



Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz,
28VDC, 5W, Diodes, Self Cut-Off, Solder Terminals, 2.92mm

Electromechanical Relay Switches Technical Data Sheet

PE71S7297

Features

- Transfer Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Latching Actuator with Self Cut-Off
- 2M Lifecycle Rating
- Suppression Diodes
- Insertion Loss 0.6 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 max
- Solder Terminal Pins for DC Control
- +28 Volt DC Bias
- 2.92mm Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 5 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 PE71S7297 is a Transfer electromechanical relay switch that operates across an ultra wide frequency range from DC to 43 GHz and can handle up to 5 Watts of Average Power in a break before make condition. The 50 Ohm design has a Latching Actuator with Self Cut-Off that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. The switch incorporates Suppression Diodes which limit voltage spikes or reverse current. Impressive typical performance includes 0.6 dB insertion loss and isolation greater than 80 dB. This switch requires +28 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 = 28 Vdc)

Switch Type Transfer
Actuator Type Latching
Actuator Options Self Cut Off, Diodes

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		43	GHz
Operating Voltage	26	28	30	Volts
Actuating Set Current			250	mA
VSWR		1.4:1	2:1	
Insertion Loss		0.6	1.3	dB
Isolation	50	85		dB
Input Power			5	Watts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 28VDC, 5W, Diodes, Self Cut-Off, Solder Terminals, 2.92mm PE71S7297](#)



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Switching Time	20	ms
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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 26.5	26.5 to 40	40 to 43	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.8:1	2:1	
Insertion Loss, Max	0.2	0.4	0.7	1	1.3	dB
Isolation, Min	80	75	65	50	50	dB

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width/Diameter	2.16 in [54.86 mm]
Height	1.26 in [32 mm]
Weight	0.26 lbs [117.93 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)

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

Plotted and Other Data

Notes:

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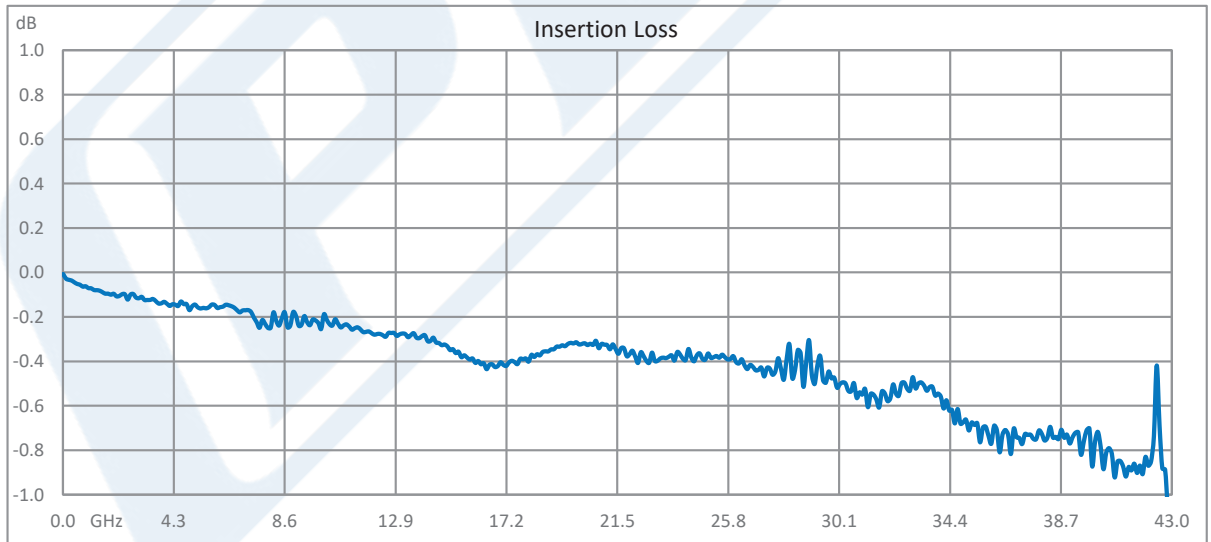
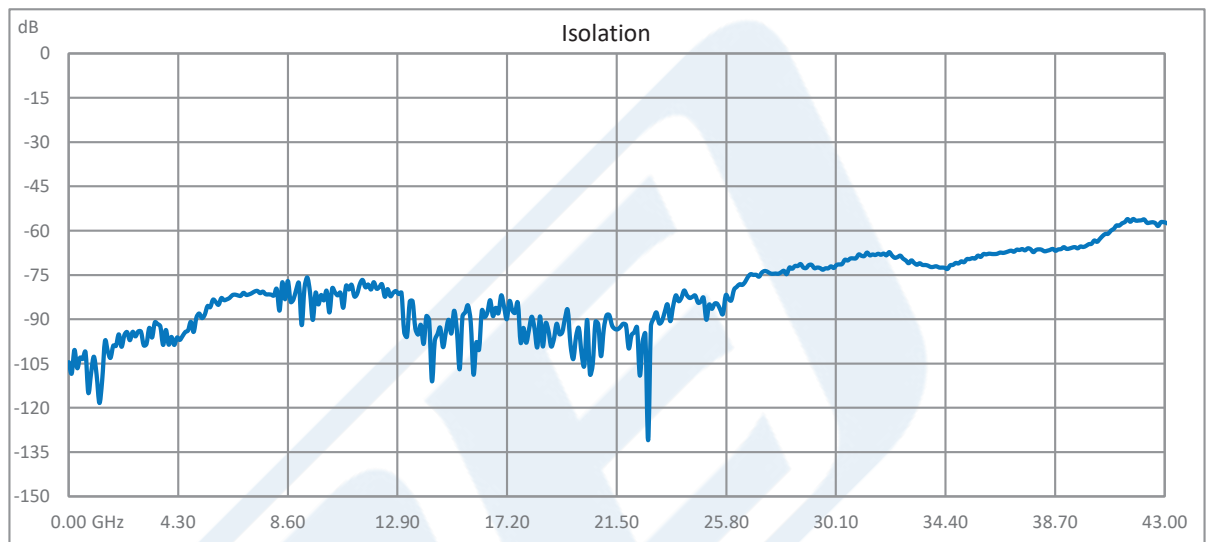


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Typical Performance Data



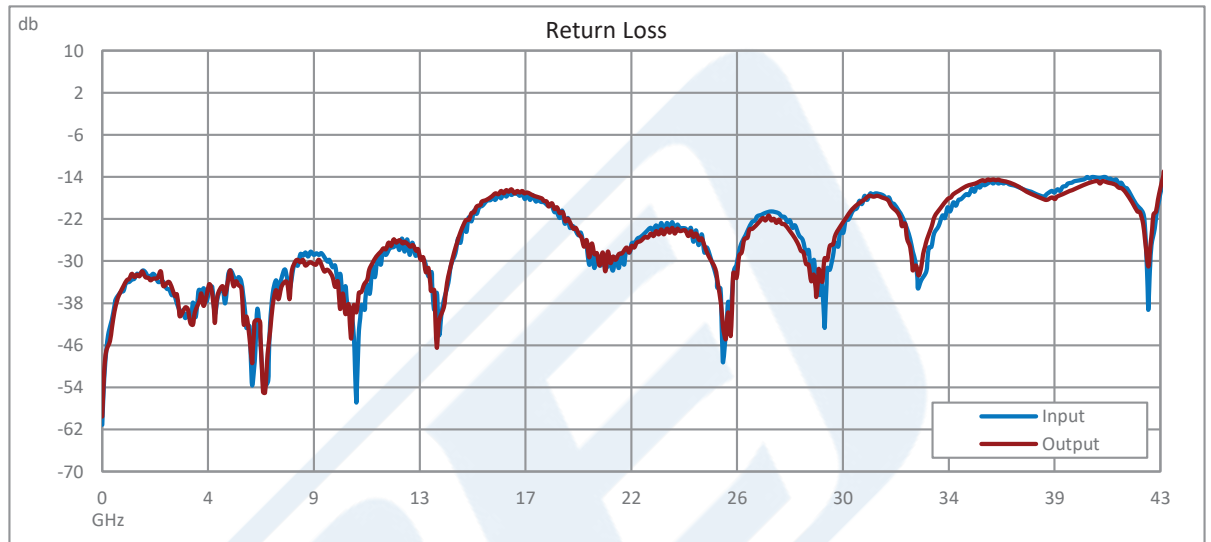
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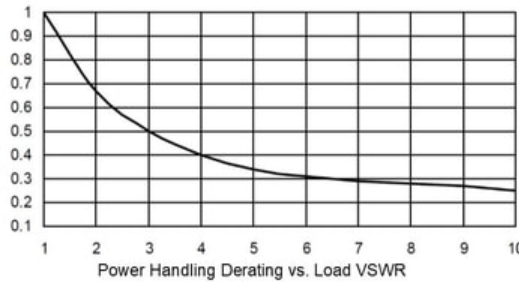
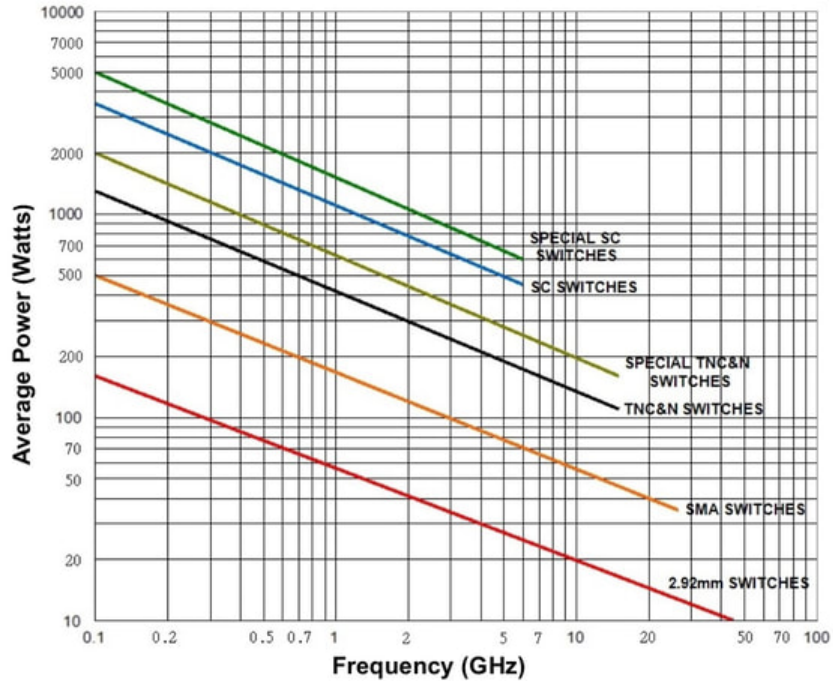


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Power Handling vs. Frequency



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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Transfer, Electromechanical Relay Latching Switch, DC to 43 GHz, 28VDC, 5W, Diodes, Self Cut-Off, 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.

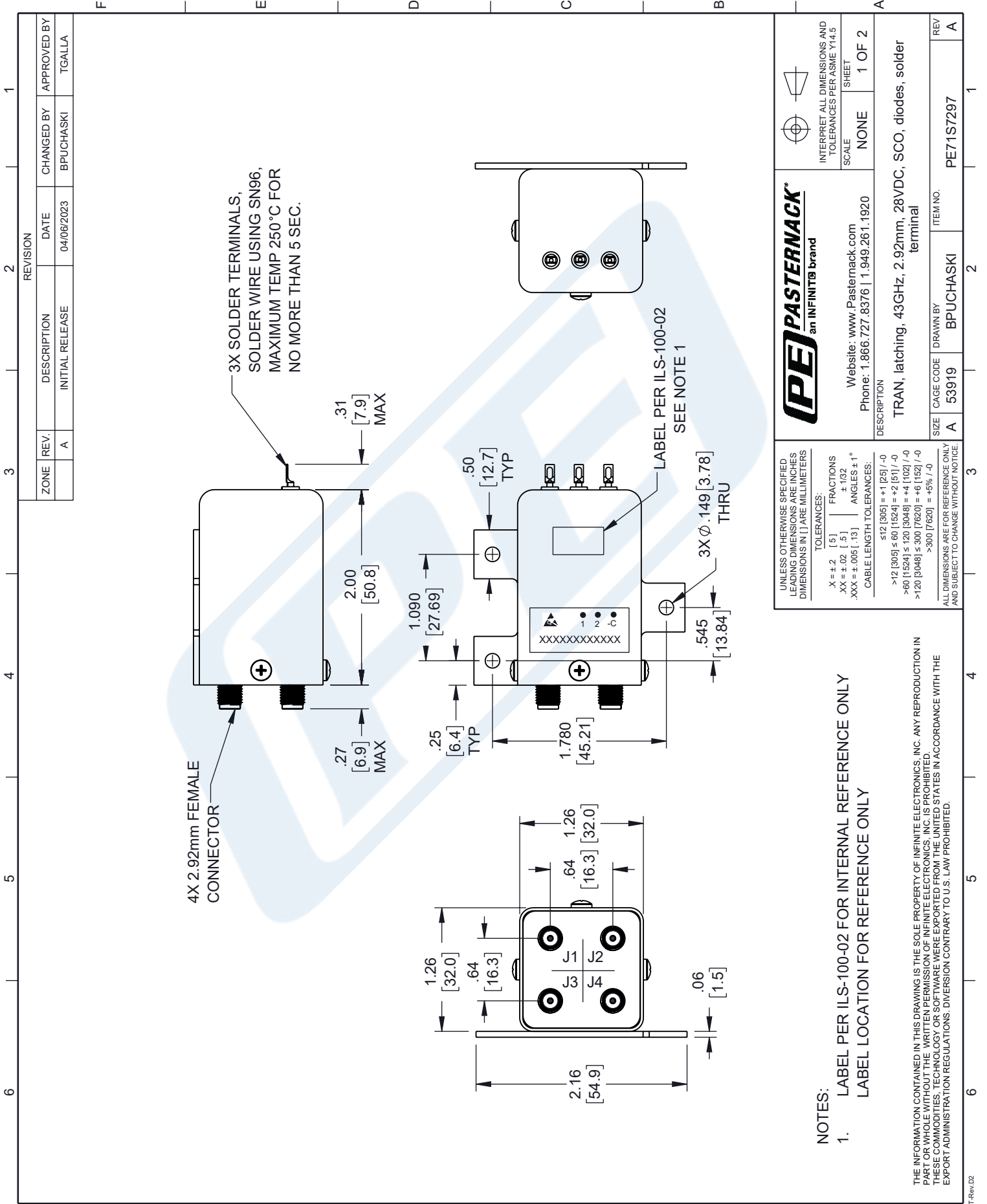
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE71S7297 CAD Drawing

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

REVISION

SCALE	SHEET
NONE	1 OF 2

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

Website: www.Pasternack.com
Phone: 1.866.727.8376 | 1.949.261.1920

DESCRIPTION
TRAN, latching, 43GHz, 2.92mm, 28VDC, SCO, diodes, solder terminal

SIZE | CAGE CODE | DRAWN BY | ITEM NO.
A | 53919 | BPUCHASKI | PE71S7297

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

TOLERANCES:
X = ±.2 [5] FRACTIONS
XX = ±.02 [0.5] ANGLES ± 1°
.XXX = ±.005 [0.13] 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 AND SUBJECT TO CHANGE WITHOUT NOTICE

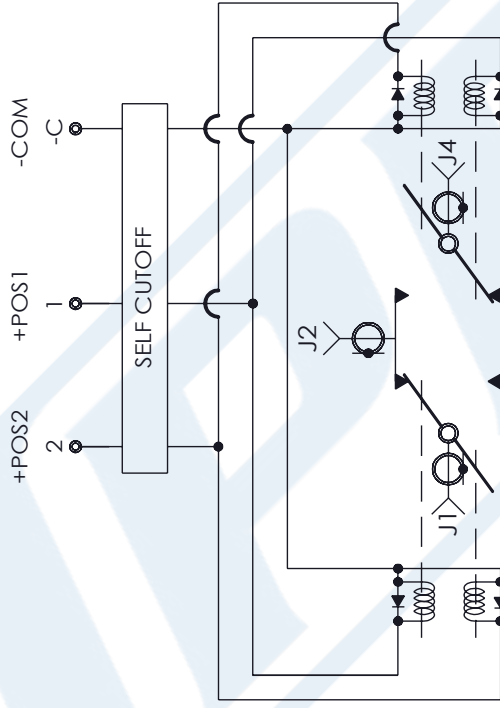
NOTES:

- LABEL PER ILS-100-02 FOR INTERNAL REFERENCE ONLY
LABEL LOCATION FOR REFERENCE ONLY

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SCHEMATIC

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SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	53919	BPUCHASKI	PE71S7297	A

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

SCALE NONE

SHEET 2 OF 2



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