



# SP12T Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA

## Electromechanical Relay Switches Technical Data Sheet

PE71S6083

### Features

- Single Pole Twelve 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 0.8 dB Max
- VSWR 1.8:1 Max

### Applications

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

### Description

The PE71S6083 is a Single Pole Twelve 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, Position Indicators and Reset 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 44 pin D-SUB Male connector and SMA Female connectors.

### Electrical Specifications

Switch Type	SP12T, Terminated
Actuator Type	Latching
Switching Sequence	Break before Make
Actuator Options	Indicators, Reset
Polarity	Negative Common
Indicator Rating	1 Watts / 30 Volts / 100 mA
Reset Current	1,500 mA

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	24	28	30	Volts
Actuating Current @ 28 Volts		125		mA
VSWR			1.8:1	
Insertion Loss			0.8	dB
Isolation	50			dB
Input Power (CW)			100	Watts
Termination Input Power (CW)			1	Watts
Switching Time			15	ms Max

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP12T Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA PE71S6083](#)



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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 15	15 to 18	GHz
VSWR, Max	1.2:1	1.4:1	1.6:1	1.7:1	1.8:1	
Insertion Loss, Max	0.2	0.4	0.6	0.7	0.8	dB
Isolation, Min	80	70	60	60	50	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.

Reset: supply voltage time 1 sec max/10% duty cycle.

### Mechanical Specifications

#### Size

Length	2.598 in [65.99 mm]
Width/Diameter	2.68 in [68.07 mm]
Height	2.68 in [68.07 mm]
Weight	0.88 lbs [399.16 g]
Package Type	Connectorized
Operating Life	2,000,000 Cycles

#### Connectors

RF Connector Type	SMA Female
RF Connector Specification	MIL C 39012
Control Connector	DB-44 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
Vibration	MIL-STD-202, Method 213B, Cond.C (survival)
	MIL-STD-202, Method 204D, Cond.D(survival)

#### Environmental Specification Notes:

Environmental specifications are guaranteed but not tested.

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

**Plotted and Other Data**

Notes:

- Values shown are typical at 25°C.

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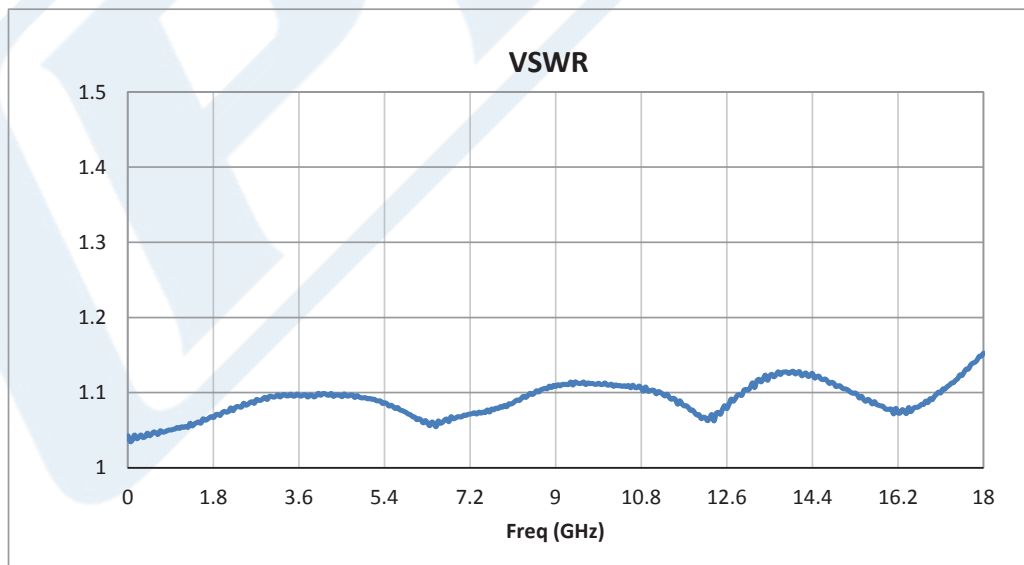
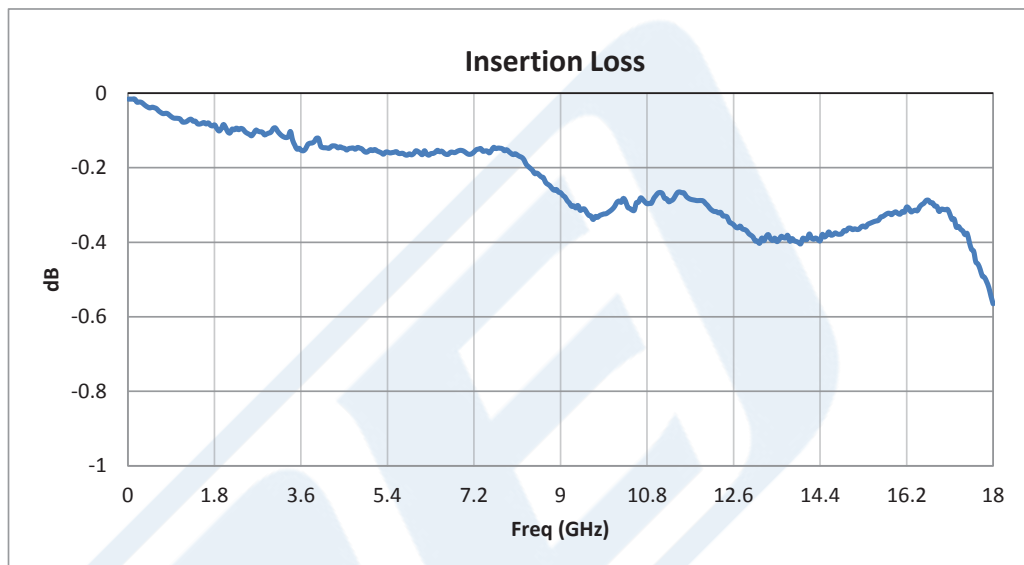


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Typical Performance Data



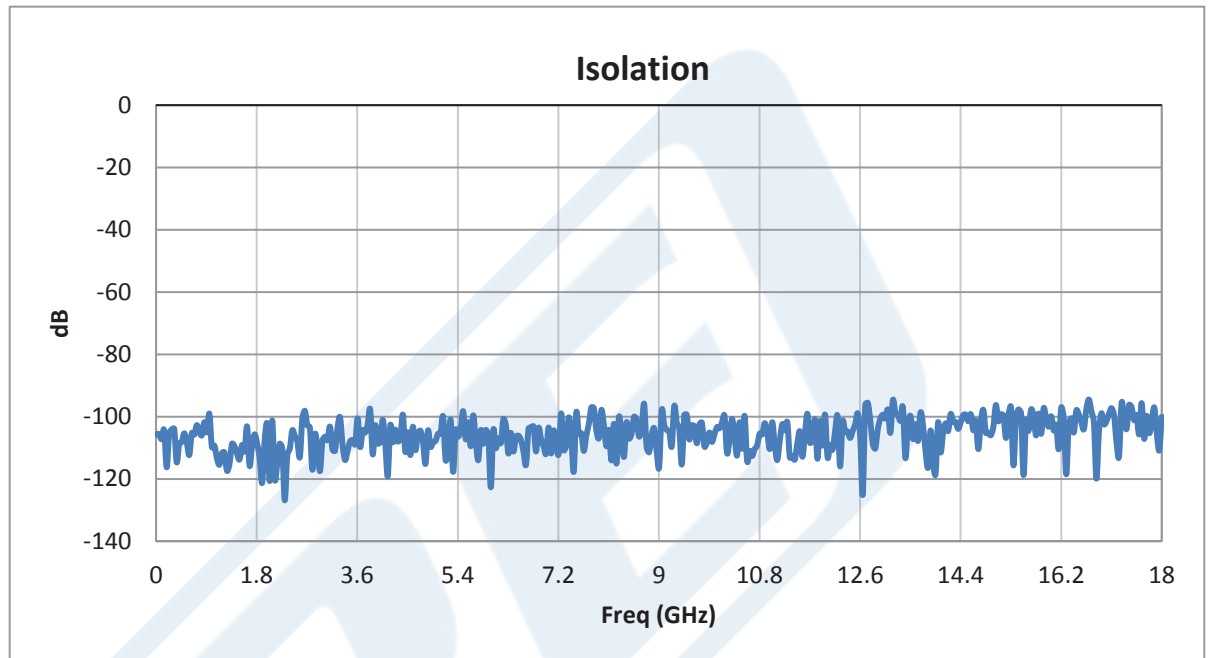
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SP12T Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

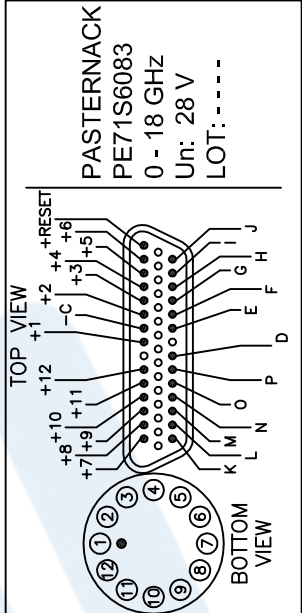
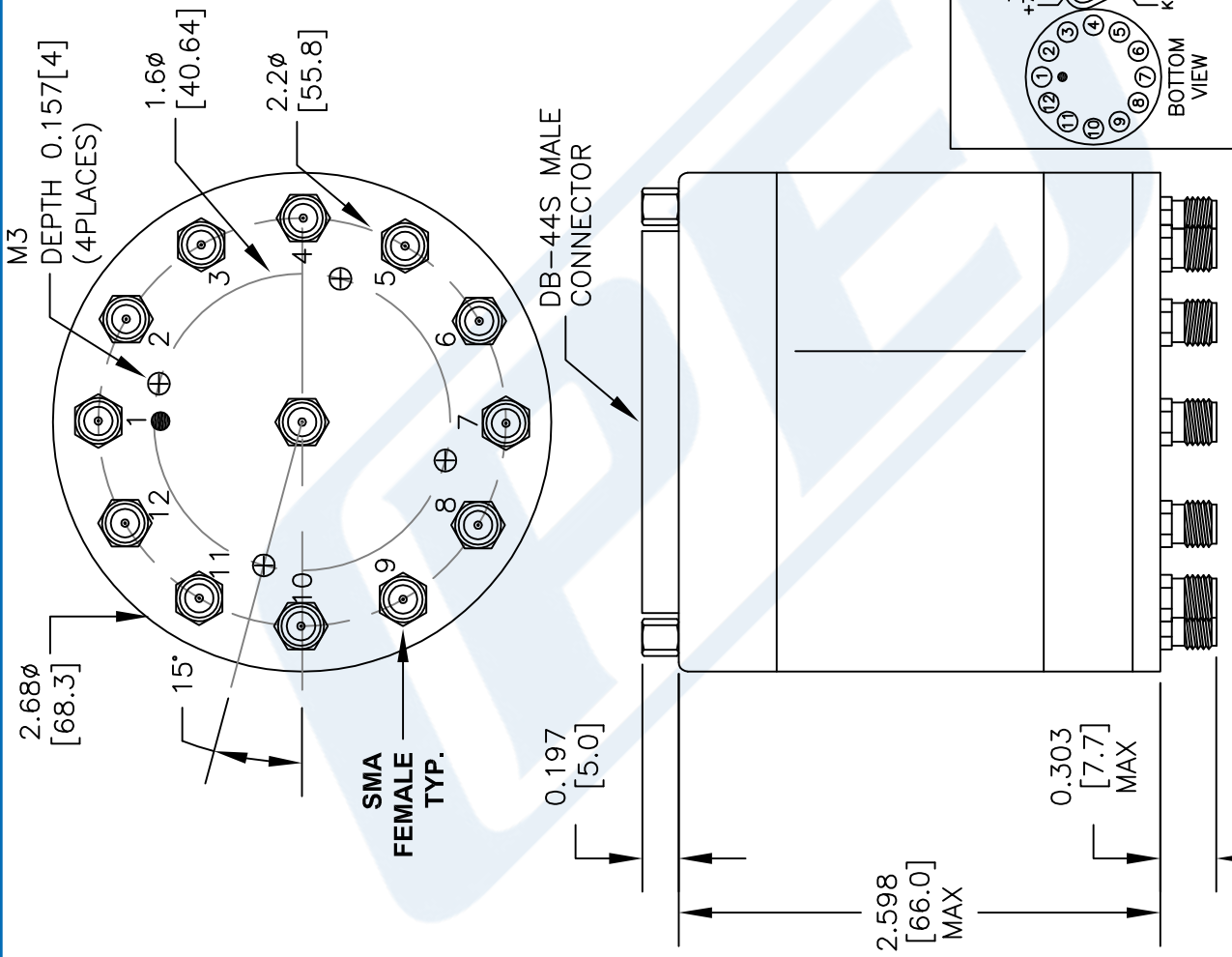
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

# PE71S6083 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  
**PE71S6083**

FSCM NO. 53919

CAD FILE 120214 SCALE N/A SIZE A 150

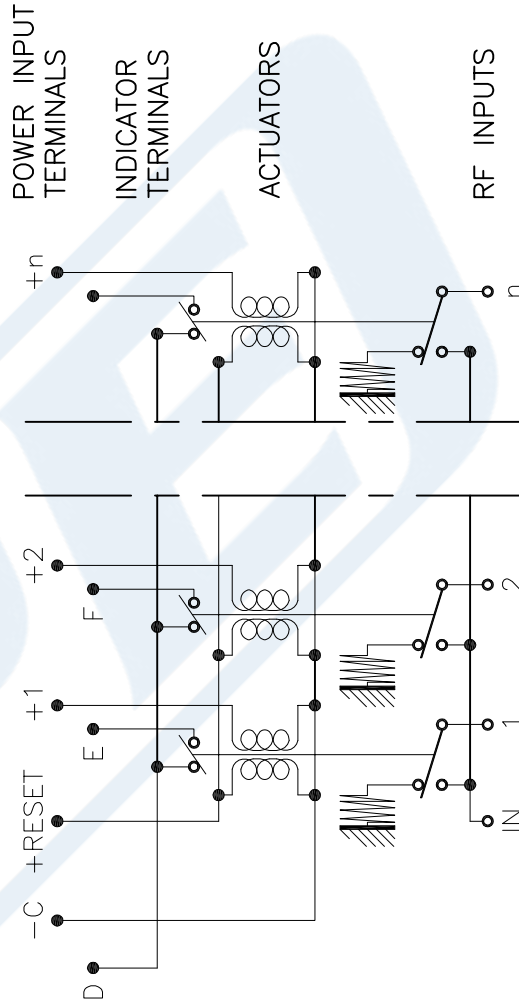
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# PE71S6083 CAD Drawing

SP12T Electromechanical Relay Latching Switch, Terminated, DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA

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.J
- C + 6	IN ↔ 6	D.J
- C + 7	IN ↔ 7	D.K
- C + 8	IN ↔ 8	D.L
- C + 9	IN ↔ 9	D.M
- C + 10	IN ↔ 10	D.N
- C + 11	IN ↔ 11	D.O
- C + 12	IN ↔ 12	D.P

**SCHEMATIC DIAGRAM**



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CAD FILE 083115 SCALE N/A SIZE A 150

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