



Transfer Electromechanical Relay Latching Switch
DC to 40 GHz, 2M Cycles, 2.92mm, 5 Watts, 28V,
Self Cut Off, TTL, Diodes, Solder Pins

Electromechanical Relay Switches Technical Data Sheet

PE71S6485

Features

- Transfer Electromechanical Relay Switch
- DC to 40 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- TTL Logic Control
- Suppression Diodes
- 2M Lifecycle Rating
- Insertion Loss 0.5 dB typ
- Isolation > 85 dB typ
- VSWR as low as 1.2:1 max
- +28 Volt DC Bias
- Solder Terminal Pins for DC Control
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 5 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 PE71S6485 is a Transfer electromechanical relay switch that operates across a wide frequency range from DC to 40 GHz and can handle up to 5W of average power in a break before make condition. The 50 Ohm design is rated for 2 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, and suppression diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.5 dB insertion loss and isolation greater than 85 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 2.92mm 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 (TA = +25°C, DC Voltage = +28 Vdc)

Switch Type	Transfer
Actuator Type	Latching
Actuator Options	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		40	GHz
Operating Voltage		+28		Volts
Actuating Set Current @ +28 Volts			250	mA
VSWR		1.4:1	1.8:1	
Insertion Loss		0.5	1	dB
Isolation	50	85		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer Electromechanical Relay Latching Switch DC to 40 GHz, 2M Cycles, 2.92mm, 5 Watts, 28V, Self Cut Off, TTL, Diodes, Solder Pins PE71S6485](#)



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Input Power (CW) 5 Watts
(at 40 GHz)

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12.4	12.4 to 26.5	26.5 to 40		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.8:1		
Insertion Loss, Max	0.2	0.4	0.7	1		dB
Isolation, Min	85	80	65	50		dB

Mechanical Specifications

Size

Length 2 in [50.8 mm]
Width/Diameter 2.16 in [54.86 mm]
Height 1.26 in [32 mm]
Weight 0.1 lbs [45.36 g]

Connectors

RF Connector Type 2.92mm Female

Environmental Specifications

Temperature

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

Shock

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

Vibration

MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

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

Plotted and Other Data

Notes:

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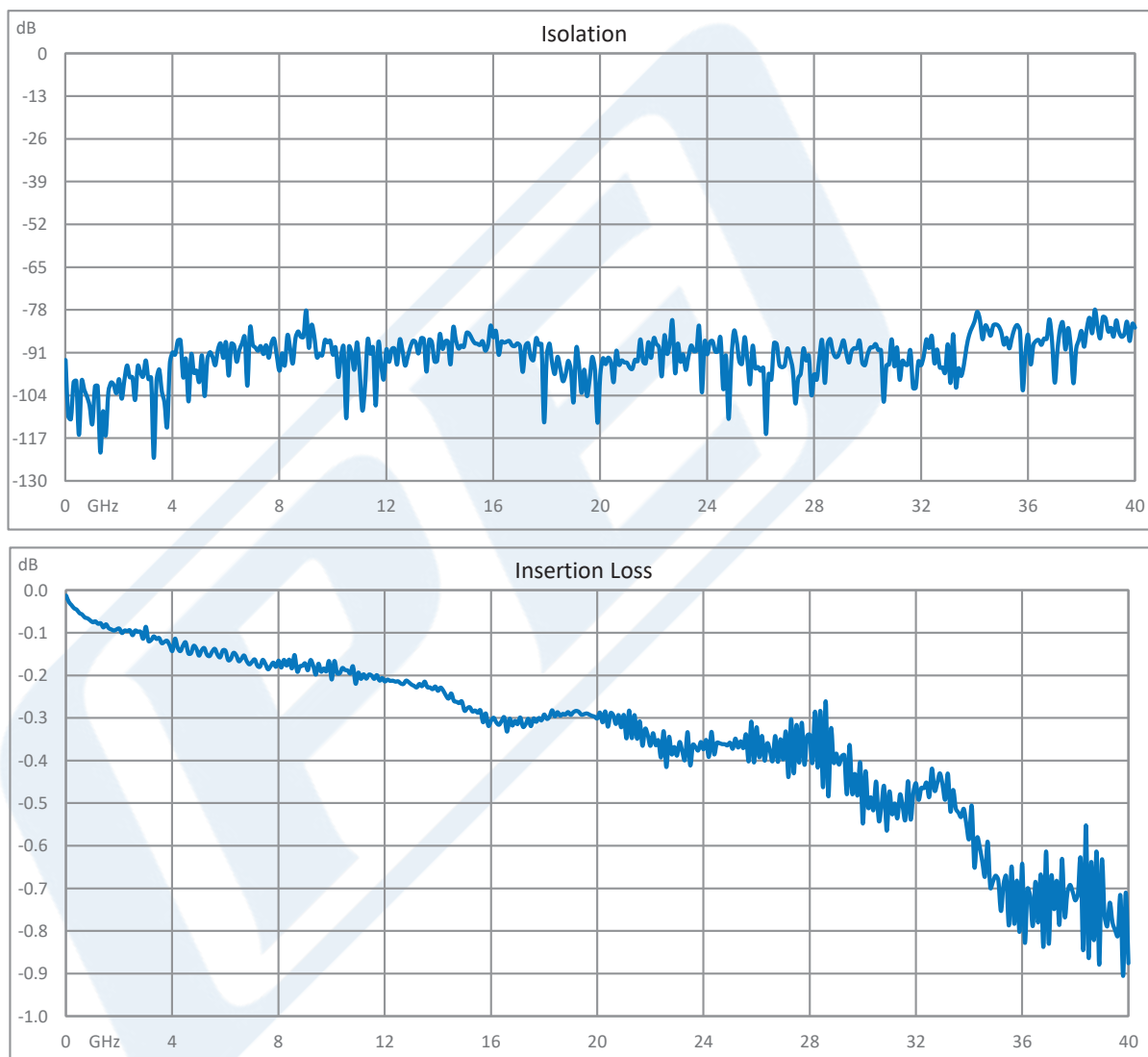


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Typical Performance Data



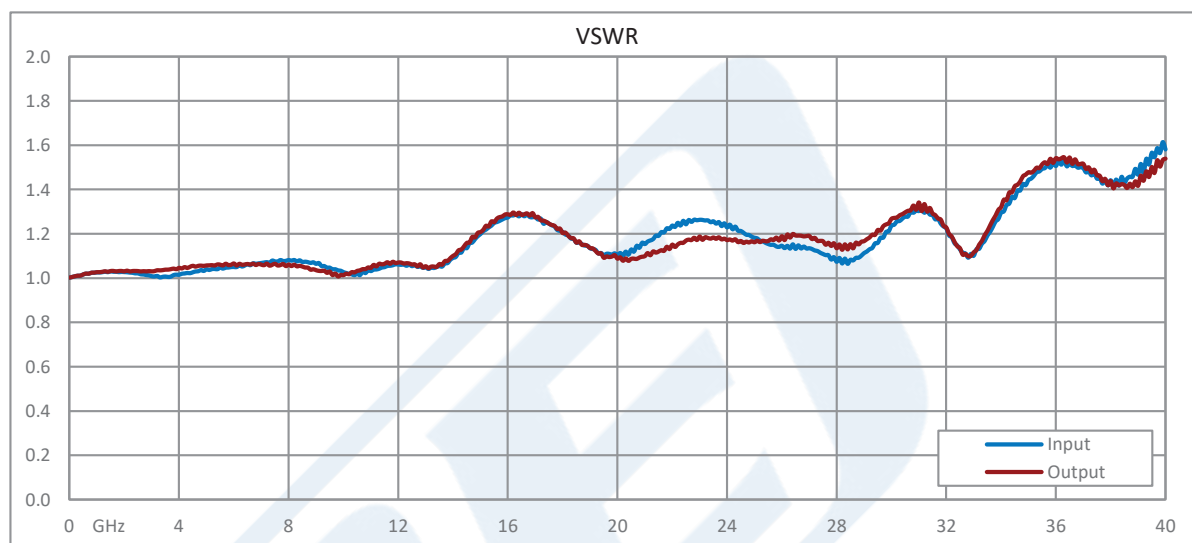
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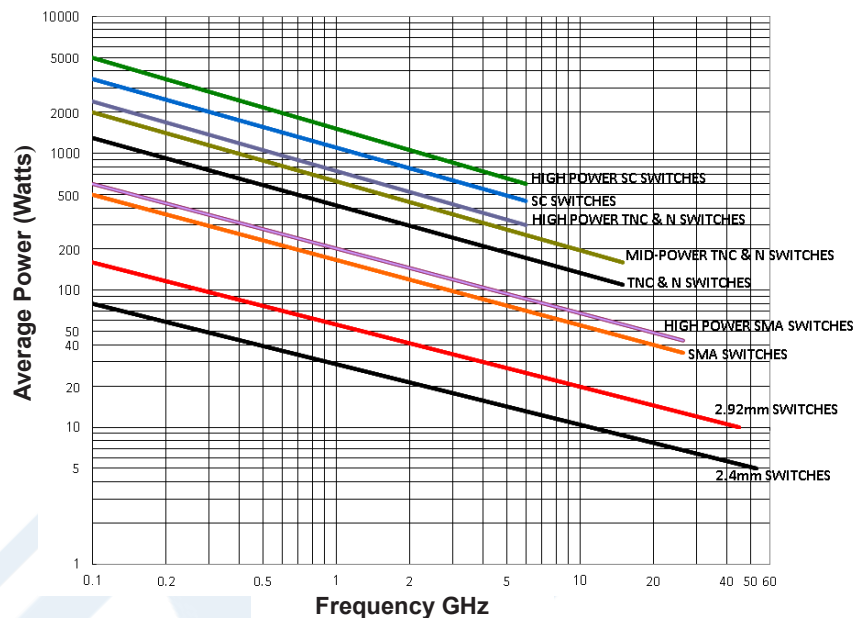
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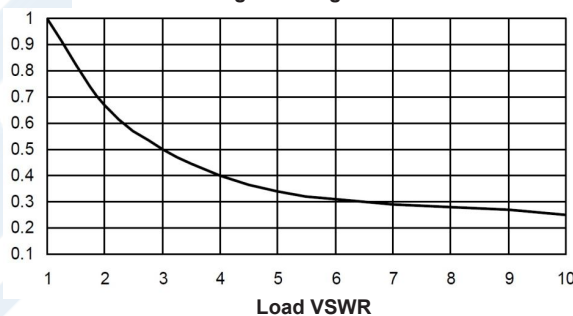
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Power Handling vs. Frequency



Power Handling De-rating vs. Load VSWR



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: ≤ 1.20:1
Operation: Cold Switching

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Transfer Electromechanical Relay Latching Switch DC to 40 GHz, 2M Cycles, 2.92mm, 5 Watts, 28V, Self Cut Off, TTL, Diodes, Solder Pins 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.

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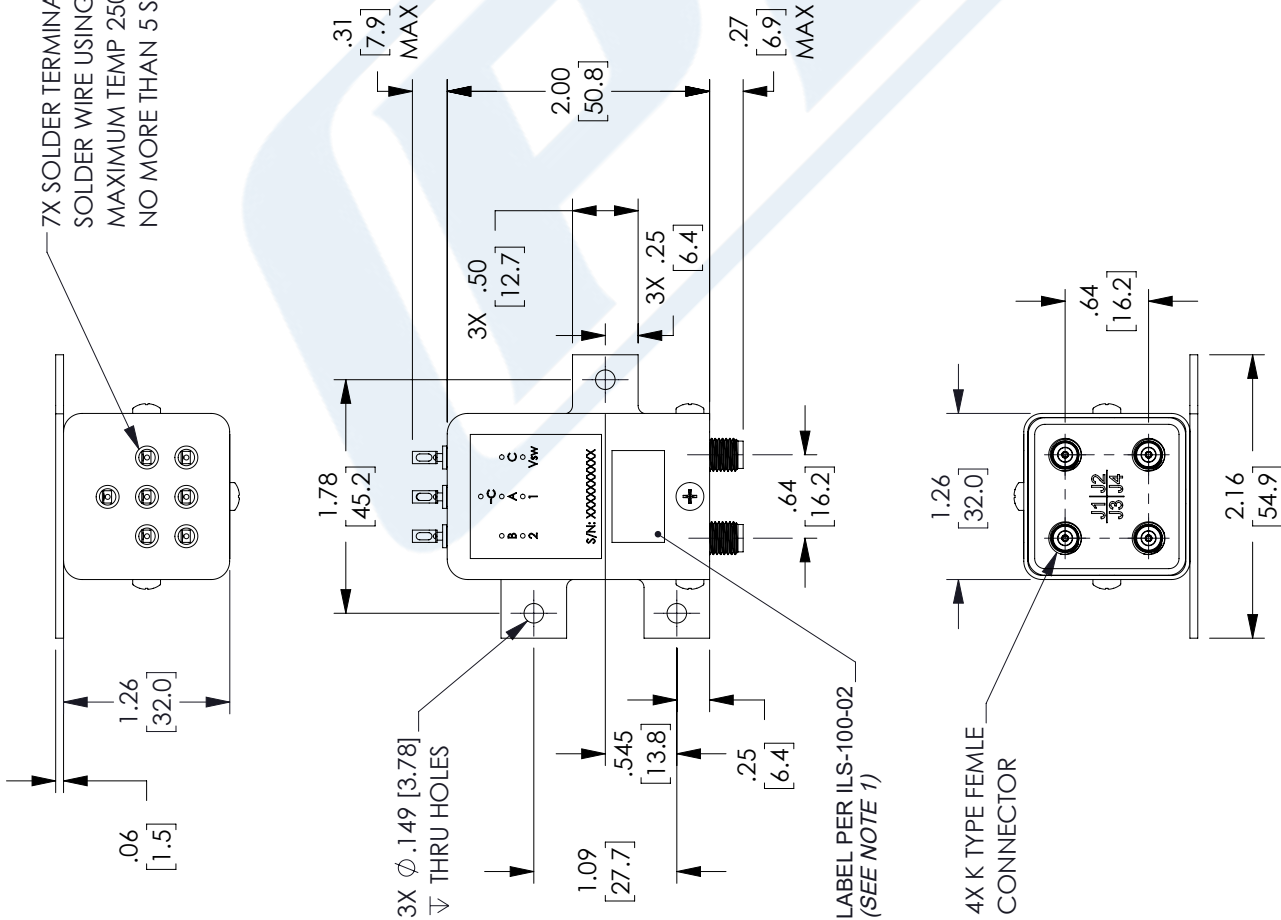
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PE71S6485 CAD Drawing

Transfer Electromechanical Relay Latching Switch DC to 40 GHz, 2M Cycles, 2.92mm, 5 Watts, 28V, Self Cut Off, TTL, Diodes, Solder Pins

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	05/17/2022	T. GALLA

7X SOLDER TERMINALS,
SOLDER WIRE USING SN96,
MAXIMUM TEMP 250 °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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UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ± .2 [5.08]
.XX = ± .02 [.51]
.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
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THIRD-ANGLE PROJECTION



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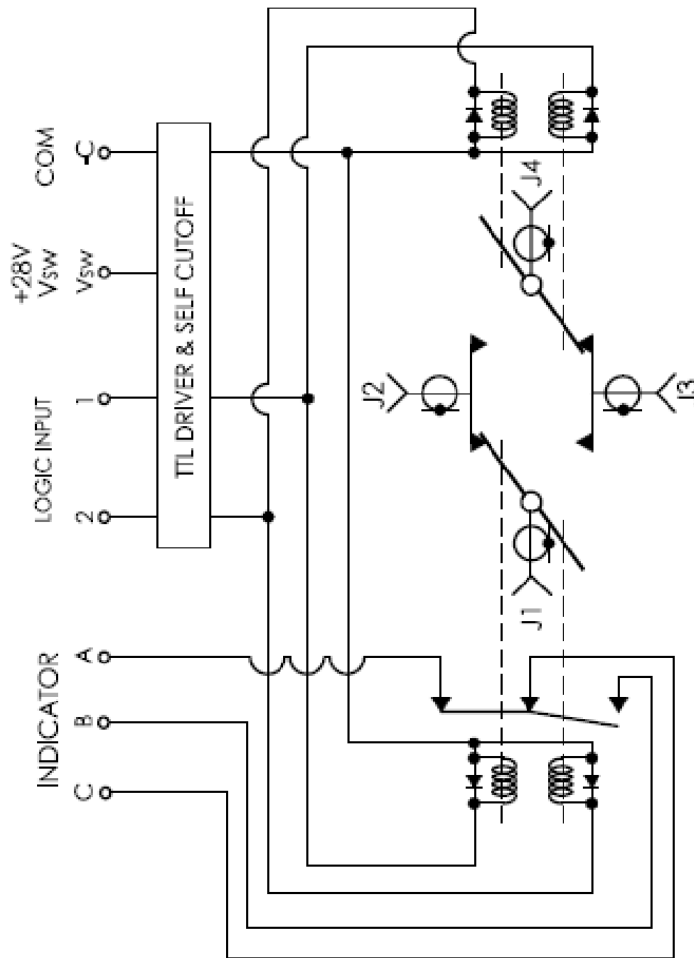
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SIZE A

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SCHEMATIC

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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 300 [7620] < L = ±5% L / -0

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