



Transfer, Electromechanical Relay Latching Switch, DC to 52GHz,
28VDC, Indicators, TTL, Diodes, Solder Terminal, 2.4mm

Electromechanical Relay Switches Technical Data Sheet

PE71S8029

Features

- Transfer Electromechanical Relay Switch
- DC to 52 GHz Frequency Range
- Latching Actuator
- TTL Logic Control
- Indicators
- Suppression Diodes
- 1M Lifecycle Rating
- Insertion Loss 0.7 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.3:1 max
- Solder Terminal Pins for DC Command Control
- +28 Volt DC Bias
- 2.4mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 3 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 PE71S8028 is a Transfer electromechanical relay switch that operates across an ultra wide frequency range from DC to 52 GHz and can handle up to 3 Watts of Average Power in a break before make condition. The 50 Ohm design is rated for 1 million lifecycles and features a Latching 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, indicators to monitor the switch position, and suppression diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.7 dB insertion loss and isolation greater than 80 dB. This switch requires +28 Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports 2.4mm female connectors and solder terminal pins for DC command 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
Actuator Type
Actuator Options
TTL Control

Transfer
Latching
Indicators, TTL Logic, Diodes
on: 2.4 to 5 Volts
off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		52	GHz
Operating Voltage	26	28	30	Volts
Actuating Set Current			250	mA
VSWR		1.4:1	2.8:1	
Insertion Loss		0.7	2.3	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 52GHz, 28VDC, Indicators, TTL, Diodes, Solder Terminal, 2.4mm PE71S8029](#)



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Isolation	50	80	dB
Input Power		3	Watts
Switching Time		20	ms

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12.4	12.4 to 18	18 to 26.5	26.5 to 40	GHz
VSWR, Max	1.3:1	1.4:1	1.5:1	1.7:1	1.9:1	
Insertion Loss, Max	0.3	0.4	0.5	0.7	1	dB
Isolation, Min	70	60	60	55	50	dB

Performance by Frequency

Description	F6	F7	F8	F9	F10	Units
Frequency Range	40 to 50	50 to 52				GHz
VSWR, Max	2.2:1	2.8:1				
Insertion Loss, Max	1.3	2.3				dB
Isolation, Min	50	50				dB

Mechanical Specifications

Size

Length	1.95 in [49.53 mm]
Width/Diameter	2.75 in [69.85 mm]
Height	0.92 in [23.37 mm]
Weight	0.5 lbs [226.8 g]
Finish	Electroless Nickel

Connectors

RF Connector Type	2.4mm Female
Control Connector	Solder Terminals

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 operational)
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Electromechanical Relay Switches Technical Data

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Vibration

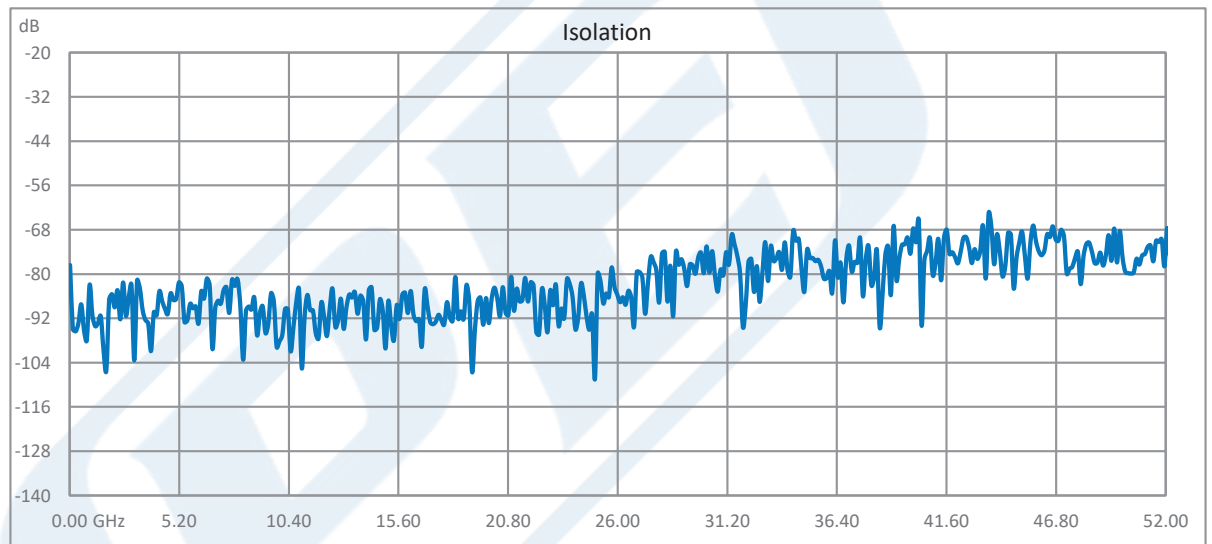
MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

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

Plotted and Other Data

Notes:

Typical Performance Data



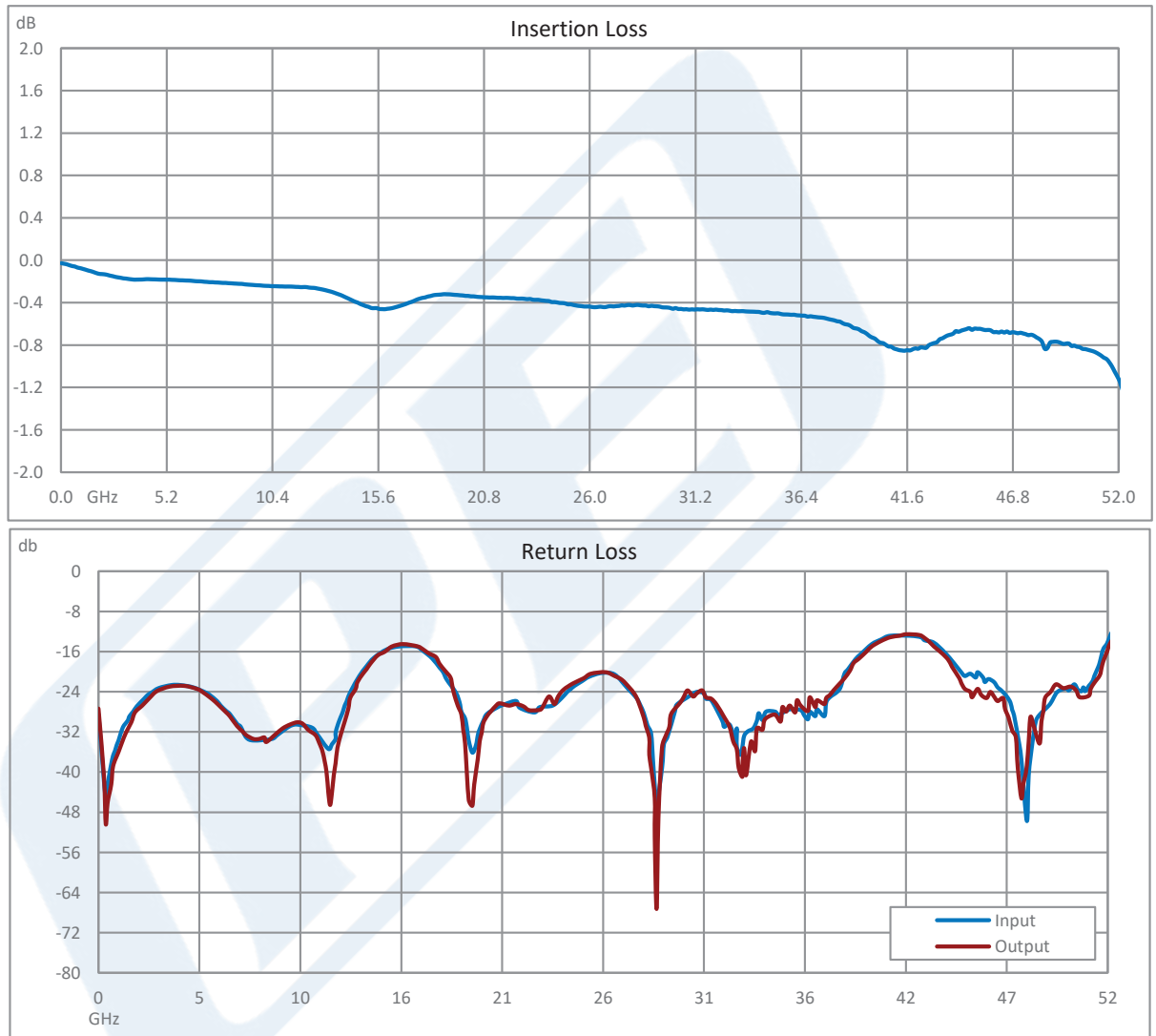
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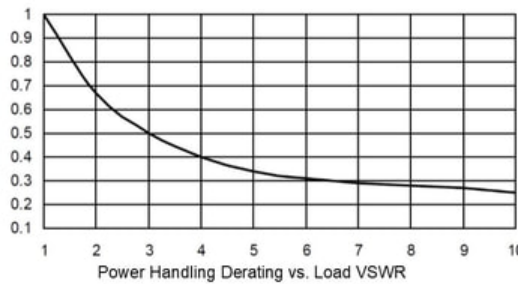
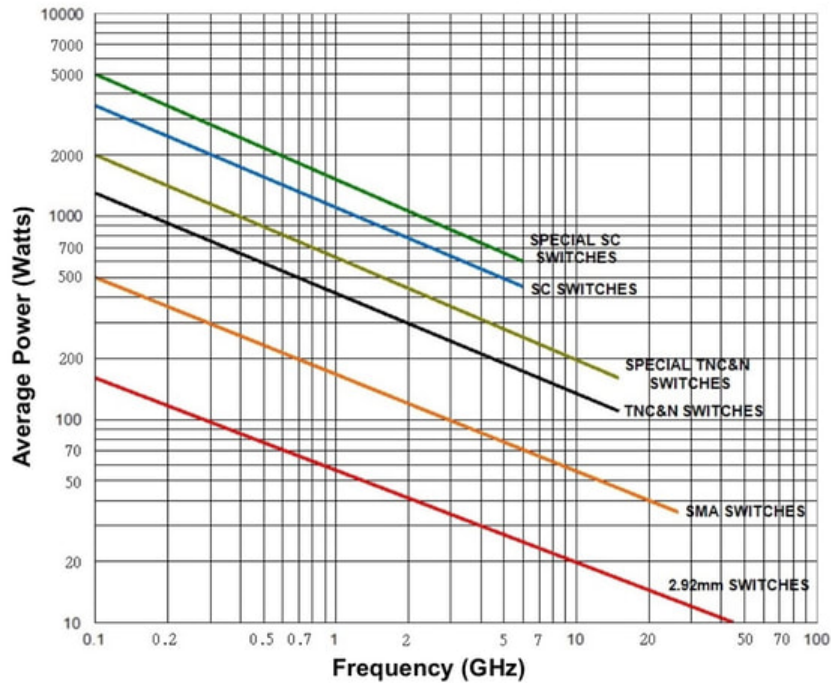


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Power Handling vs. Frequency



Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

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Transfer, Electromechanical Relay Latching Switch, DC to 52GHz, 28VDC, Indicators, TTL, Diodes, Solder Terminal, 2.4mm 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.

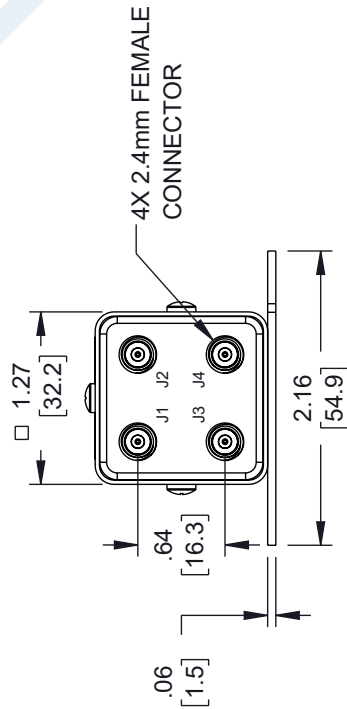
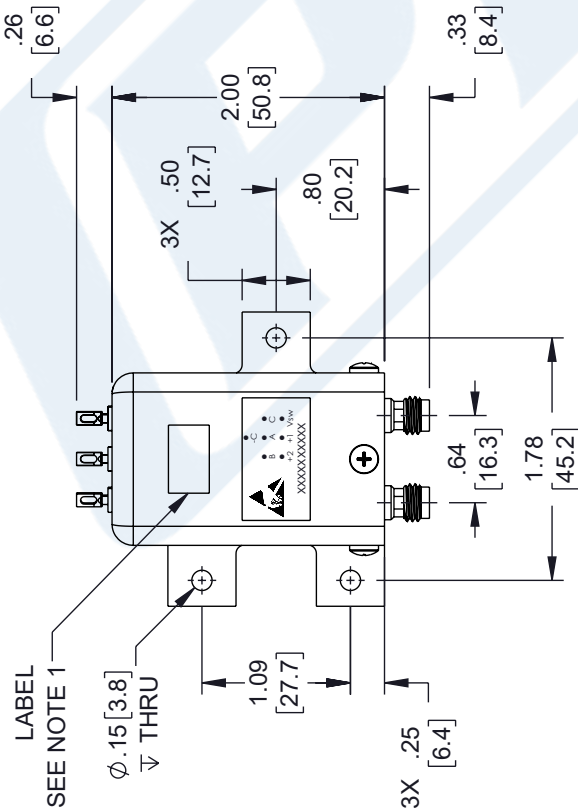
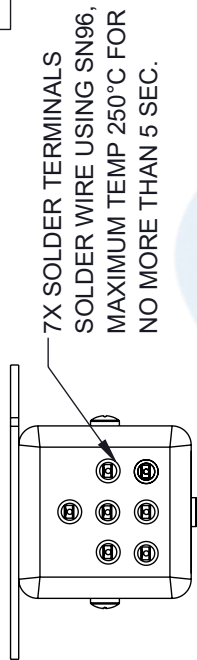
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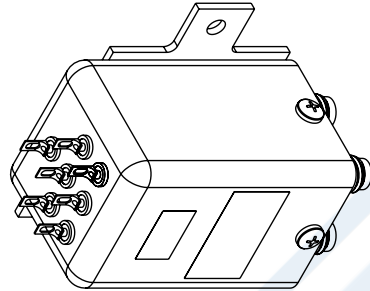
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REVISION				
ZONE	REV	DESCRIPTION	DATE	CHANGED BY
	A	INITIAL RELEASE	04/12/2023	SREITER
				TGALLA



1. LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY.
LABEL LOCATION FOR REFERENCE ONLY.

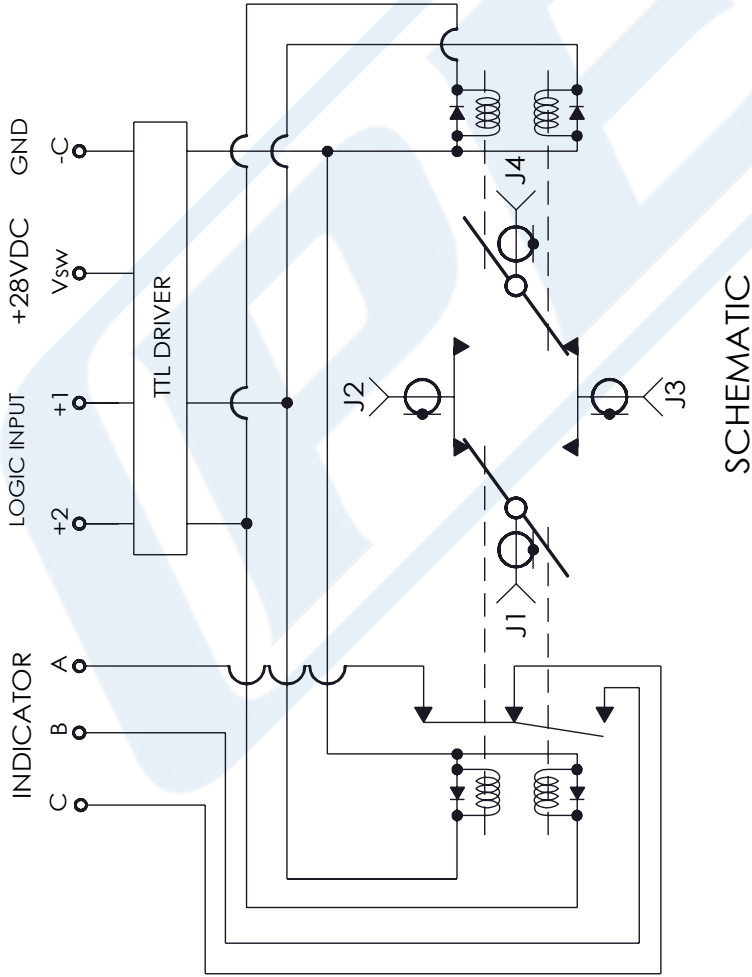
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Website: www.Pasternak.com Phone: 1.866.727.8376 1.949.261.1920							
DESCRIPTION							
TRAN, 2.4mm, LATCHING, INDICATORS, 52GHz, 28VDC, TTL, DIODES, SOLDER TERMINAL							
SIZE	CAGE CODE	DRAWN BY	ITEM NO.	SREITER		REV	
A	53919				PE71S8029	A	
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PE71S8029 CAD Drawing

Transfer, Electromechanical Relay Latching Switch, DC to 52GHz, 28VDC, Indicators, TTL, Diodes, Solder Terminal, 2.4mm



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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TOLERANCES:
X = ±.2 [.5] FRACTIONS
.XX = ±.02 [.5] ± 1/32
.XXX = ±.005 [.13] 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

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DESCRIPTION

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DIODES, SOLDER TERMINAL

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