



SP8T Electromechanical Relay Latching Switch
DC to 18 GHz, SMA, 100 Watts, 30V Indicator, 28V
Control with Self Cut Off, Auto Reset, Diodes

Electromechanical Relay Switches Technical Data Sheet

PE71S6081

Features

- Single Pole Eight Throw Terminated Relay Switch
- DC to 18 GHz Frequency Range
- 2M Cycle Min Operating Life
- 100 Watt Avg Power Max
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 0.6 dB Max
- VSWR 1.6:1 Max

Applications

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

Description

The PE71S6081 is a Single Pole Eight Throw Terminated Electromechanical Relay Switch that operates from DC to 18 GHz and can handle up to 240 Watts of CW input power in a Break Before Make condition. The design features a Latching Actuator with Terminations, Diodes, Self Cut Off, Auto Reset and Position Indicators circuitry and is rated for 2M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min, with +28 Vdc operating voltage. Performance is guaranteed over -40°C to +85°C and the switch assembly is RoHS and REACH compliant. The package interface uses a 25 pin D-SUB Male connector and SMA Female connectors.

Electrical Specifications

Switch Type	SP8T, Absorptive
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Self Cut Off, Auto Reset, Indicators, Diodes
Polarity	Negative Common
Indicator Rating	1 Watts / 30 Volts / 100 mA
Self Cut-Off Time	40 ms < CT < 120 ms

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	24	28	30	Volts
Actuating Current @ 28 Volts		375		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW)			100	Watts
Termination Input Power (CW)			1	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP8T Electromechanical Relay Latching Switch DC to 18 GHz, SMA, 100 Watts, 30V Indicator, 28V Control with Self Cut Off, Auto Reset, Diodes PE71S6081](#)



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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 8	8 to 12.4	12.4 to 16	16 to 18	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1	1.6:1	
Insertion Loss, Max	0.2	0.3	0.4	0.55	0.6	dB
Isolation, Min	80	70	60	60	60	dB
Input Power, Max (CW)	240	150	120	110	100	Watts

Electrical Specification Notes:

Average Power and Actuating Current values at 25°C.

Termination Average Power: 1W per termination / 3W total power.

Mechanical Specifications

Size

Length	2.598 in [65.99 mm]
Width/Diameter	2.25 in [57.15 mm]
Height	2.25 in [57.15 mm]
Weight	0.62 lbs [281.23 g]
Operating Life	2,000,000 Cycles
Switching Time	50 ms Max

Connectors

RF Connector Type	SMA Female
RF Connector Specification	MIL C 39012
Control Connector	25 pin D-SUB Male

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +85 deg C

Construction

Humidity	Splashproof
Shock	MIL-DTE-3928E, Cond.B MIL-STD-202, Method 213B, Cond.C

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Vibration
ESD Sensitivity



Environmental Specification Notes:
Environmental specifications are guaranteed but not tested.

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant
REACH Compliant

12/17/2014

Plotted and Other Data

Notes:

- Values shown are typical at 25°C.

MIL-STD-202, Method 204D, Cond.D
ESD Sensitive Material. Transport material in approved
ESD bags. Handle in approved ESD Workstation.

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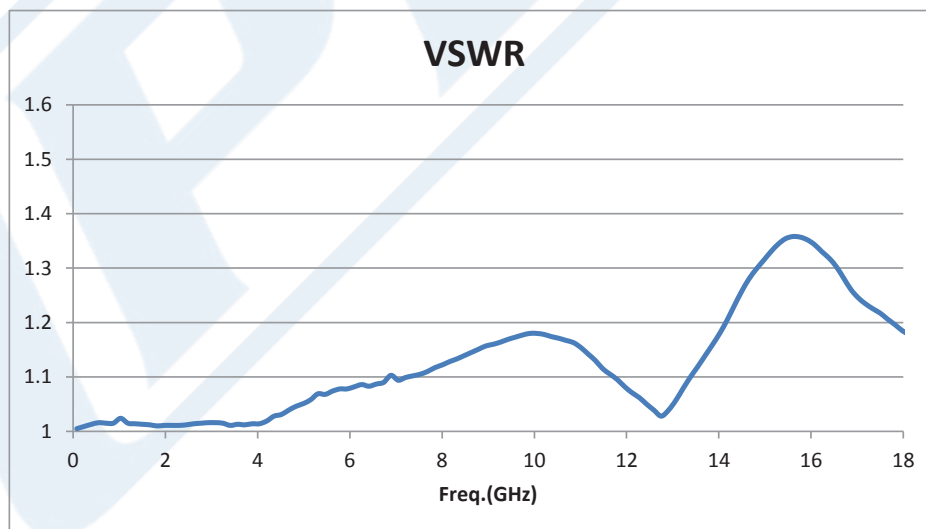
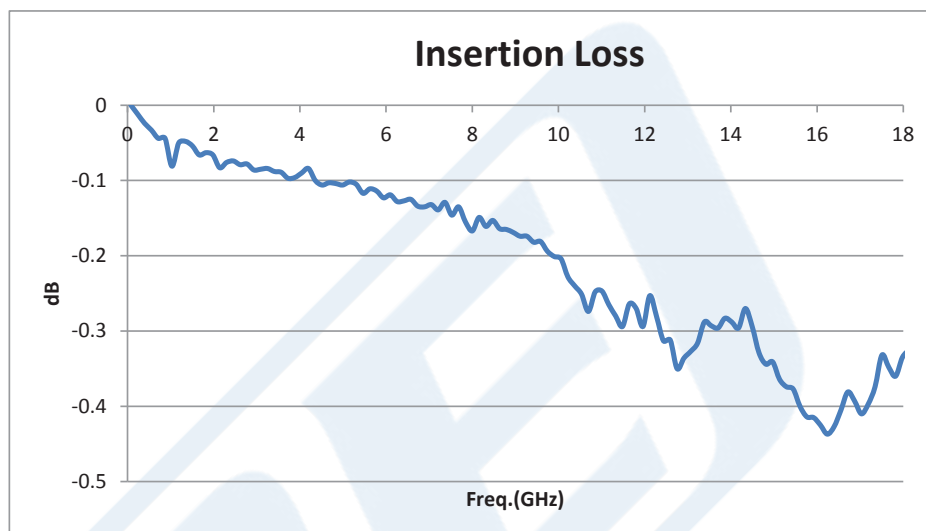


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Typical Performance Data



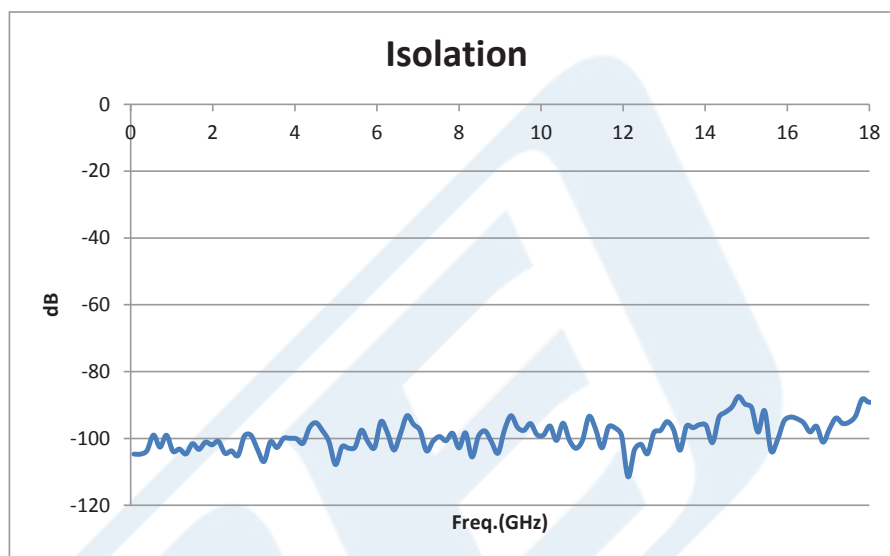
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SP8T Electromechanical Relay Latching Switch DC to 18 GHz, SMA, 100 Watts, 30V Indicator, 28V Control with Self Cut Off, Auto Reset, Diodes from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

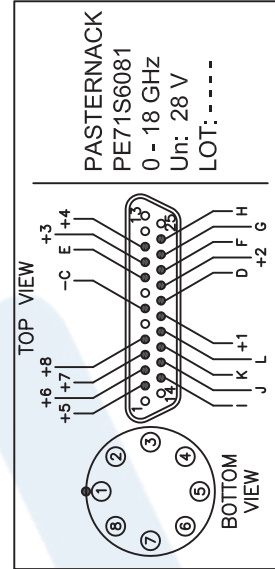
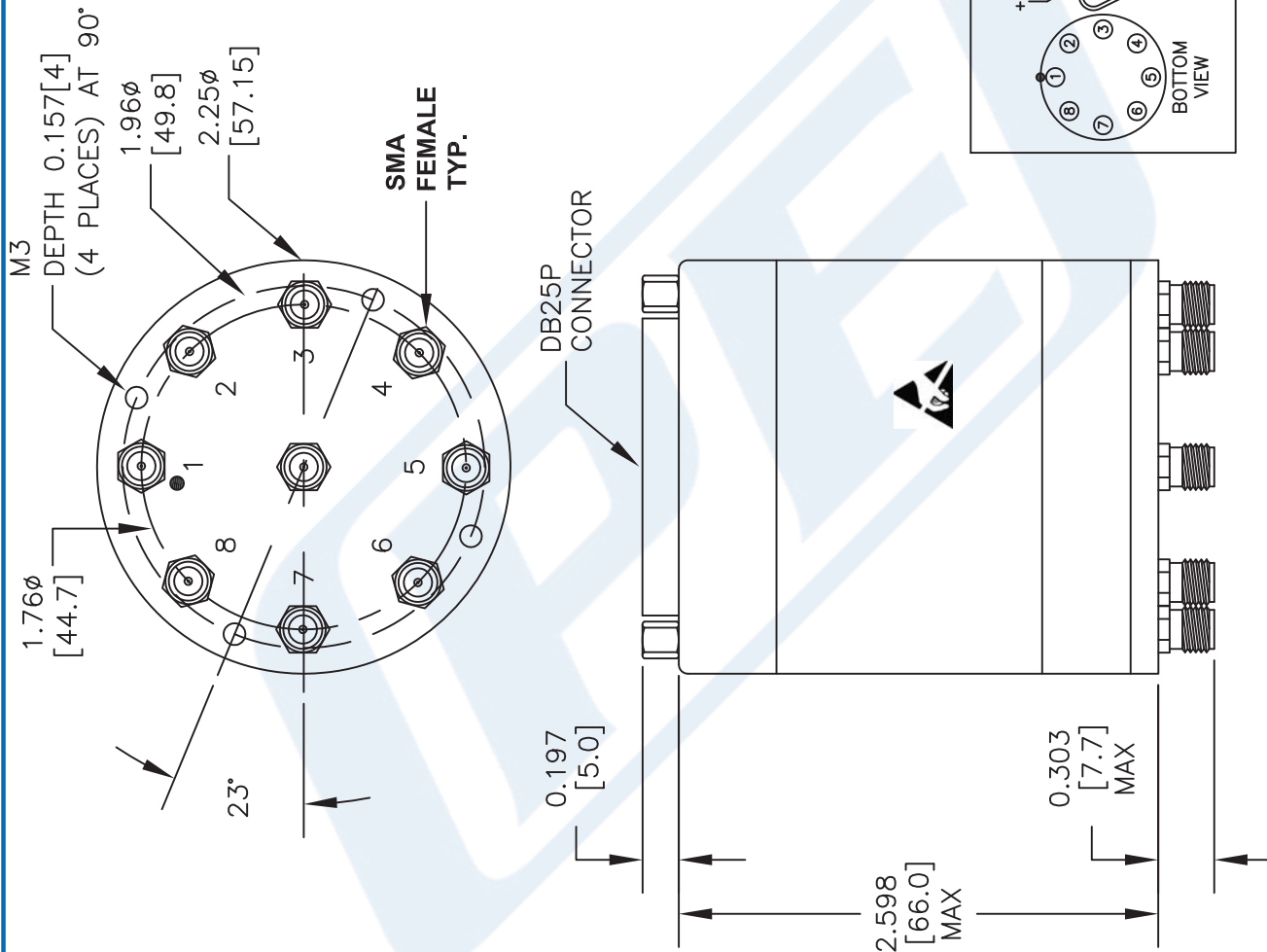
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE71S6081 CAD Drawing

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NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE

PE71S6081

FSCM NO. 53919

CAD FILE 083115

SCALE N/A

SIZE A

150

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THE ENGINEER'S RF SOURCE

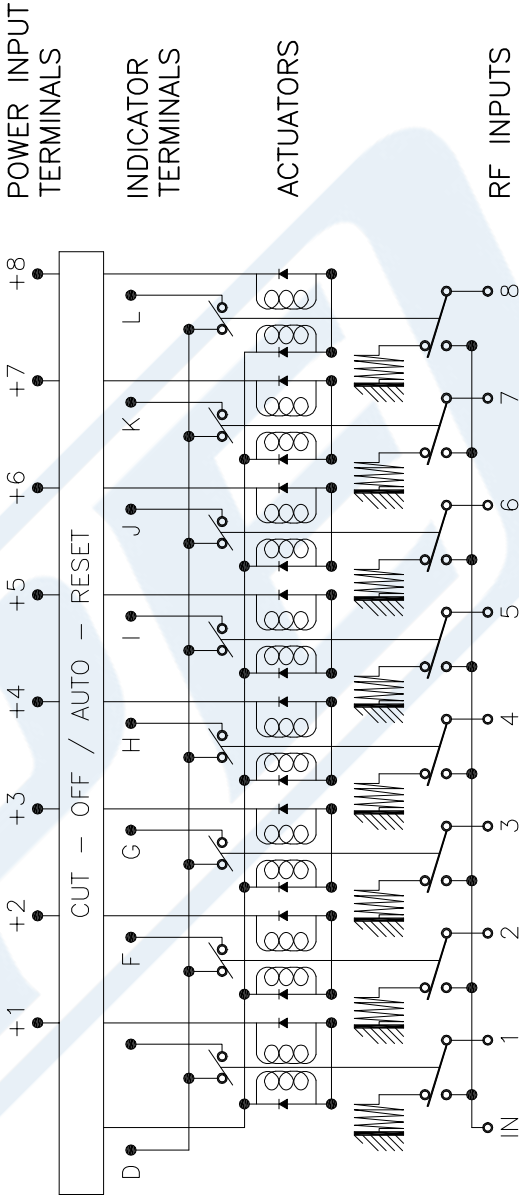
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PE71S6081 CAD Drawing

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Voltage	RF Continuity	Indicator
- C + 1	IN ↔ 1	D.E
- C + 2	IN ↔ 2	D.F
- C + 3	IN ↔ 3	D.G
- C + 4	IN ↔ 4	D.H
- C + 5	IN ↔ 5	D.I
- C + 6	IN ↔ 6	D.J
- C + 7	IN ↔ 7	D.K
- C + 8	IN ↔ 8	D.L

SCHEMATIC DIAGRAM



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SCALE N/A

SIZE A

150