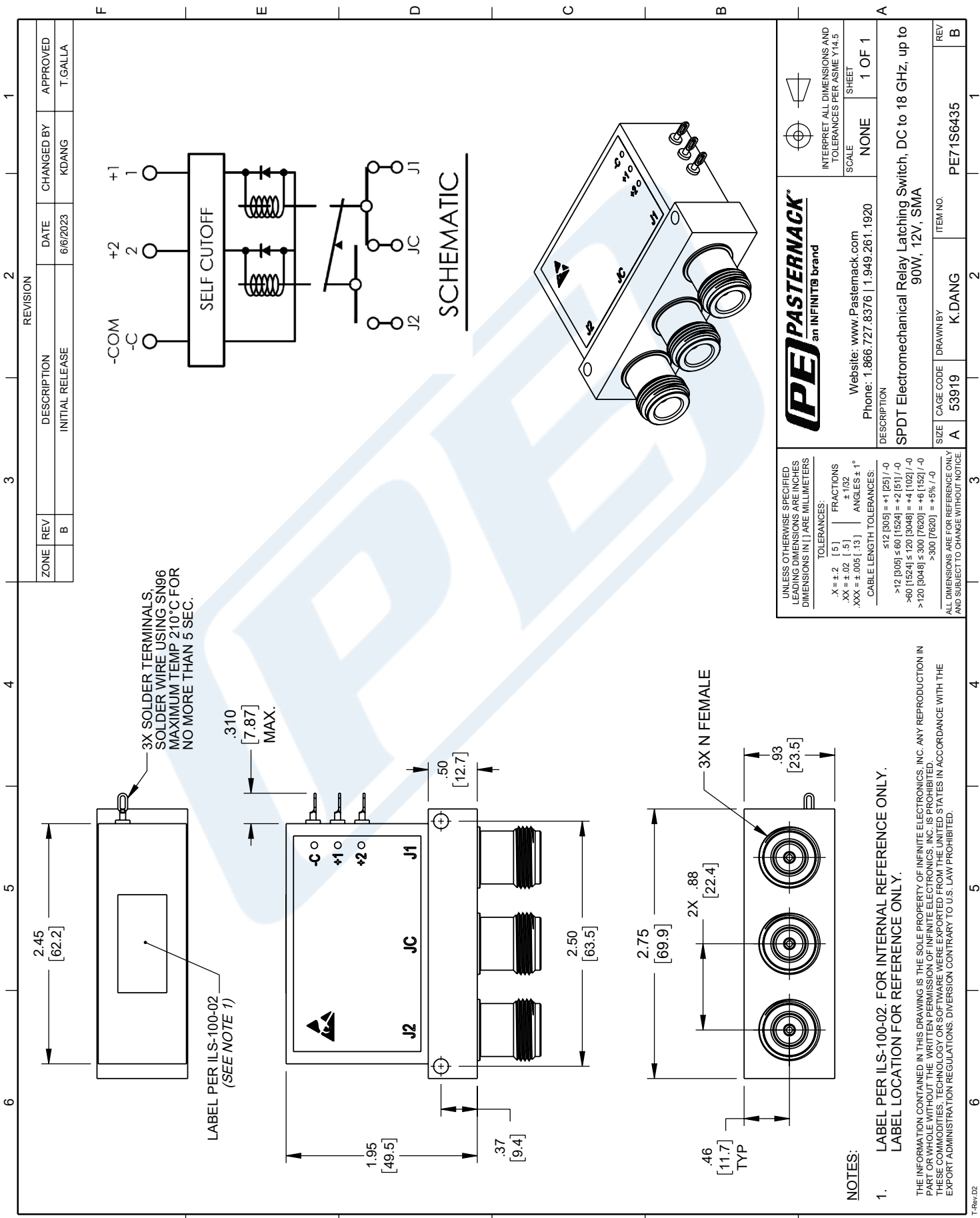
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URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-600w-12v-n-pe71s6435-p.aspx>

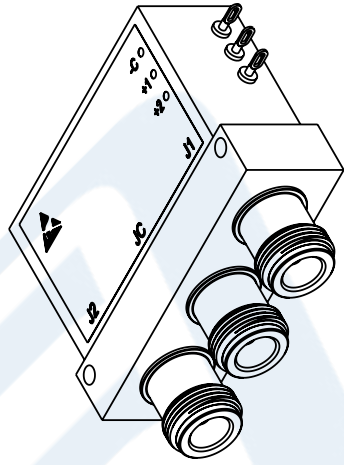
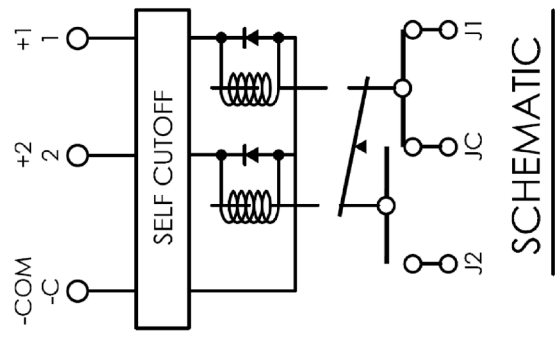
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PE71S6435 CAD Drawing

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



ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	B	INITIAL RELEASE	6/6/2023	KDANG	T.GALLA



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

TOLERANCES:
 .X = ±.2 [5]
 .XX = ±.02 [.5]
 .XXX = ±.005 [.13]
 FRACTIONS ±.132
 ANGLES ± 1°
 CABLE LENGTH TOLERANCES:
 ≤12 [305] = ±.1 [25] / -0
 >12 [305] ≤ 60 [1524] = +.2 [51] / -0
 >60 [1524] ≤ 120 [3048] = +.4 [102] / -0
 >120 [3048] ≤ 300 [7620] = +.6 [152] / -0
 >300 [7620] = +.5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE
SHEET 1 OF 1

DESCRIPTION
SPDT Electromechanical Relay Latching Switch, DC to 18 GHz, up to 90W, 12V, SMA

SIZE A
CAGE CODE 53919
DRAWN BY K.DANG
ITEM NO. PE71S6435
REV B

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