



SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Solder Terminals, 2.92mm

## Electromechanical Relay Switches Technical Data Sheet

**PE71S7279**

### Features

- Single Pole Double Throw (SPDT) Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.6 dB typ
- Isolation > 85 dB typ
- VSWR as low as 1.15:1 max
- Solder Terminal Pins for DC Control
- +12 Volt DC Bias
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 10 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions

### Applications

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

### Description

The PE71S7279 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across an ultra wide frequency range from DC to 43 GHz and can handle up to 10 Watts of Average Power in a break before make condition. The 50 Ohm design is rated for 2 million lifecycles and features a Failsafe Actuator. Impressive typical performance includes 0.6 dB insertion loss and isolation greater than 85 dB. This switch requires +12 Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports 2.92mm female connectors and solder terminal pins for DC control. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

### Electrical Specifications (TA = 25°C, DC Voltage = 12 Vdc)

Switch Type SPDT  
Actuator Type Failsafe

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		43	GHz
Operating Voltage	11	12	13	Volts
Actuating Set Current			200	mA
VSWR		1.4:1	1.9:1	
Insertion Loss		0.6	1.2	dB
Isolation	40	85		dB
Input Power			10	Watts
Switching Time			20	ms

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 43 GHz, 12VDC, 10W, Solder Terminals, 2.92mm PE71S7279](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12.4	12.4 to 18	18 to 26.5	26.5 to 40	GHz
VSWR, Max	1.15:1	1.35:1	1.4:1	1.45:1	1.5:1	
Insertion Loss, Max	0.2	0.3	0.4	0.5	0.7	dB
Isolation, Min	85	80	80	75	60	dB

### Performance by Frequency

Description	F6	F7	F8	F9	F10	Units
Frequency Range	40 to 43					GHz
VSWR, Max	1.9:1					
Insertion Loss, Max	1.2					dB
Isolation, Min	40					dB

### Mechanical Specifications

#### Size

Length	2.05 in [52.07 mm]
Width/Diameter	1.5 in [38.1 mm]
Height	0.52 in [13.21 mm]
Weight	0.1 lbs [45.36 g]
Finish	Electroless Nickel

#### Connectors

RF Connector Type	2.92mm Female
Control Connector	Solder Terminals

### Environmental Specifications

#### Temperature

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C

#### Shock

MIL-STD-202 Method 213, Condition D, 500G (non operational)

#### Vibration

MIL-STD-202 Method 204, Condition D, 10G RMS (non operational)

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## Electromechanical Relay Switches Technical Data

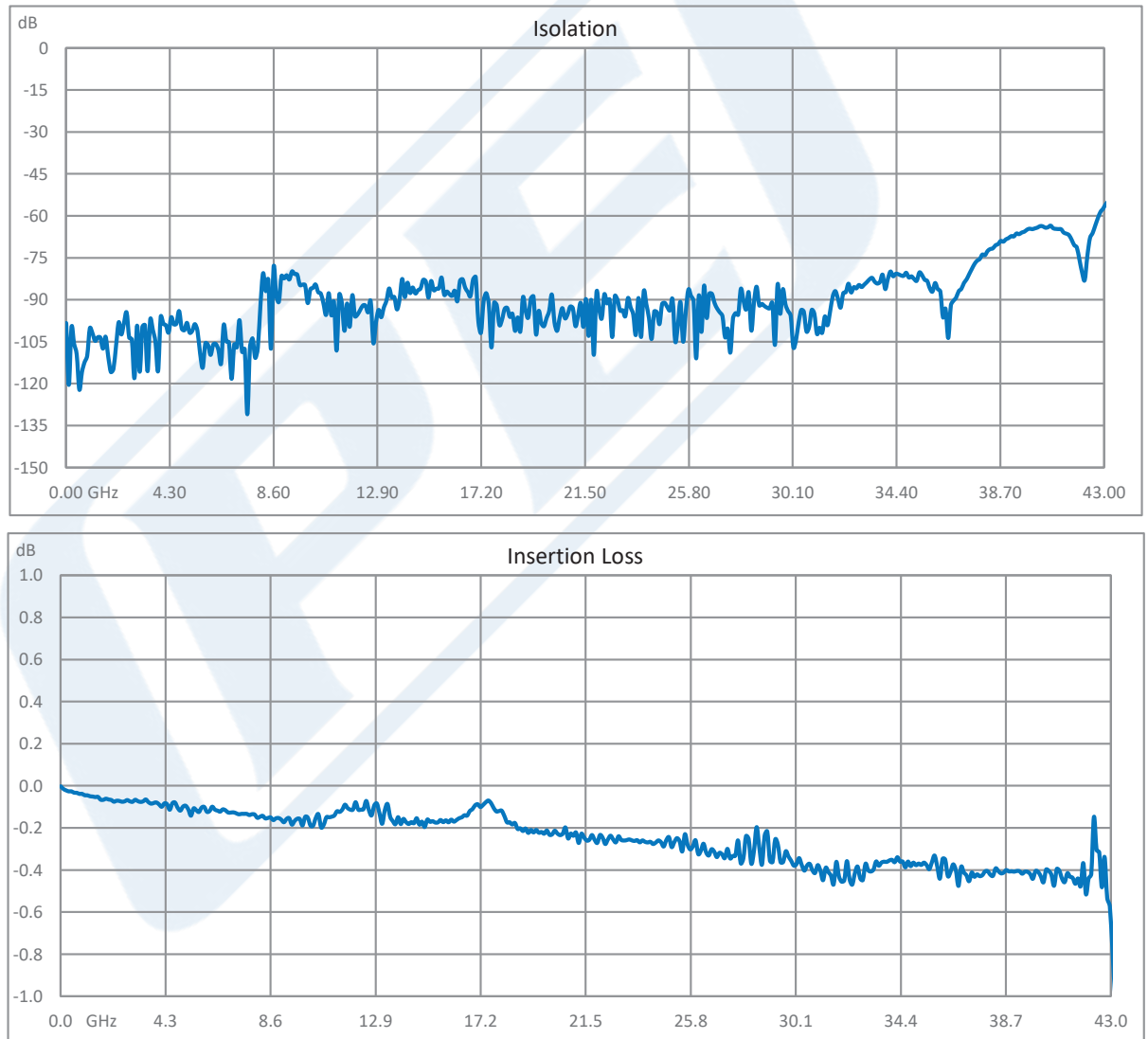
**PE71S7279**

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

### Plotted and Other Data

Notes:

#### Typical Performance Data



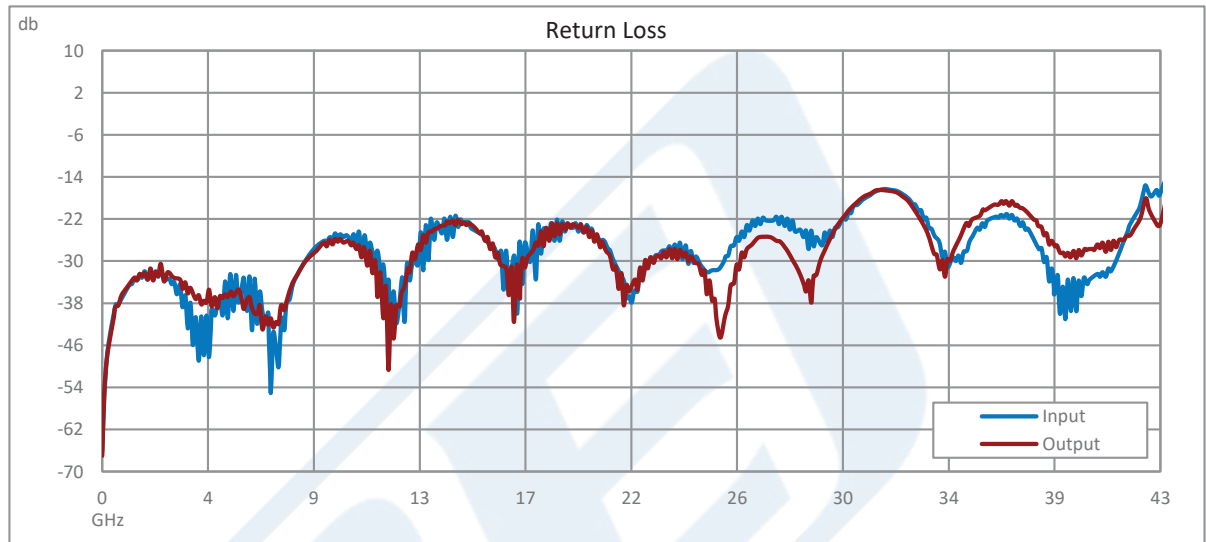
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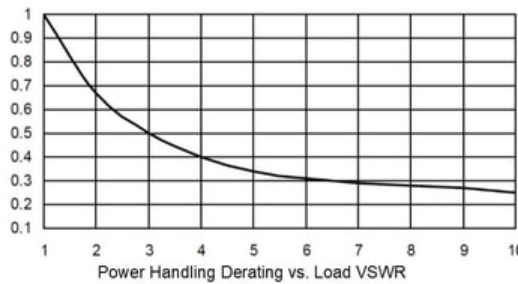
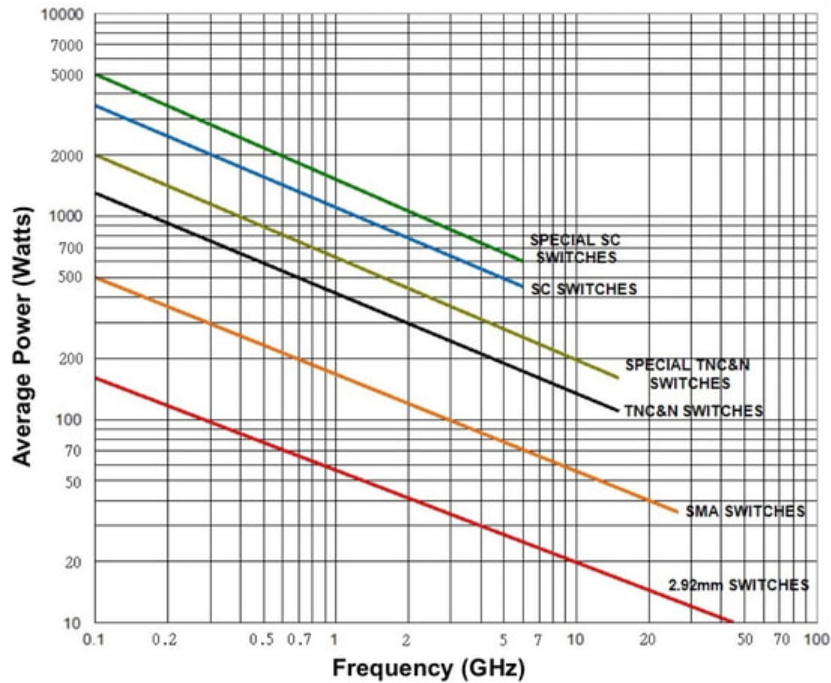


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**Power Handling vs. Frequency**



Power handling chart and derating curves based on the following conditions:

- Ambient temperature: 40°C or less
- Altitude: Sea level
- Load VSWR: 1.20:1 Maximum
- Relative Humidity: 40-50%
- Cold switching: RF signal off

Note: specifications subject to change without notice

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## Electromechanical Relay Switches Technical Data

**PE71S7279**

SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Solder Terminals, 2.92mm 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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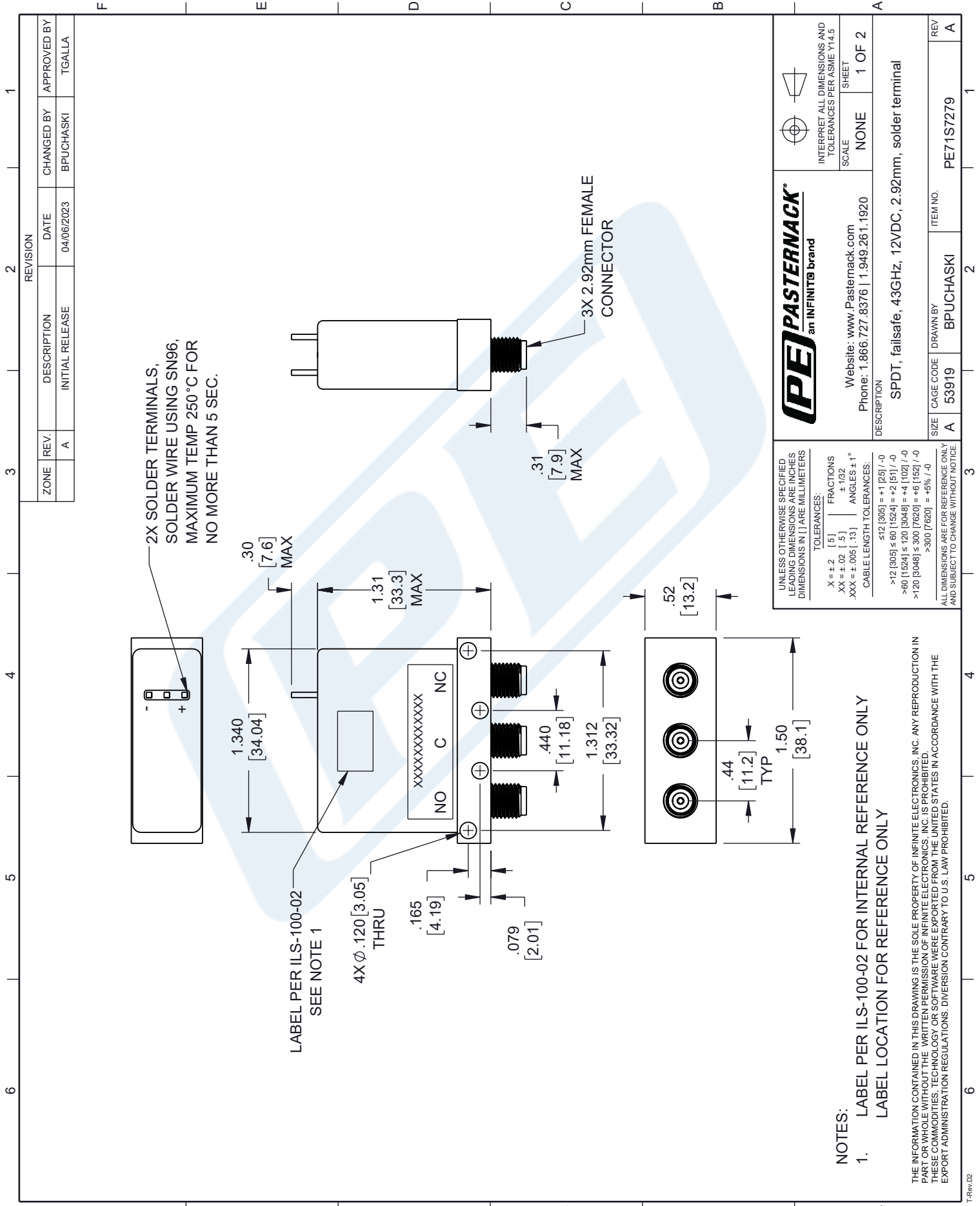
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.



# PE71S7279 CAD Drawing

SPDT, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Solder Terminals, 2.92mm



2X SOLDER TERMINALS,  
SOLDER WIRE USING SN96,  
MAXIMUM TEMP 250 °C FOR  
NO MORE THAN 5 SEC.

3X 2.92mm FEMALE  
CONNECTOR

LABEL PER ILS-100-02  
SEE NOTE 1

4X  $\phi$ .120 [3.05]  
THRU

.165  
[4.19]

.079  
[2.01]

.30  
[7.6]  
MAX

1.31  
[33.3]  
MAX

.31  
[7.9]  
MAX

.52  
[13.2]

.44  
[11.2]  
TYP

1.50  
[38.1]

REVISION		DESCRIPTION	DATE	CHANGED BY	APPROVED BY
ZONE	REV.	INITIAL RELEASE	04/06/2023	BPUCHASKI	TGALLA
	A				

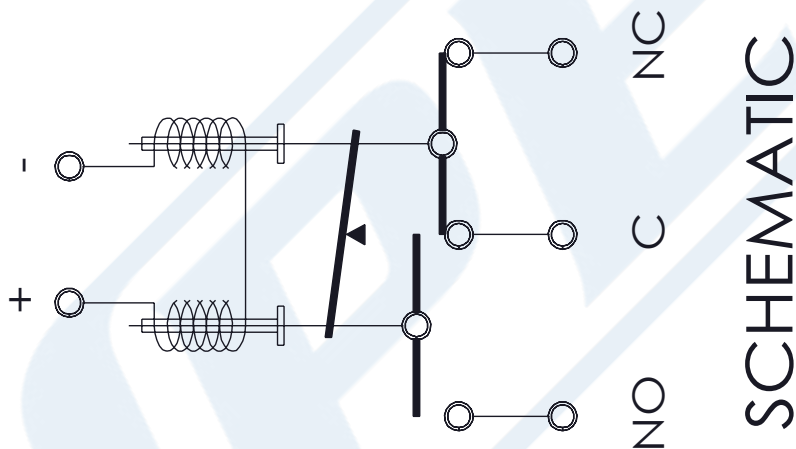
<p><b>PASTERNAK</b> an INFINITI® brand</p> <p>Website: <a href="http://www.Pasternack.com">www.Pasternack.com</a> Phone: 1.866.727.8376   1.949.261.1920</p>	<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p>
	<p>SCALE: NONE</p> <p>SHEET: 1 OF 2</p>
<p>DESCRIPTION: SPDT, failsafe, 43GHz, 12VDC, 2.92mm, solder terminal</p>	
<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <p>X = ±.2 [5] FRACTIONS XX = ±.02 [.5] ANGLES ± 1° .XXX = ±.005 [.13] CABLE LENGTH TOLERANCES:</p> <p>&lt;12 [305] ≤ 60 [1524] = +1 [25] / -0 &gt;60 [1524] ≤ 120 [3048] = +2 [51] / -0 &gt;120 [3048] ≤ 300 [7620] = +4 [102] / -0 &gt;300 [7620] = +5% / -0</p> <p>ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE</p>	<p>SIZE: A</p> <p>CAGE CODE: 53919</p> <p>ITEM NO.: PE71S7279</p>

NOTES:  
1. LABEL PER ILS-100-02 FOR INTERNAL REFERENCE ONLY  
LABEL LOCATION FOR REFERENCE ONLY

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## SCHEMATIC

UNLESS OTHERWISE SPECIFIED  
LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

**TOLERANCES:**

X = ±.2	[.5]	FRACTIONS
XX = ±.02	[.15]	± 1/32
XXX = ±.005	[.13]	ANGLES ± 1°

**CABLE LENGTH TOLERANCES:**

≤ 12 [305]	± .1 [25]	/ -0	
> 12 [305]	≤ 60 [1524]	± .2 [51]	/ -0
> 60 [1524]	≤ 120 [3048]	± .4 [102]	/ -0
> 120 [3048]	≤ 300 [7620]	± .6 [152]	/ -0
> 300 [7620]		± .5%	/ -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY  
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DESCRIPTION  
SPDT, failsafe, 43GHz, 12VDC, 2.92mm, solder terminal

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	BPUCHASKI	PE71S7279

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE SHEET 2 OF 2

REV A

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