



Transfer E-M Relay Latching Switch with Self Cut-off, DC to 12 GHz, 600W, 5M Lifecycles, 28V, Indicators, TTL, Suppression Diodes, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6461

Features

- Transfer Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- TTL Logic Control
- Suppression Diodes
- Indicators
- 5M Lifecycle Rating
- Insertion Loss 0.2 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 max
- +28 Volt DC Bias
- Solder Terminal Pins for DC Command Control
- N Type 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 PE71S6461 is a Transfer electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 600 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 TTL control logic, suppression diodes which limit voltage spikes or reverse current, and indicators. Impressive typical performance includes 0.2 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 N Type female connectors and solder terminal pins for DC 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	DPDT
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	Indicators, Self Cut Off, 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	24	28	30	Volts
Actuating Set Current @ 28 Volts			150	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer E-M Relay Latching Switch with Self Cut-off, DC to 12 GHz, 600W, 5M Lifecycles, 28V, Indicators, TTL, Suppression Diodes, N PE71S6461](#)



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VSWR		1.4:1	1.7:1	
Insertion Loss		0.2	0.7	dB
Isolation	60	80		dB
Input Power (CW)			1	kWatts
Switching Time			20	ms Max

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 2	2 to 4	4 to 8	8 to 12		GHz
VSWR, Max	1.2:1	1.4:1	1.5:1	1.7:1		
Insertion Loss, Max	0.2	0.4	0.5	0.7		dB
Isolation, Min	80	80	70	60		dB

Mechanical Specifications

Size

Length	2.52 in [64.01 mm]
Width/Diameter	1.75 in [44.45 mm]
Height	1.75 in [44.45 mm]

Finish

NICKEL

Package Type

Connectorized

Operating Life

5,000,000 Cycles

Connectors

RF Connector Type

N Female

Environmental Specifications

Temperature

Operating Range

-25 to +65 deg C

Storage Range

-55 to +100 deg C

Humidity

Moisture resistant or immersion sealing available

Shock

MIL-STD-202 Method 213, Condition D, 500G (non oper)

Vibration

MIL-STD-202 Method 214, Condition D, 10G RMS (non oper)

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Electromechanical Relay Switches Technical Data

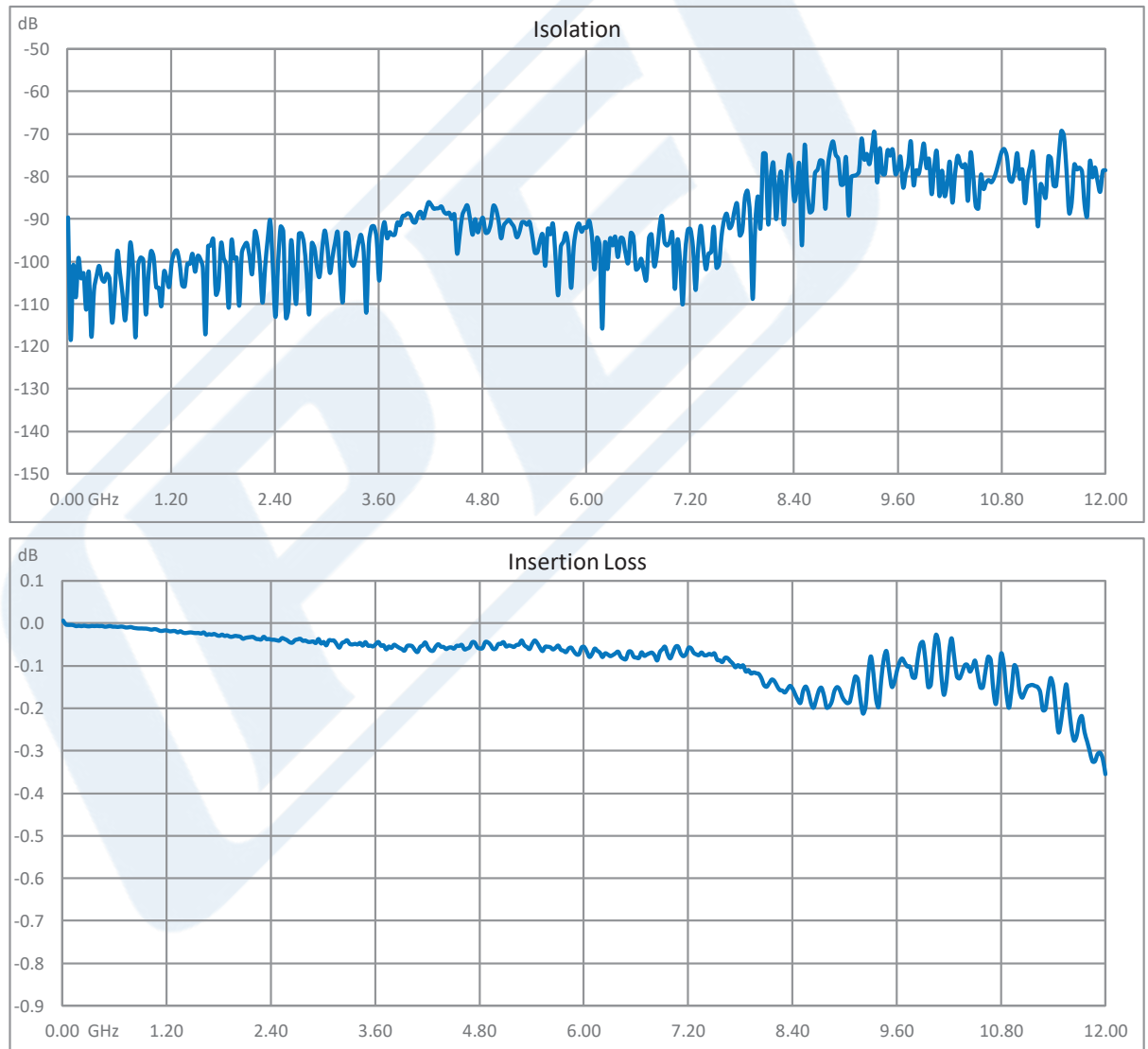
PE71S6461

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

Plotted and Other Data

Notes:

Typical Performance Data



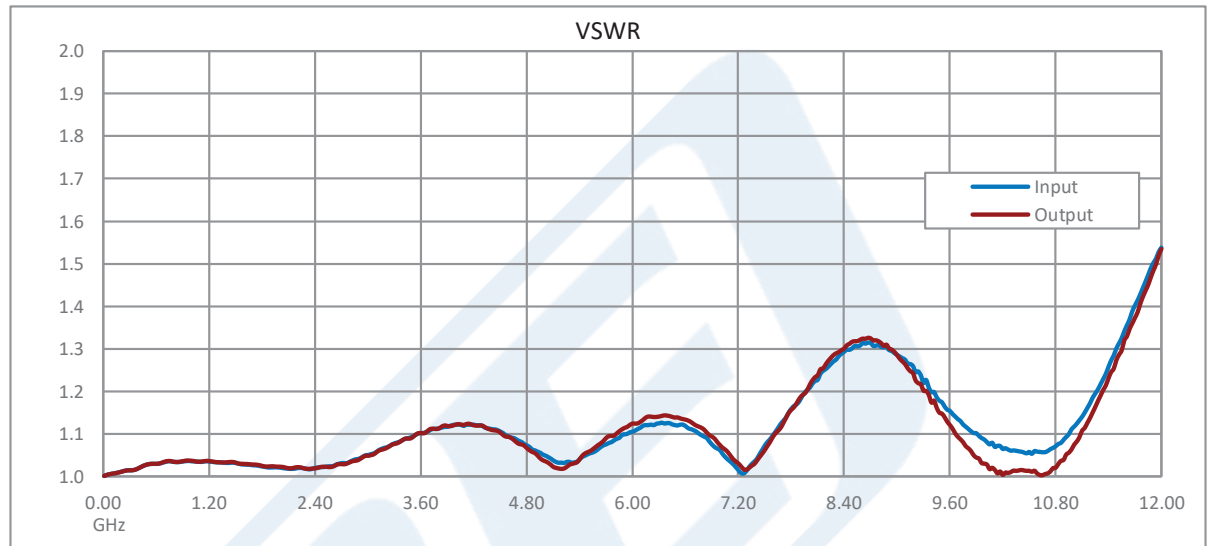
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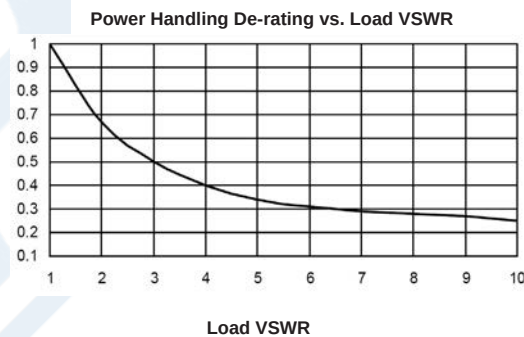
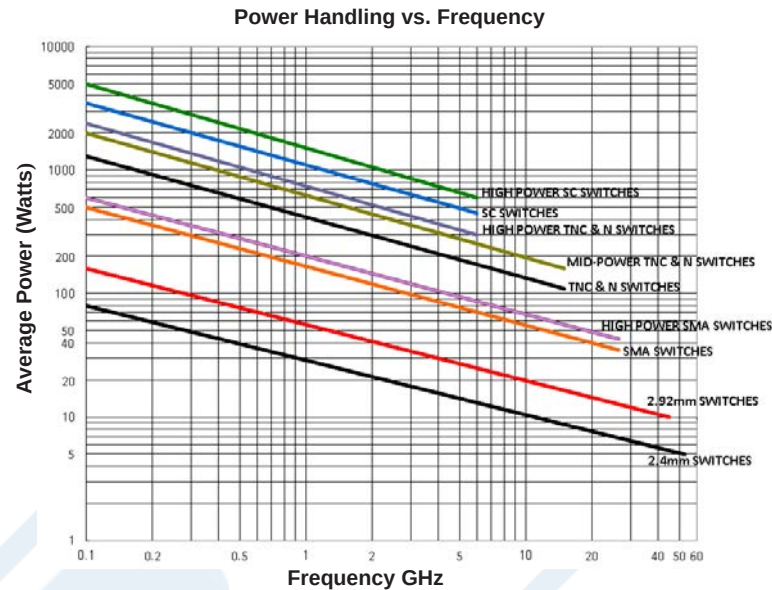
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Power Handling Chart and Derating Curves based on the following Test and Environmental Conditions:
Ambient temperature: 20 - 25°C
Altitude: Sea Level to 1,000 feet
Relative Humidity: 50 - 55%
Load VSWR: $\leq 1.20:1$
Operation: Cold Switching

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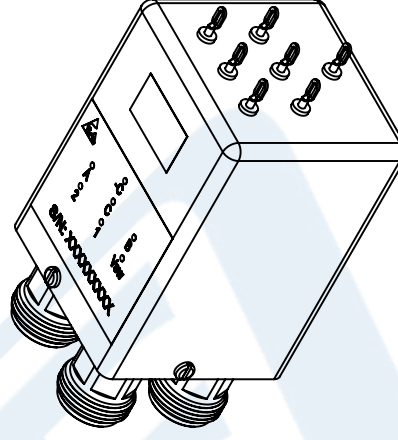
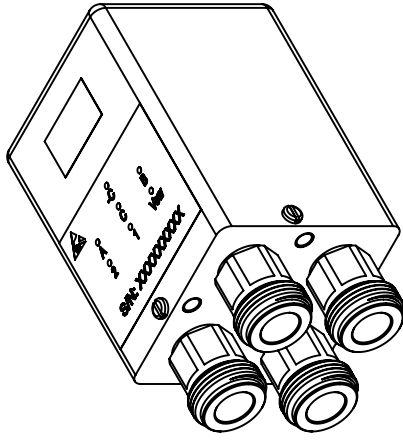
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PE71S6461 CAD Drawing

Transfer E-M Relay Latching Switch with Self Cut-off, DC to 12 GHz,
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/1/2021	T.GALLA



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SIZE A		CAGE CODE 53919

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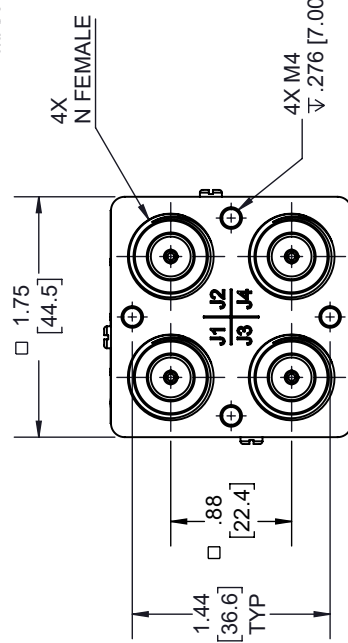
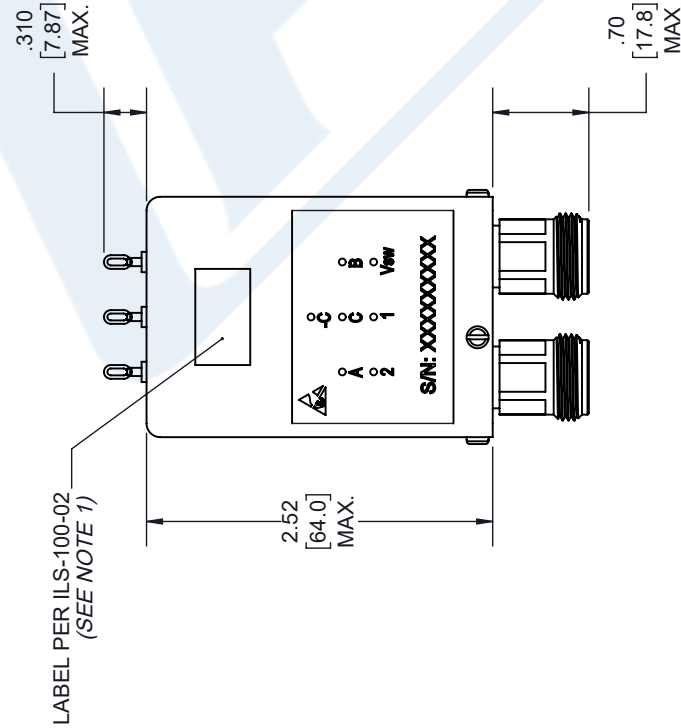
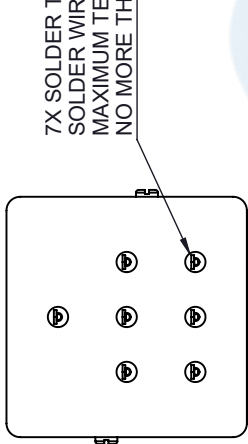
TOLERANCES:

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.

7X SOLDER TERMINALS,
SOLDER WIRE USING SN96,
MAXIMUM TEMP 250 °C FOR
NO MORE THAN 5 SEC.



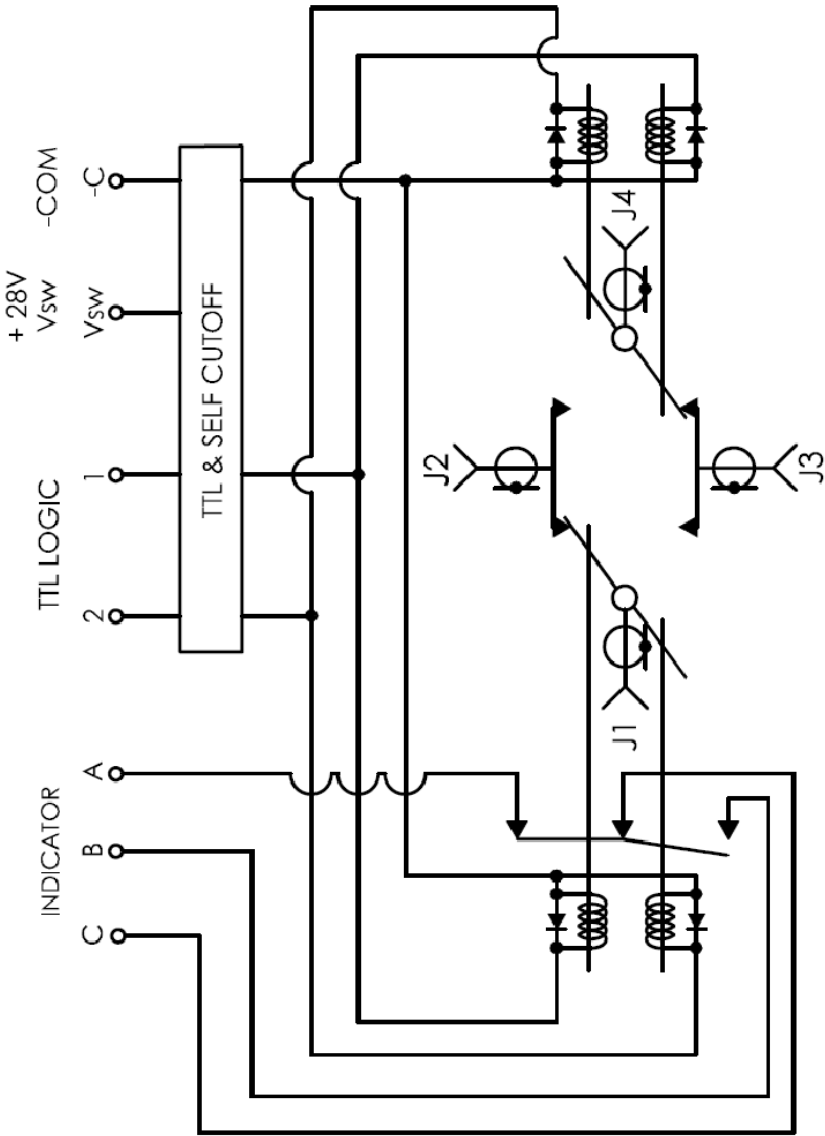
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OPERATIONAL			
LOGIC TABLE			
TERMINALS	RF PORTS	IND. PATH	
1	2		
0	0	NO CHANGE	NO CHANGE
0	1	J1-J3, J2-J4	B-C
1	0	J1-J2, J3-J4	A-C
1	1	FORBIDDEN	FORBIDDEN

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