



SP12T Electromechanical Relay Latching Switch,
Terminated, DC to 12.4 GHz, up to 240W, 28V Self
Cut Off, Auto Reset, Indicators, Diodes, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6082

Features

- Single Pole Twelve Throw Terminated Relay Switch
- DC to 12.4 GHz Frequency Range
- 2M Cycle Min Operating Life
- 120 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 PE71S6082 is a Single Pole Twelve Throw Terminated Electromechanical Relay Switch that operates from DC to 12.4 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, Position Indicators, Self Cut Off and Auto 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	Self Cut Off, Auto Reset, Indicators, Diodes
Polarity	Negative Common
Indicator Rating	1 Watt / 30 Volts / 100 mA
Self Cut-Off Time	40 ms < CT < 120 ms

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12.4	GHz
Impedance		50		Ohms
Operating Voltage	24	28	30	Volts
Actuating Set Current @ 28 Volts		500		mA
VSWR			1.6:1	
Insertion Loss			0.6	dB
Isolation	60			dB
Input Power (CW)			120	Watts
Termination Input Power (CW)			1	Watt
Switching Time			50	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 12.4 GHz, up to 240W, 28V Self Cut Off, Auto Reset, Indicators, Diodes, SMA PE71S6082](#)



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Electromechanical Relay Switches Technical Data

PE71S6082

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 8	8 to 12.4			GHz
VSWR, Max	1.2:1	1.4:1	1.6:1			
Insertion Loss, Max	0.2	0.4	0.6			dB
Isolation, Min	80	70	60			dB
Input Power, Max (CW)	240	150	120			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	2.68 in [68.07 mm]
Height	2.68 in [68.07 mm]
Weight	0.9075 lbs [411.64 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	Splashproof
Humidity	MIL-DTE-3928E, Cond.B
Shock	MIL-STD-202, Method 213B, Cond.C (survival)
Vibration	MIL-STD-202, Method 204D, Cond.D (survival)
ESD Sensitivity	ESD Sensitive Material. Transport material in approved ESD bags. Handle in approved ESD Workstation.

Environmental Specification Notes:

Environmental specifications are guaranteed but not tested.

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Electromechanical Relay Switches Technical Data

PE71S6082

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

Plotted and Other Data

Notes:

- Values shown are typical at 25°C.

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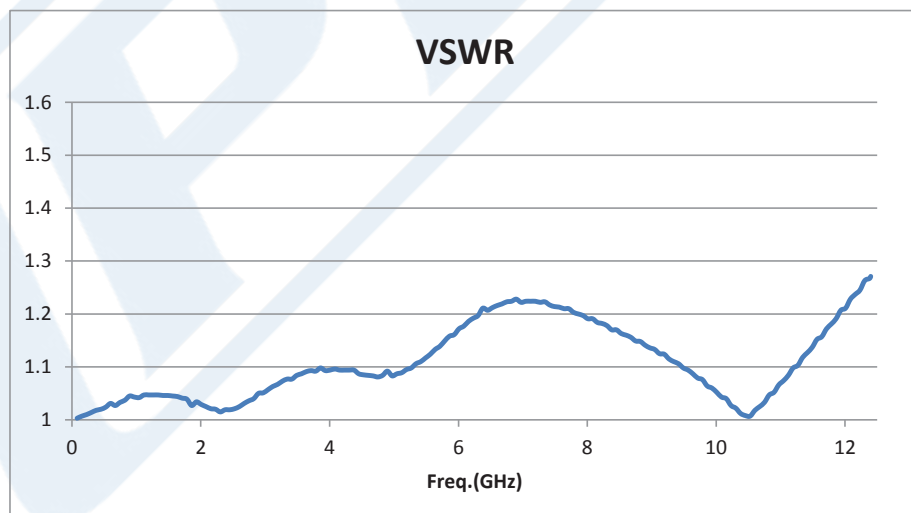
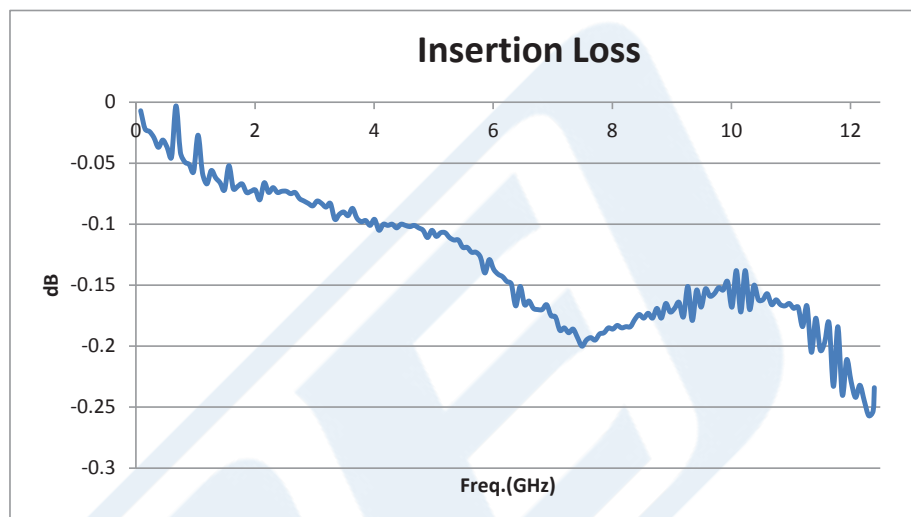


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Electromechanical Relay Switches Technical Data

PE71S6082

Typical Performance Data



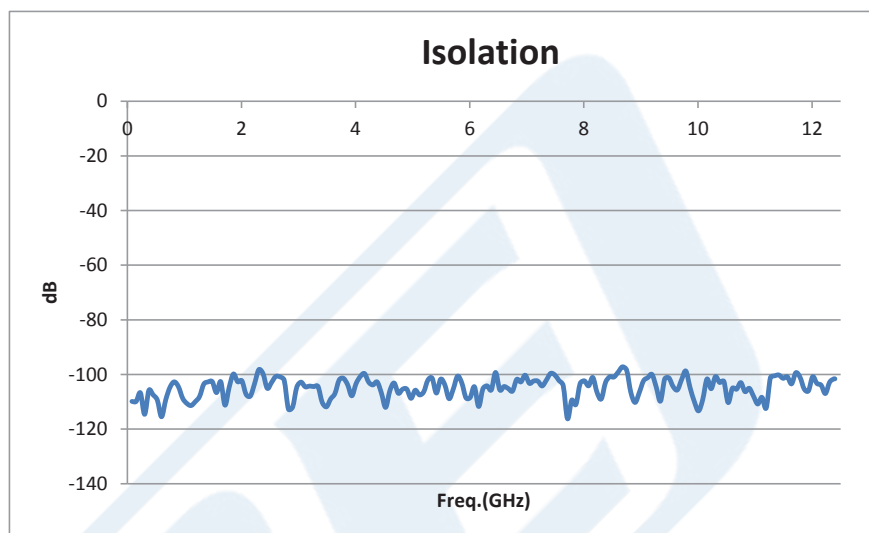
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Electromechanical Relay Switches Technical Data

PE71S6082

SP12T Electromechanical Relay Latching Switch, Terminated, DC to 12.4 GHz, up to 240W, 28V Self Cut Off, Auto Reset, Indicators, Diodes, 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.

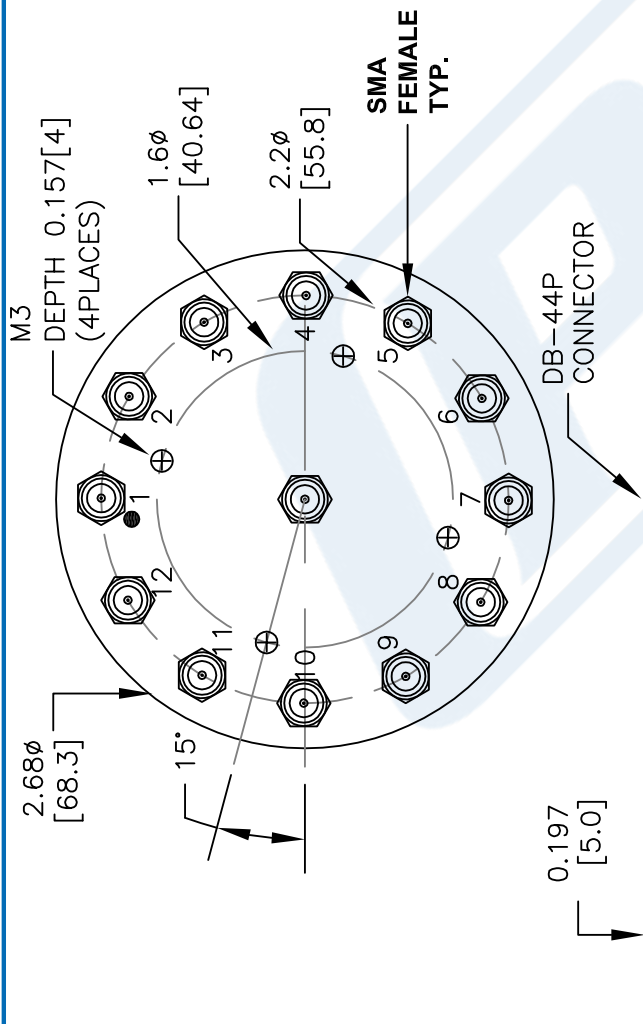
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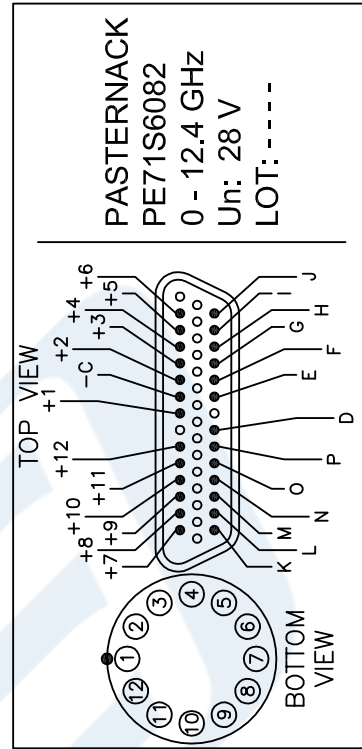
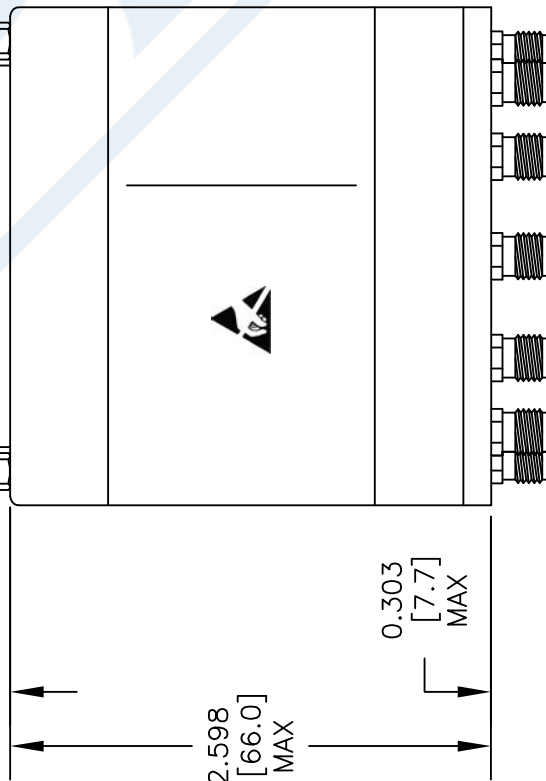
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such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

PE71S6082 CAD Drawing

SP12T Electromechanical Relay Latching Switch, Terminated, DC to 12.4 GHz,
up to 240W, 28V Self Cut Off, Auto Reset, Indicators, Diodes, SMA



0.197 [5.0]



PASTERNAK
PE71S6082
0 - 12.4 GHz
Un: 28 V
LOT: ----

DWG TITLE

PE71S6082

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].

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FSCM NO. 53919

CAD FILE 083115

SCALE N/A

SIZE A

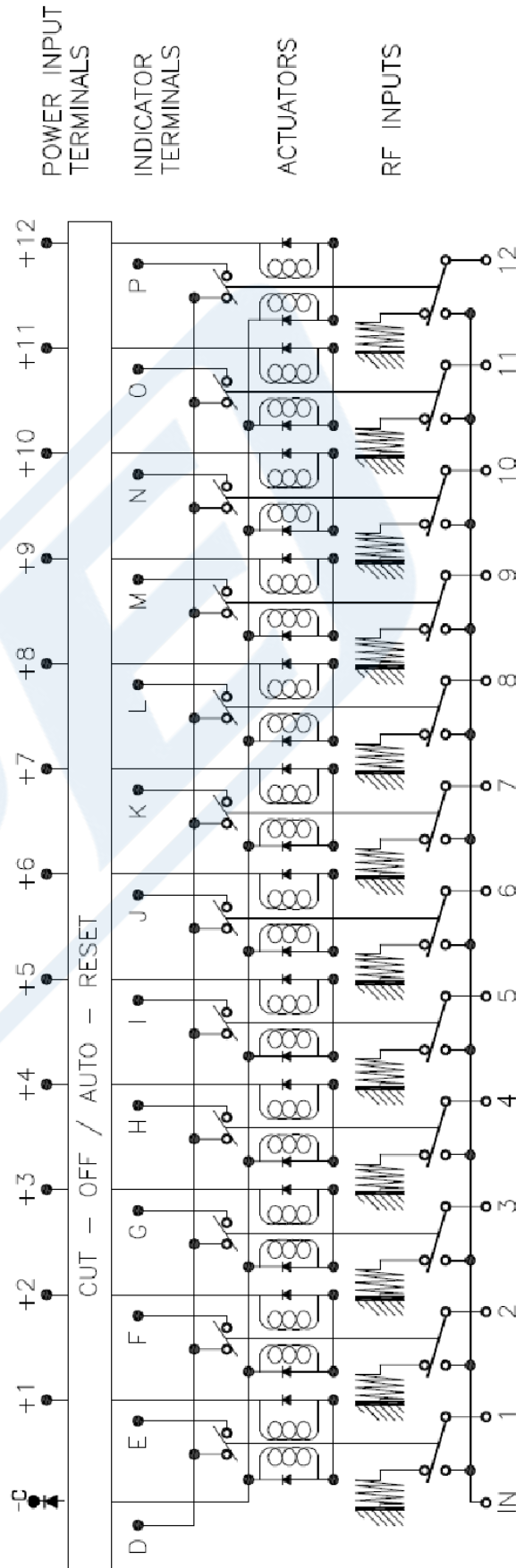
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PE71S6082 CAD Drawing

SP12T Electromechanical Relay Latching Switch, Terminated, DC to 12.4 GHz,
up to 240W, 28V Self Cut Off, Auto Reset, Indicators, Diodes, 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.I
- 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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DWG TITLE

PE71S6082

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CAGE CODE 53919

CAD FILE 083115

SCALE N/A

SIZE A

150



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](#)



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

Electromechanical Relay Switches Technical Data

PE71S6083

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:

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DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA

Electromechanical Relay Switches Technical Data

PE71S6083

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

Plotted and Other Data

Notes:

- Values shown are typical at 25°C.

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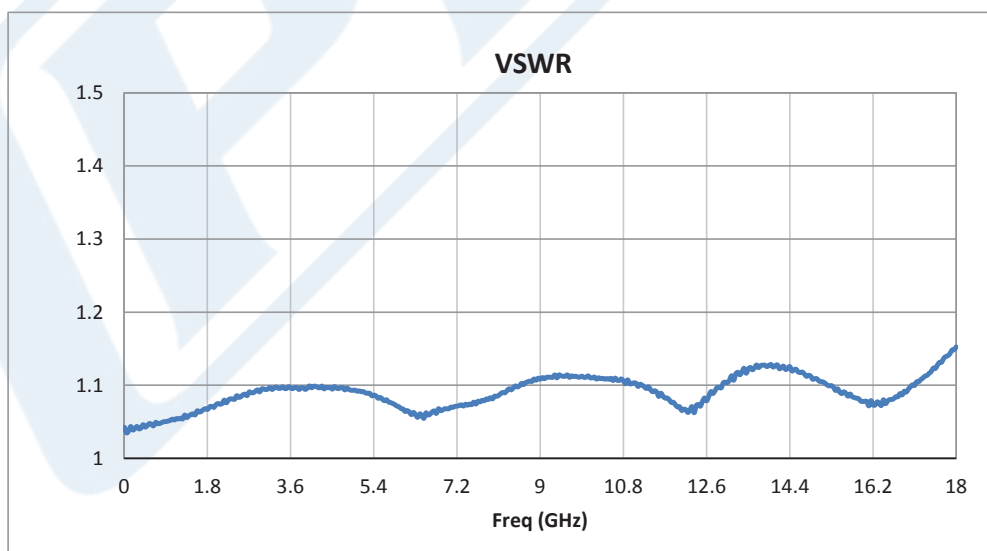
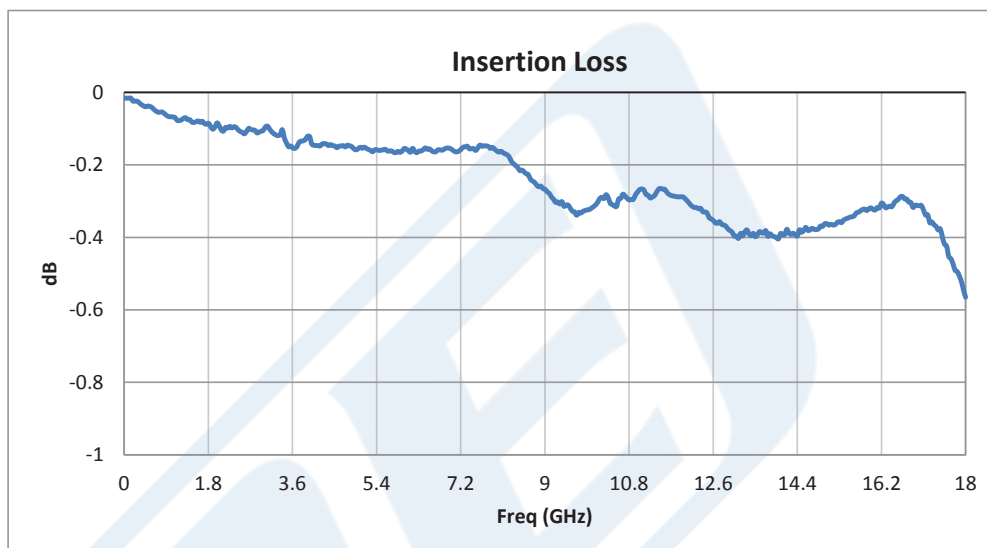


SP12T Electromechanical Relay Latching Switch, Terminated,
DC to 18 GHz, up to 240W, 28V Indicators, Reset, SMA

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Typical Performance Data



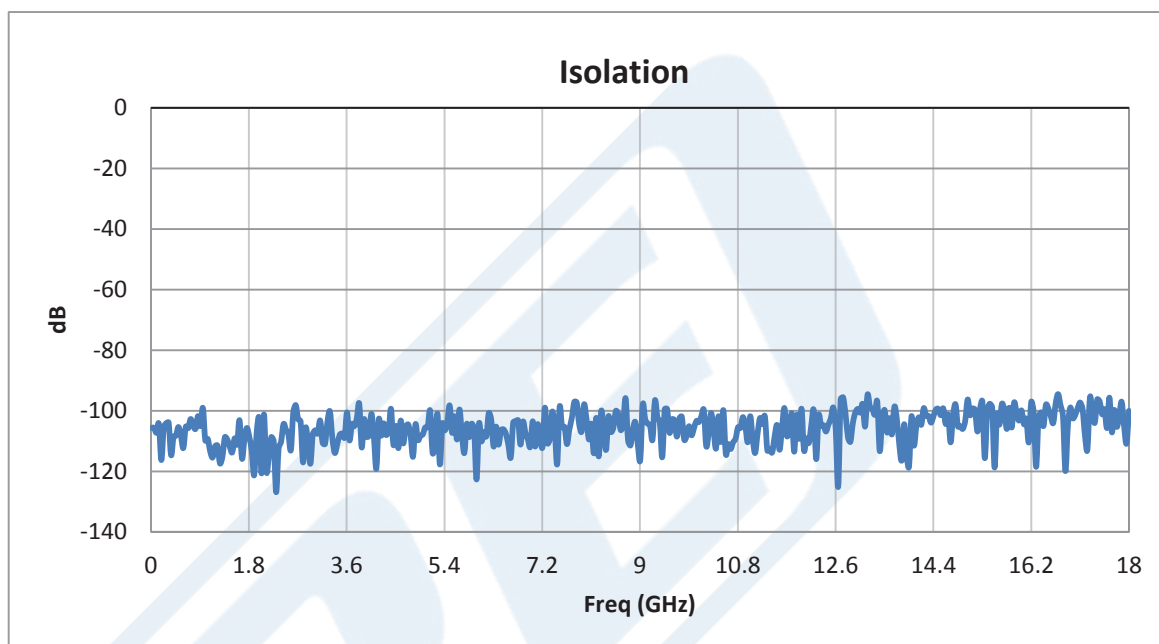
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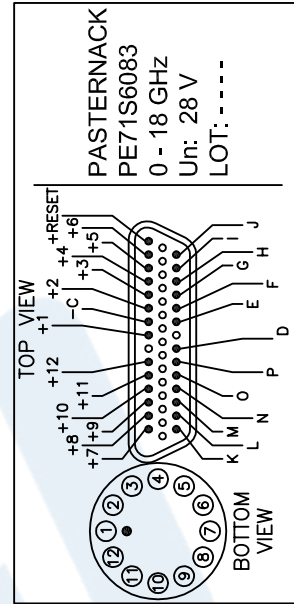
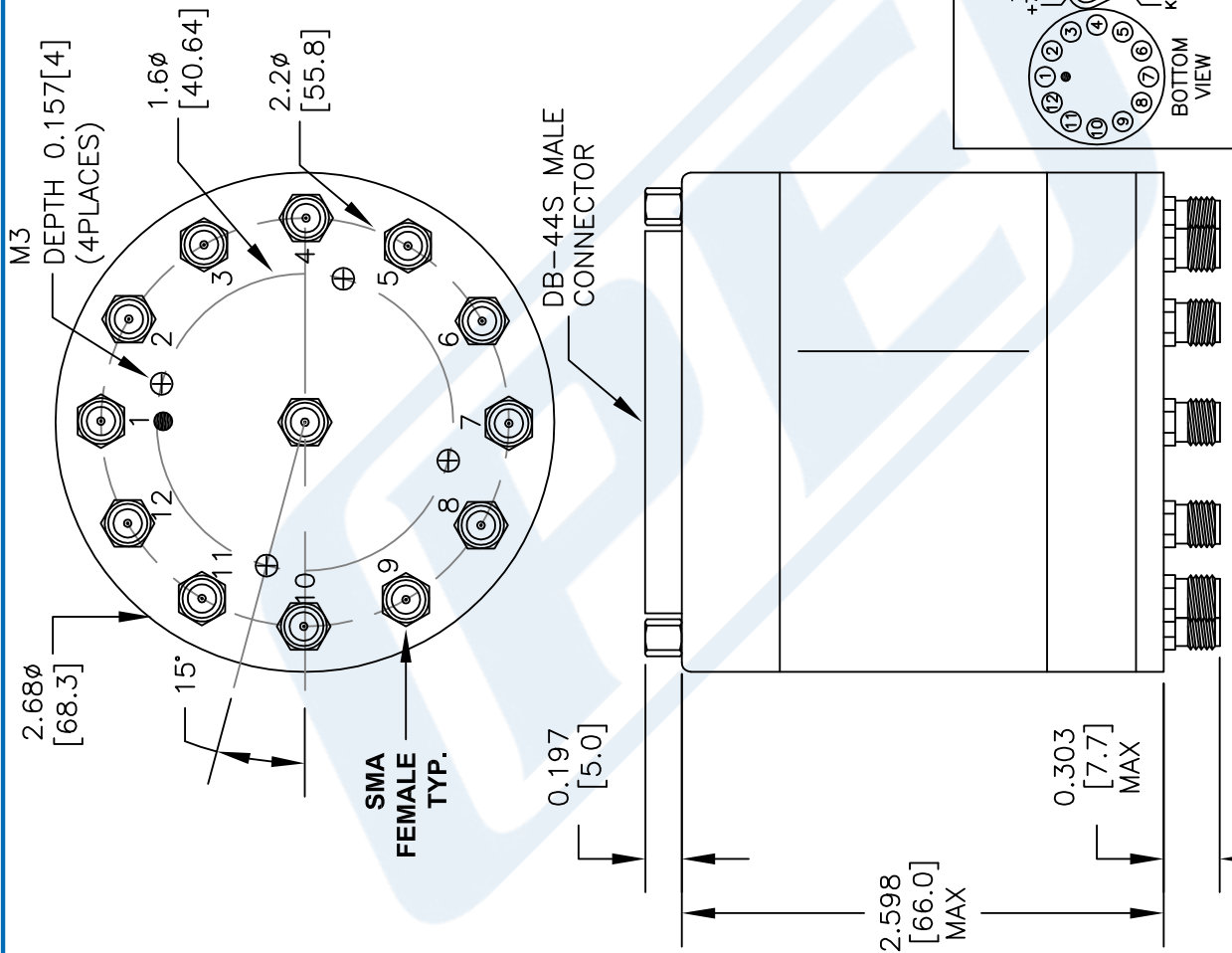
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PE71S6083 CAD Drawing

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DWG TITLE

PE71S6083

FSCM NO. 53919

CAD FILE 120214

SCALE N/A

SIZE A

150

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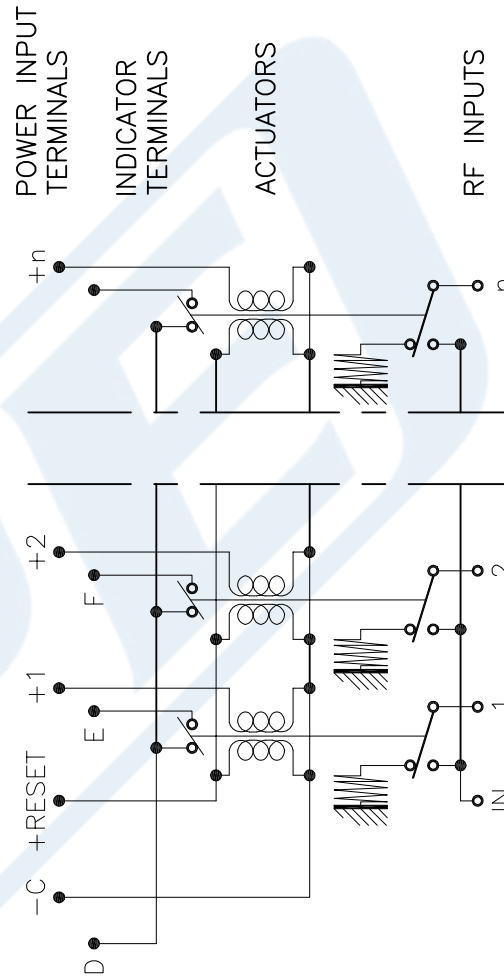
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Voltage	RF Continuity	Indicator
- C + 1	IN ↔ 1	D.E
- C + 2	IN ↔ 2	D.F
- C + 3	IN ↔ 3	D.G
- C + 4	IN ↔ 4	D.H
- C + 5	IN ↔ 5	D.I
- C + 6	IN ↔ 6	D.J
- C + 7	IN ↔ 7	D.K
- C + 8	IN ↔ 8	D.L
- C + 9	IN ↔ 9	D.M
- C + 10	IN ↔ 10	D.N
- C + 11	IN ↔ 11	D.O
- C + 12	IN ↔ 12	D.P

SCHEMATIC DIAGRAM



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CAD FILE 083115

SCALE N/A

SIZE A

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