



SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes

## Electromechanical Relay Switches Technical Data Sheet

PE71S6144

### Features

- Single Pole Six Throw Relay Switch
- DC to 40 GHz Frequency Range
- 1M Cycle Min Operating Life
- Normally Open Actuator
- TTL Logic Driver, Position Indicators, Suppression Diodes
- Insertion Loss 1 dB max
- Isolation 50 dB min
- 3 Watts Avg Power Max
- Switching Sequence Break Before Make

### Applications

- Test & Measurement
- Communications System
- Instrumentation
- Suitable for Aircraft

### Description

The PE71S6144 is a Single Pole Six Throw Electromechanical Relay Switch that operates from DC to 40 GHz and has a rating of 3 Watts input power (CW) in a Break Before Make condition. The design features a Normally Open Actuator with TTL Logic Driver, Position Indicators, Suppression Diodes and is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 70 dB min, with +12 Vdc operating voltage and performance is guaranteed over -35°C to +85°C. The package interface uses solder terminals and 2.92mm Female connectors.

### Electrical Specifications

Switch Type	SP6T, Reflective
Actuator Type	Normally Open
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic, Diodes
TTL Control	on: 2.4 to 5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		40	GHz
Impedance		50		Ohms
Operating Voltage	10.8	12	13.2	Volts
Actuating Current @ 12 Volts			200	mA
VSWR			2:1	
Insertion Loss			1	dB
Isolation	50			dB
Input Power (CW) (at 40 GHz)			3	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes PE71S6144](#)



SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes

## Electromechanical Relay Switches Technical Data

PE71S6144

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 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	2:1	
Insertion Loss, Max	0.2	0.4	0.5	0.7	1	dB
Isolation, Min	70	60	60	55	50	dB

### Mechanical Specifications

#### Size

Length	2.25 in [57.15 mm]
Width/Diameter	1.75 in [44.45 mm]
Height	1.75 in [44.45 mm]
Weight	0.288 lbs [130.63 g]
Body Material and Plating	Aluminum
Package Type	Connectorized Module
Operating Life	1,000,000 Cycles
Switching Time	15 ms Max

#### Connectors

RF Connector Type	2.92mm Female
RF Connector Specification	MIL-C-39012
RF Connector Contact Material and Plating	Beryllium Copper, Gold
RF Connector Body Material and Plating	Passivated Stainless Steel
Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-35 to +85 deg C
ESD Sensitivity	ESD Sensitive Material. Transport material in Approved ESD bags. Handle in approved ESD Workstation.



Environmental Specification Notes:  
Designed to meet MIL-E-5400 and MIL-S-3928

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)  
Not RoHS Compliant

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes PE71S6144](#)



SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes

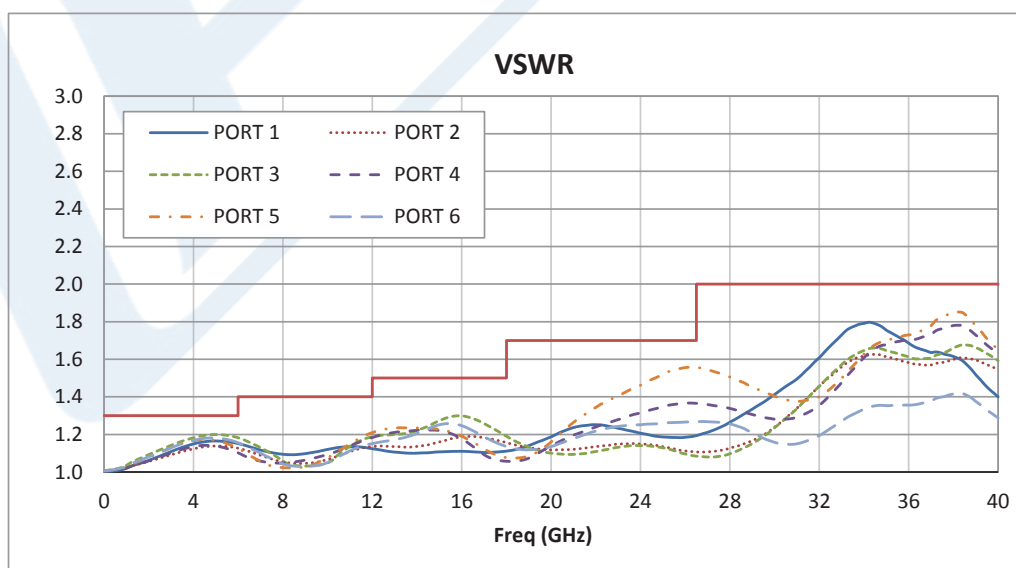
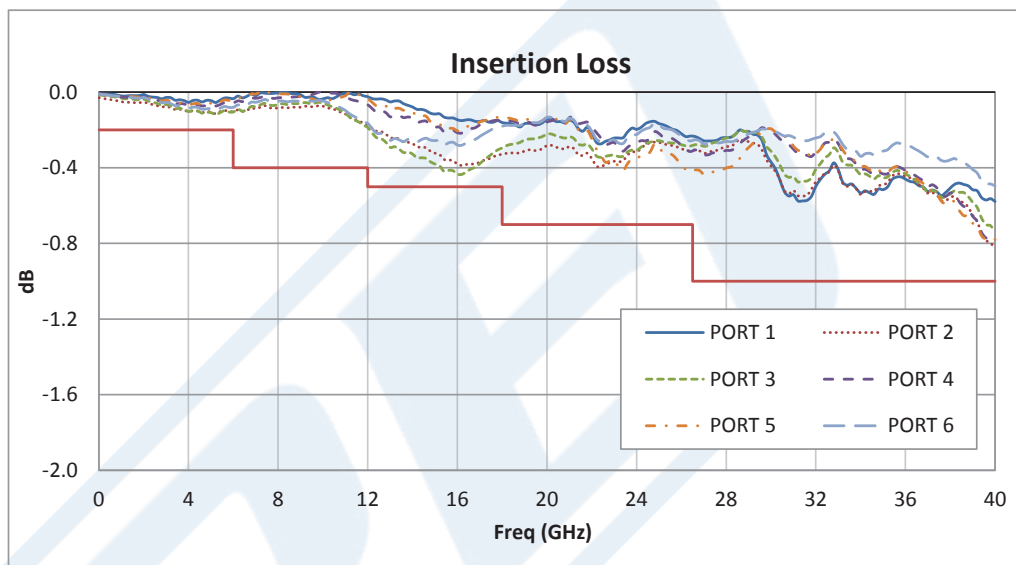
## Electromechanical Relay Switches Technical Data

PE71S6144

### Plotted and Other Data

Notes:

#### Typical Performance Data



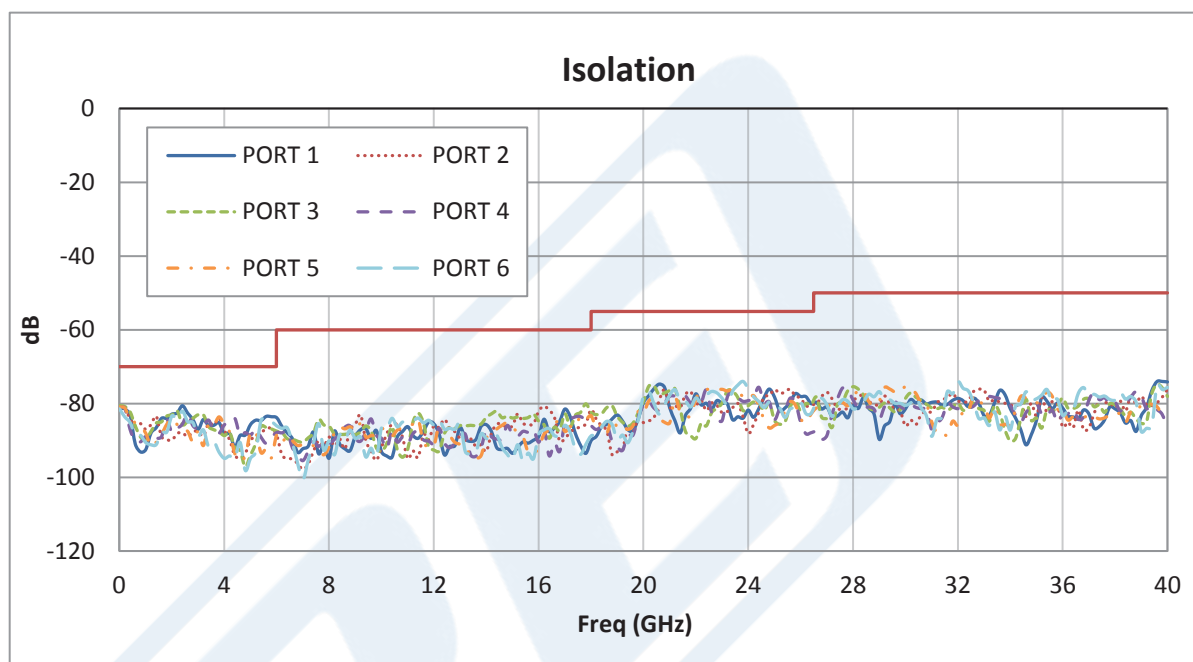
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes PE71S6144](#)



SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes

Electromechanical Relay Switches Technical Data

PE71S6144



SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, 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.

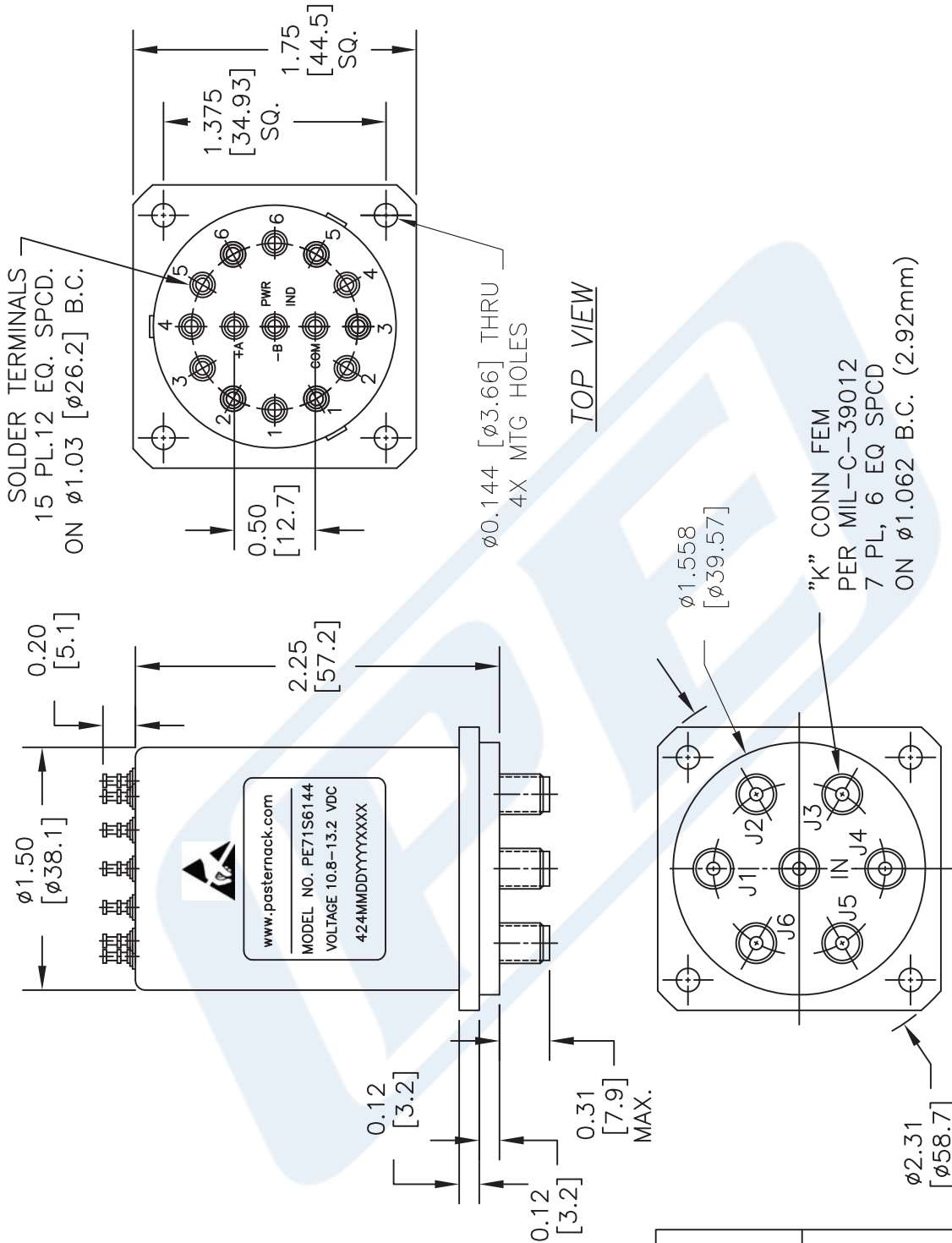
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz, 2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes PE71S6144](http://www.pasternack.com/2.92mm-sp6t-electromechanical-relay-switch-40-ghz-normally-open-indicators-ttl-logic-pe71s6144-p.aspx)

URL: <http://www.pasternack.com/2.92mm-sp6t-electromechanical-relay-switch-40-ghz-normally-open-indicators-ttl-logic-pe71s6144-p.aspx>

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.

# PE71S6144 CAD Drawing

SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz,  
2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		
DECIMALS	ANGLES	FRACTIONS
.XX ±.03	± 1°	± 1/16
.XXX ±.010		
HOLE DIAMETER	TOLERANCE	
.0135 TO .125	+.004/- .001	
.126 TO .250	+.005/- .001	
.251 TO .500	+.006/- .001	
.501 TO .750	+.008/- .001	
.751 TO 1.000	+.010/- .001	
1.001 TO 2.000	+.012/- .001	

\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

**PASTERNACK®**  
THE ENGINEER'S RF SOURCE  
Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com

DWG TITLE  
**PE71S6144**

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].

FSCM NO. 53919

CAD FILE 031315

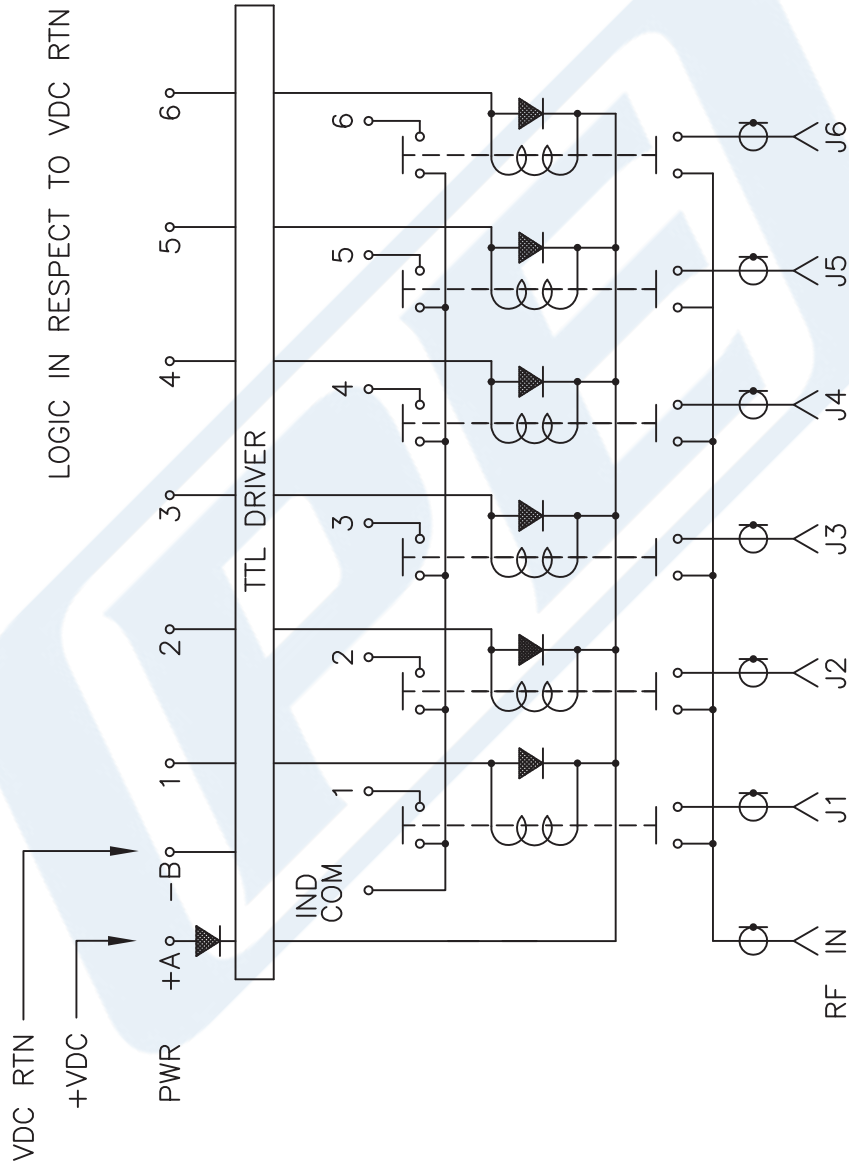
SCALE N/A

SIZE A

200

PE71S6144 CAD Drawing

SP6T Electromechanical Relay Normally Open Switch DC to 40 GHz,  
2.92mm, 3 Watts, 12V Control, Indicators, TTL, Diodes



SCHEMATIC SHOWN IN DE-ENERGIZED POSITION

- 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  
**PE71S6144**

FSCM NO. 53919

CAD FILE 031315

SCALE N/A

SIZE A

200

**Pasternack**  
THE ENGINEER'S RF SOURCE  
Pasternack Enterprises, Inc.  
P.O. Box 16759 | Irvine | CA | 92623  
Phone: (949) 261-1920 | Fax: (949) 261-7451  
Website: www.pasternack.com | E-Mail: sales@pasternack.com