



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

Electromechanical Relay Switches Technical Data Sheet

PE71S7294

Features

- Transfer Electromechanical Relay Switch
- DC to 43 GHz Frequency Range
- Failsafe Actuator
- 2M Lifecycle Rating
- Insertion Loss 0.6 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 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 PE71S7294 is a Transfer 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 80 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
Actuator Type

Transfer
Failsafe

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		43	GHz
Operating Voltage	11	12	13	Volts
Actuating Set Current			380	mA
VSWR		1.4:1	2:1	
Insertion Loss		0.6	1.3	dB
Isolation	50	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: [Transfer, Electromechanical Relay Failsafe Switch, DC to 43 GHz, 12VDC, 10W, Solder Terminals, 2.92mm PE71S7294](#)



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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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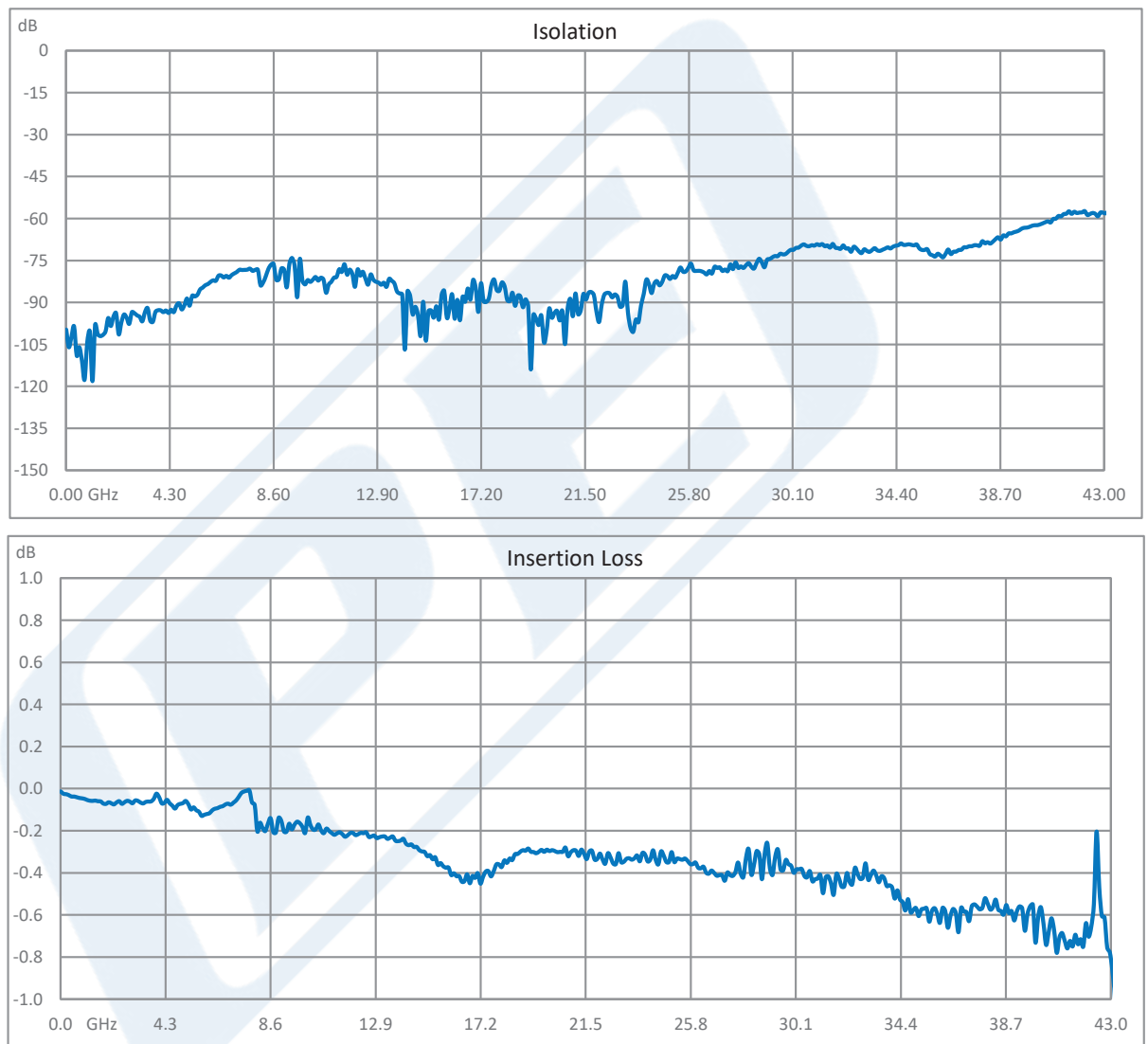


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Typical Performance Data



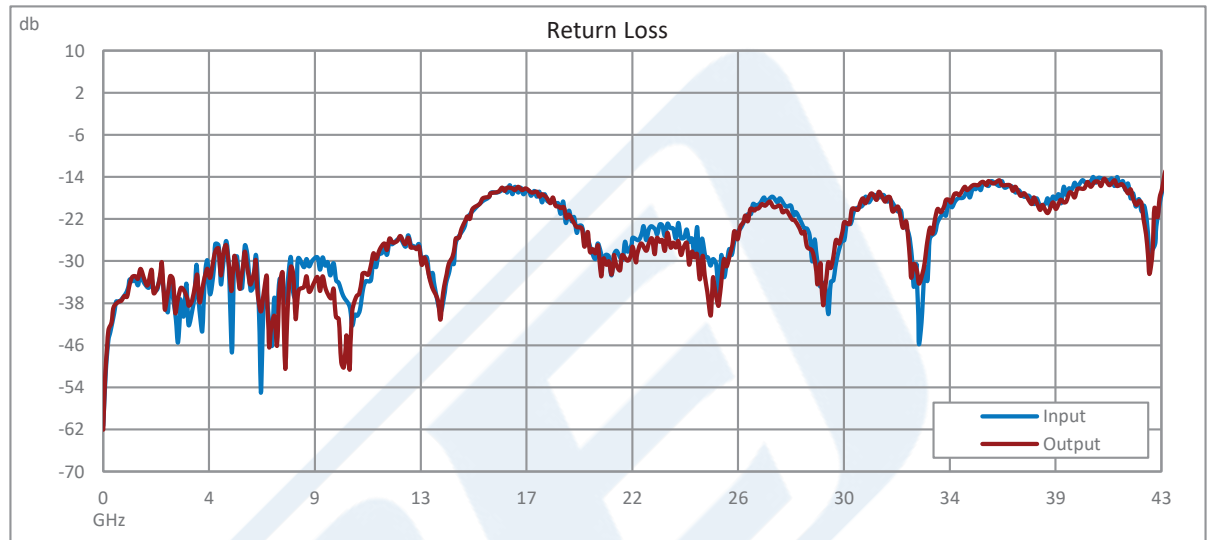
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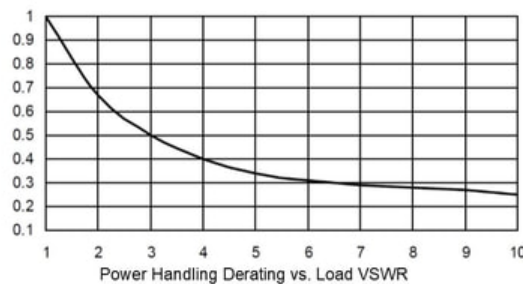
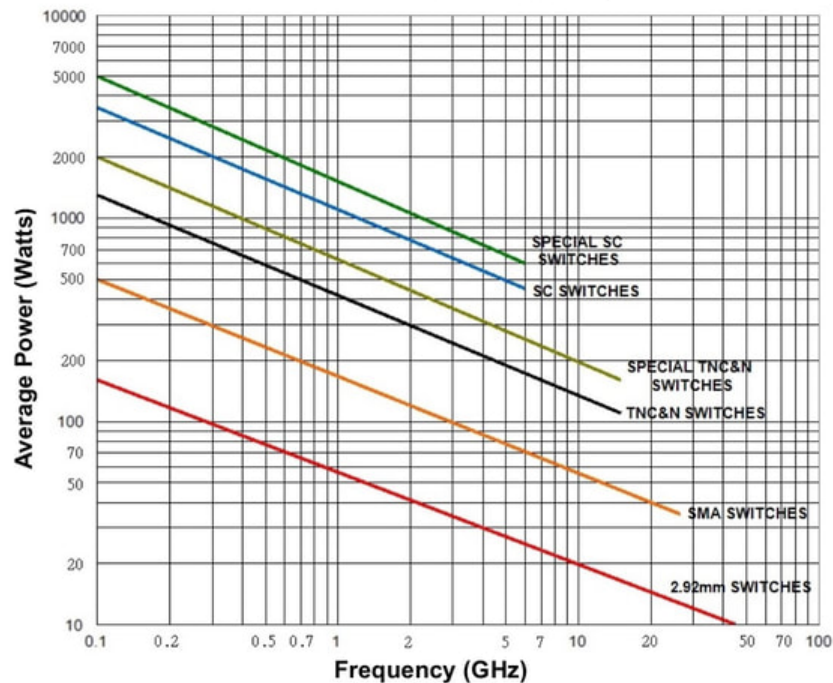


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Power Handling vs. Frequency



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 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.

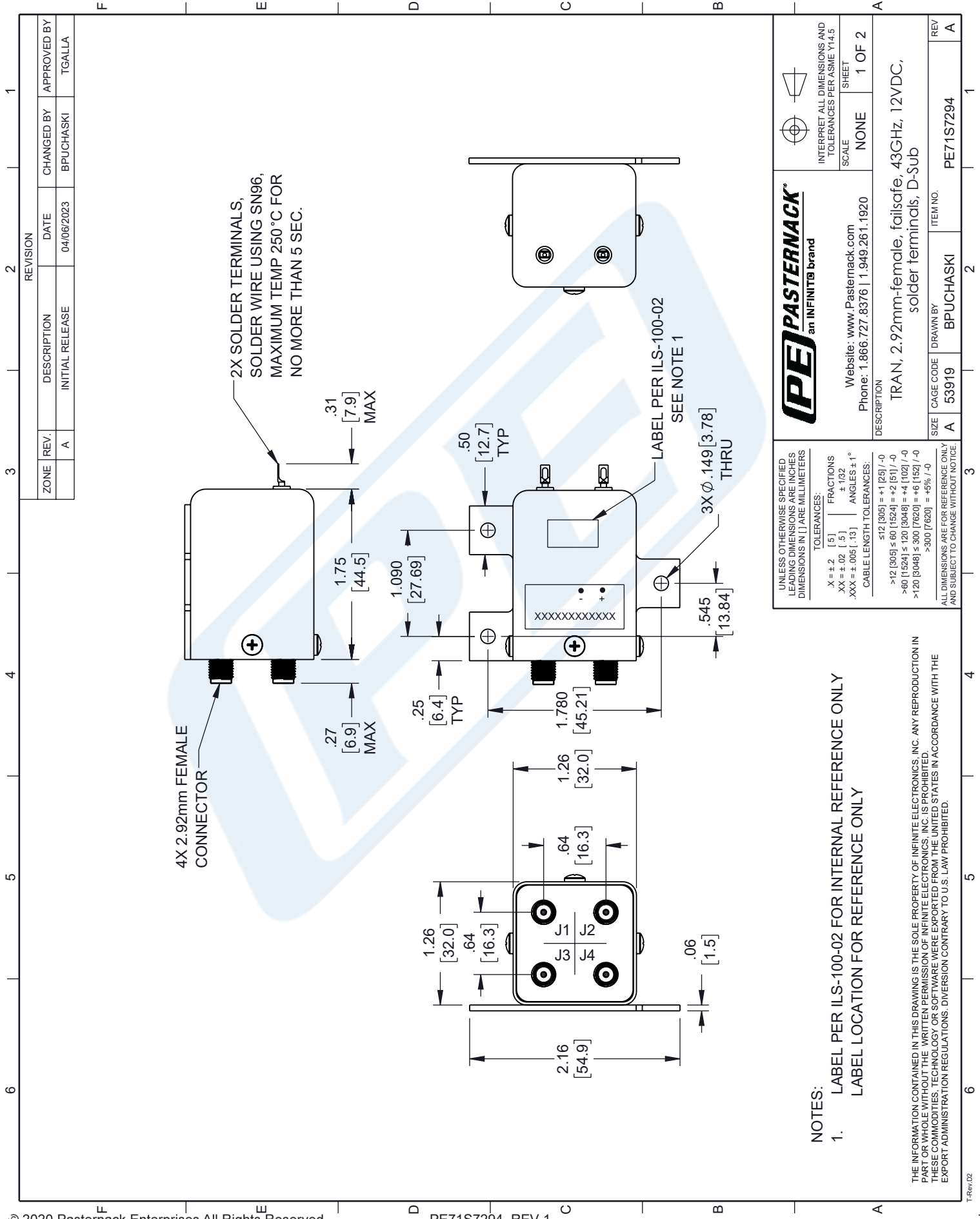
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE71S7294 CAD Drawing

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



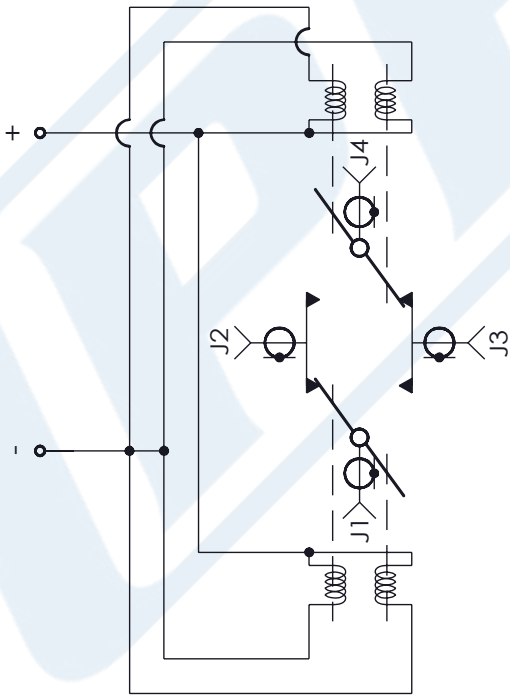
ZONE	REV.	DESCRIPTION	DATE	CHANGED BY	APPROVED BY
	A	INITIAL RELEASE	04/06/2023	BPUCHASKI	TGALLA

PE PASTERNAK an INFINITO brand		
Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920	SCALE: NONE SHEET: 1 OF 2	DESCRIPTION: TRAN, 2.92mm-female, failsafe, 43GHz, 12VDC, solder terminals, D-Sub
SIZE: A CAGE CODE: 53919 DRAWN BY: BPUCHASKI ITEM NO.: PE71S7294	REV: A	

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES: X = ±.2 [5] XX = ±.02 [3] XXX = ±.005 [13]	FRACTIONS ± 1/32 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 AND SUBJECT TO CHANGE WITHOUT NOTICE	

PE71S7294 CAD Drawing

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



VOLTAGE	RF PATH
DE-ENERGIZED	J1-J2, J3-J4
ENERGIZED	J1-J3, J2-J4

SCHEMATIC

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

TOLERANCES:

X = ±.2	[.5]	FRACTIONS
XX = ±.02	[.5]	± 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]	±.8 [203]	/ -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY
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DESCRIPTION
TRAN, 2.92mm-female, failsafe, 43GHz, 12VDC,
solder terminals, D-Sub

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	BPUCHASKI	PE71S7294

REV A

INTERPRET ALL DIMENSIONS AND
TOLERANCES PER ASME Y14.5

SCALE
NONE

SHEET
2 OF 2

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