



SPDT Electromechanical Relay Failsafe Switch
DC to 18 GHz, SMA, 35 Watts, 12V Control

Electromechanical Relay Switches Technical Data Sheet

PE7142

Features

- SPDT Switch
- DC to 18GHz Frequency Range
- 1M Cycles Min Lifetime
- Failsafe Switch
- Break before Make
- -40 to +85 Deg C Operating Temperature
- Insertion Loss 0.5 dB Max
- VSWR 1.5:1 Max
- +12 Vdc Operating Voltage

Applications

- Test & Measurement
- Instrumentation

Description

The PE7142 is a Single Pole Double Throw Electromechanical Relay Switch that operates from DC to 18 GHz and can handle up to 85 Watts of CW input power in a Break before Make condition. This design features a Failsafe Actuator and is rated for 1M Life Cycles. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min, with +9 Vdc operating voltage. Performance is guaranteed over -40 deg C to +85 deg C, and the switch assembly is RoHS and REACH compliant. The package interface uses solder terminals and SMA female connectors.

Electrical Specifications

Switch Type	SPDT, Reflective
Actuator Type	Failsafe
Switching Sequence	Break before Make
Pickup Voltage	9 Volts
Dropout Voltage	1.5 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	10	12	14	Volts
Actuating Current @ 12 Volts			190	mA
VSWR			1.5:1	
Insertion Loss			0.5	dB
Isolation	60			dB
Input Power (CW)			35	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch DC to 18 GHz, SMA, 35 Watts, 12V Control PE7142](#)



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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 4	4 to 8	8 to 12.4	12.4 to 18		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1		
Insertion Loss, Max	0.2	0.3	0.4	0.5		dB
Isolation, Min	80	70	60	60		dB
Input Power, Typ (CW)	85	55	45	35		Watts

Mechanical Specifications

Size

Length	1.34 in [34.04 mm]
Width/Diameter	0.5 in [12.7 mm]
Height	1.88 in [47.75 mm]
Weight	0.0625 lbs [28.35 g]
Body Material and Plating	Aluminum, Black Anodized
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	15 ms Max

Connectors

RF Connector Type	SMA Female
RF Connector Contact Material and Plating	Beryllium Copper, Gold
RF Connector Body Material and Plating	Passivated Stainless Steel
Control Connector	Solder Terminals

Mechanical Specification Notes:

RF Connector mating requirements per MIL-C-39012

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +100 deg C

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

RoHS Compliant	
REACH Compliant	12/17/2014

Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch DC to 18 GHz, SMA, 35 Watts, 12V Control PE7142](#)

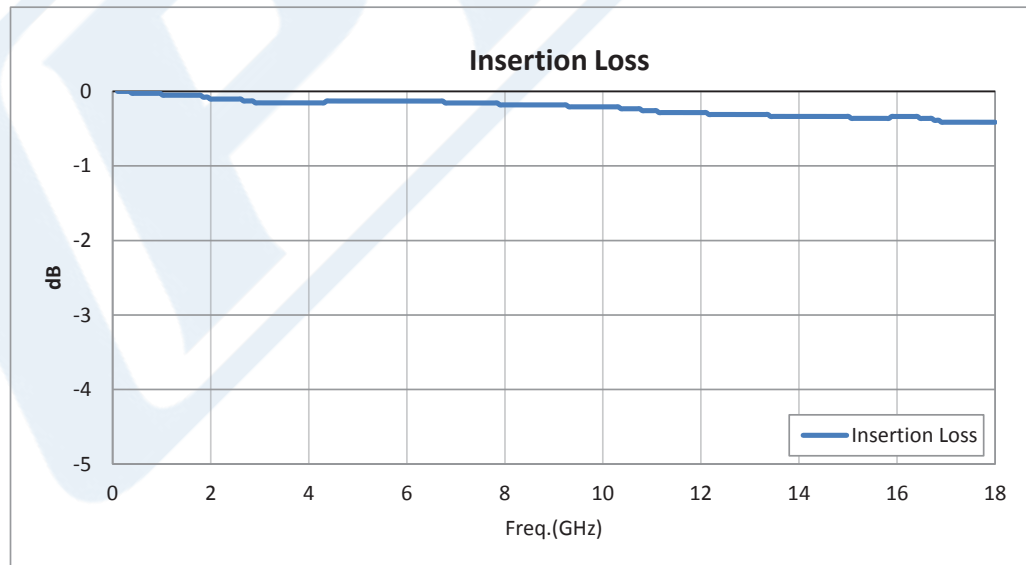
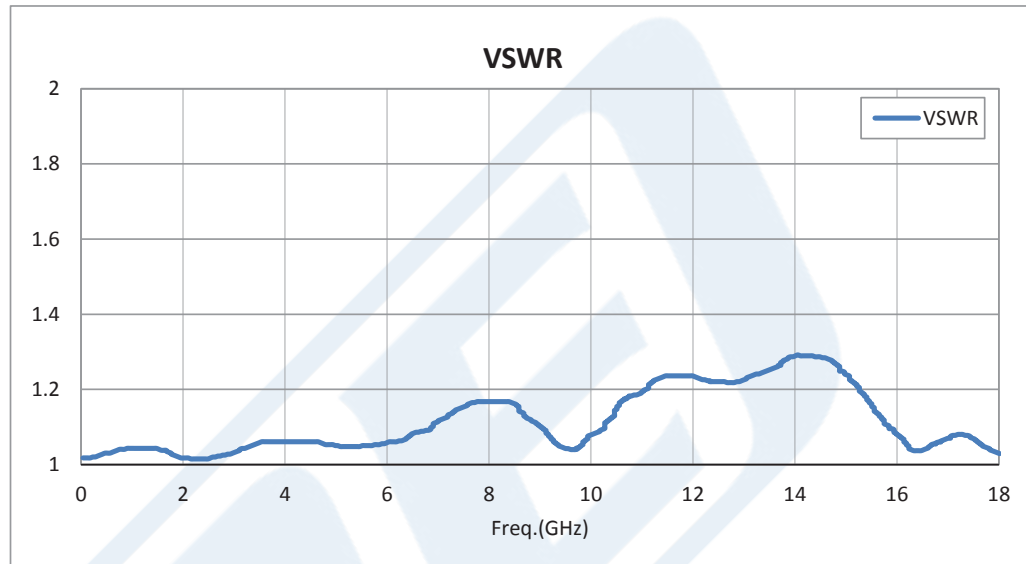


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Typical Performance Data



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SPDT Electromechanical Relay Failsafe Switch DC to 18 GHz, SMA, 35 Watts, 12V Control 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.

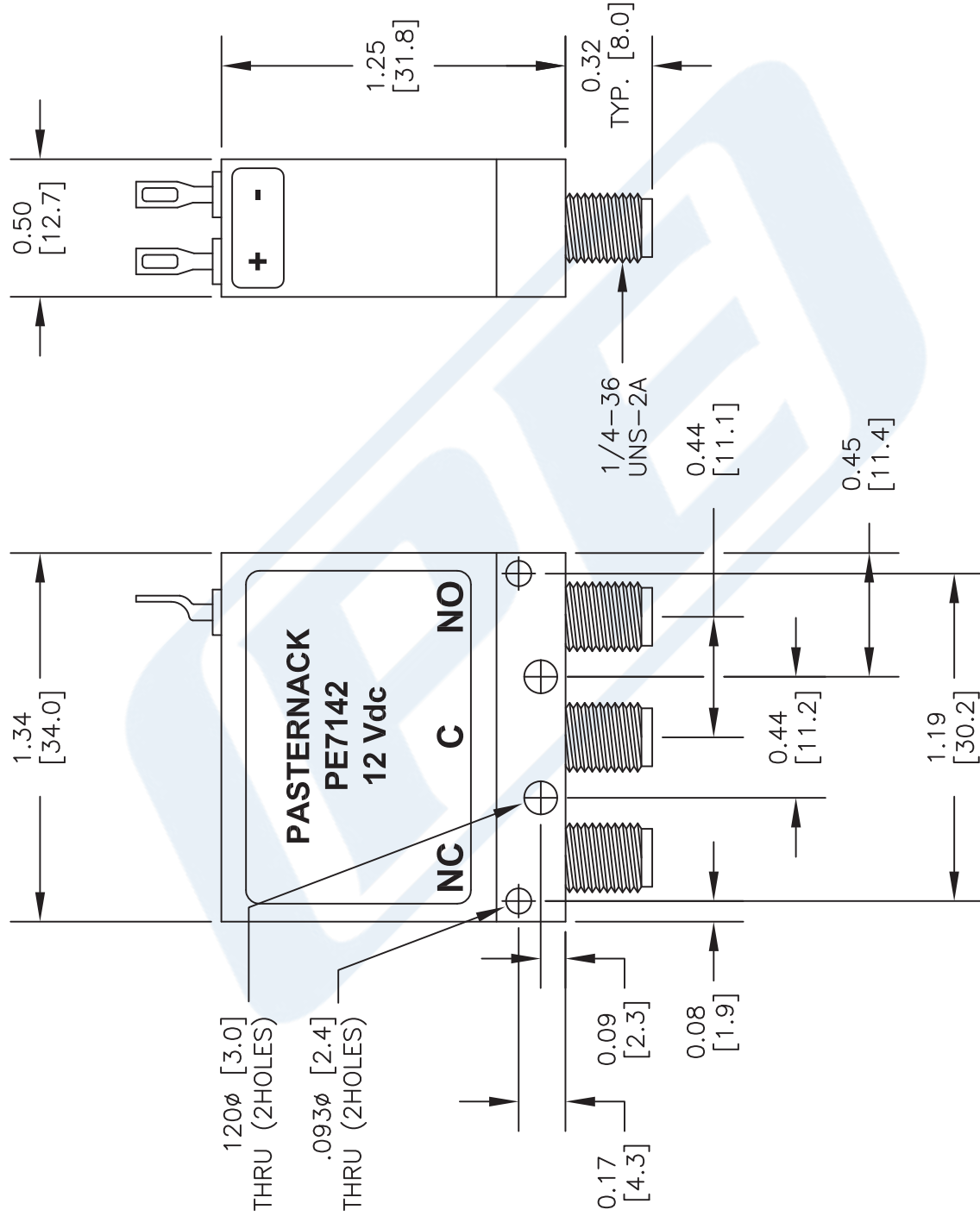
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PE7142 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch DC to 18 GHz, SMA, 35 Watts, 12V Control



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
PE7142

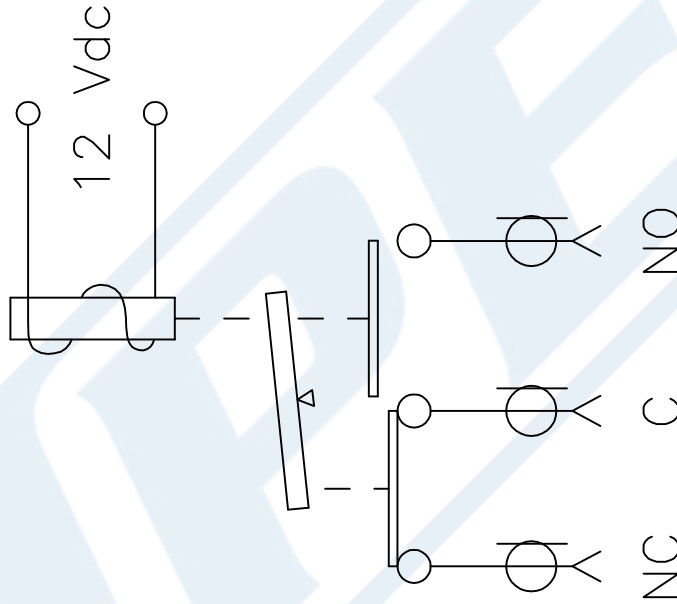
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FSCM NO. 53919

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150



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