



Transfer Electromechanical Relay Latching Switch,
+COM, DC to 18 GHz, 90W, 12VDC, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6583

Features

- Transfer Electromechanical Relay Switch
- DC to 18 GHz Frequency Range
- Latching Actuator
- Positive Common (+COM) Configuration
- 5M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.2:1 max
- Solder Terminal Pins for DC Control
- 12 Volt DC Bias
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- 90 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 PE71S6583 is a Transfer electromechanical relay switch that operates across a broadband frequency range from DC to 18 GHz and can handle 90W of average power in a break before make condition. The 50 Ohm design supports a positive common (+COM) biasing configuration and features a Latching Actuator with a 5 million lifecycle rating. The Latching Actuator magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Impressive typical performance includes 0.3 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 SMA 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 Latching		
Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Operating Voltage	11	12	13	Volts
Actuating Set Current @		300		mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	65	80		dB
Switching Time		<20		ms Typ

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, +COM, DC to 18 GHz, 90W, 12VDC, SMA PE71S6583](#)



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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18			GHz
VSWR, Max	1.2:1	1.3:1	1.4:1			
Insertion Loss, Max	0.2	0.3	0.5			dB
Isolation, Min	80	70	65			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	0.114 lbs [51.71 g]

Connectors

RF Connector Type	SMA 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 oper)
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Vibration	MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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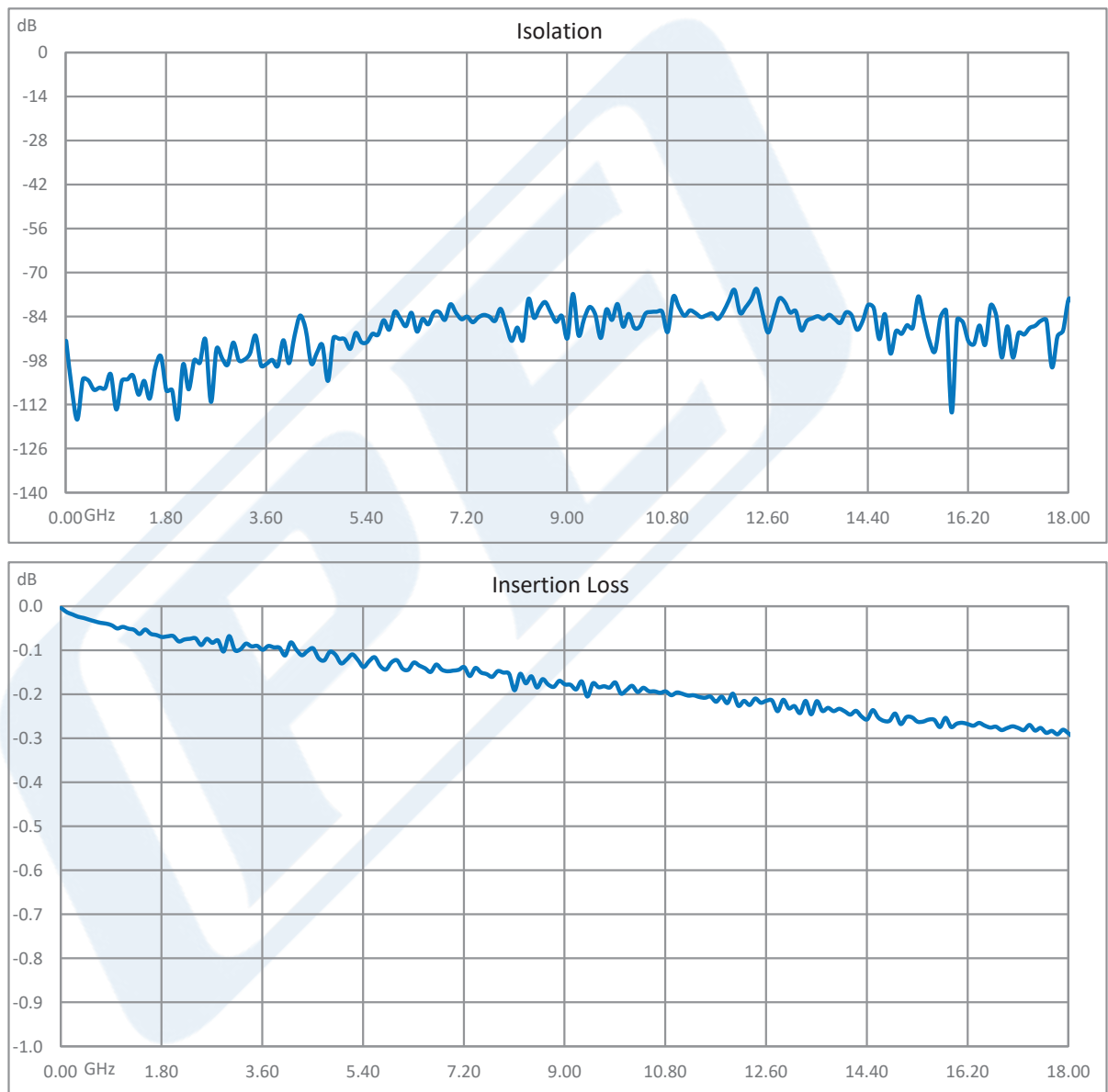


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Typical Performance Data



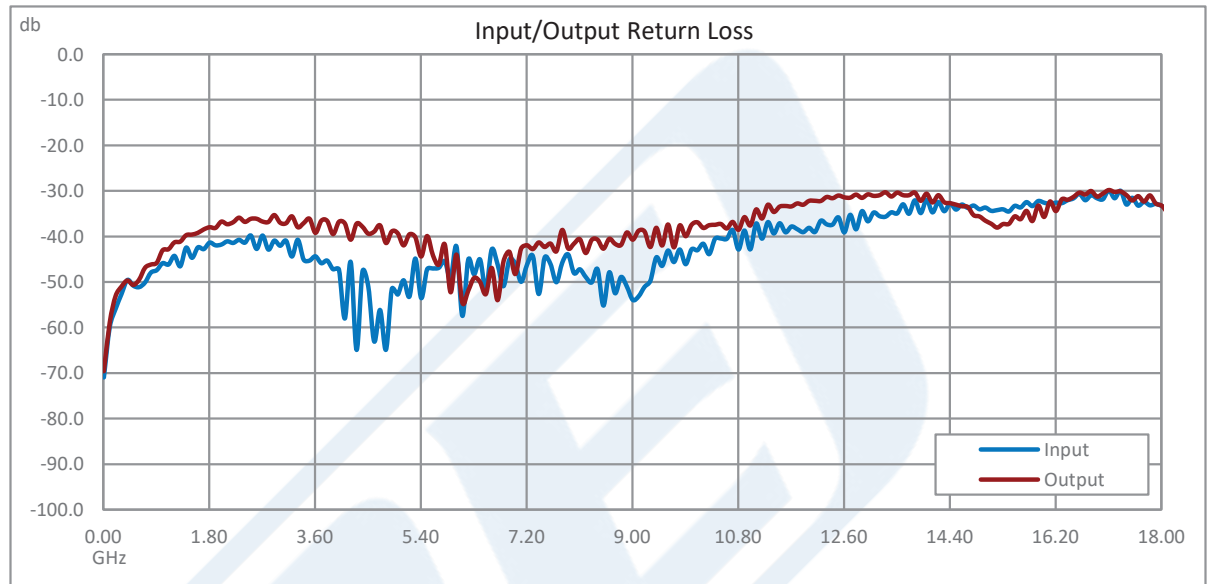
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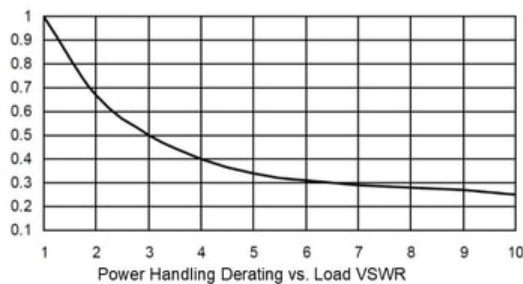
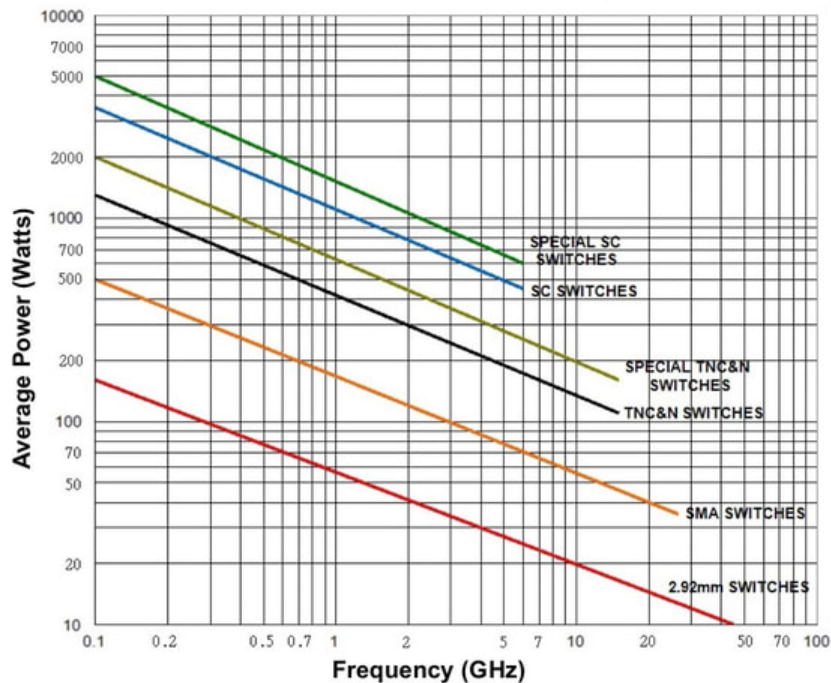


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Power Handling vs. Frequency



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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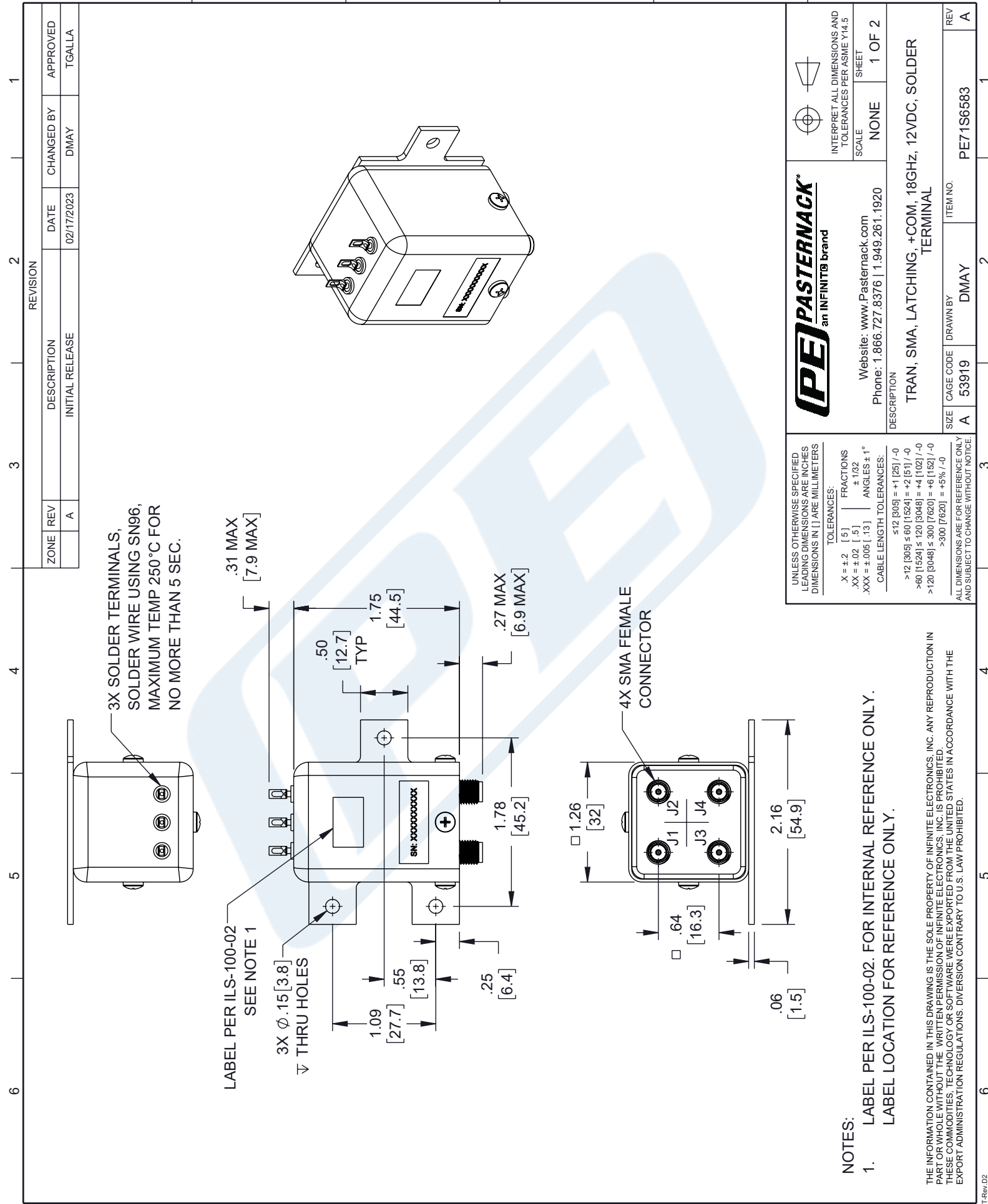
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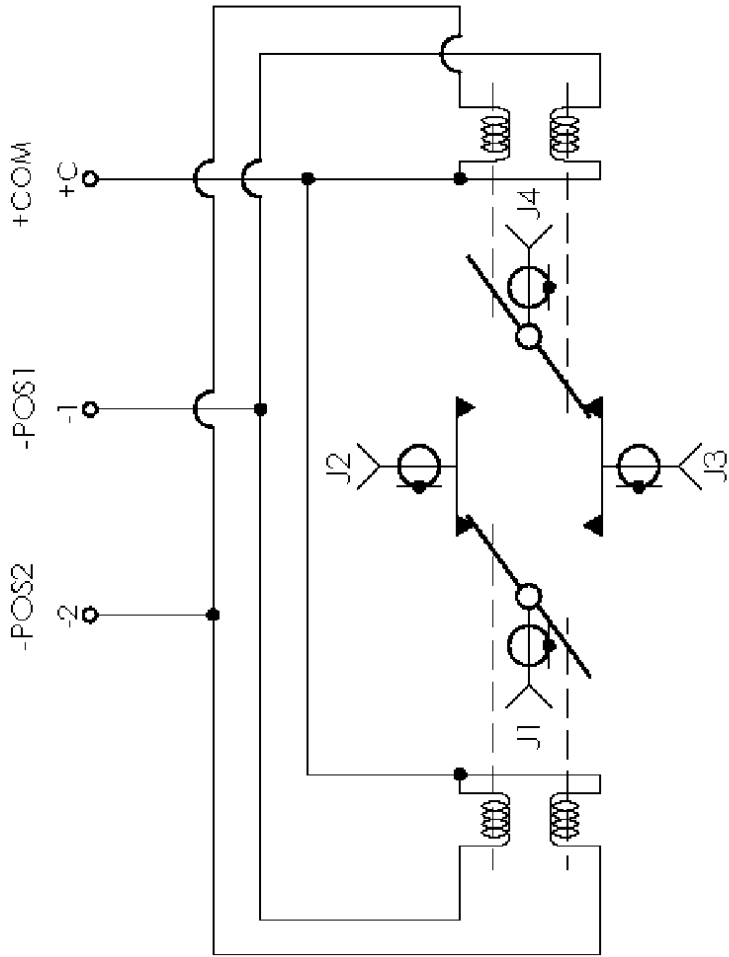
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F E D C B A

F E D C B A





POS	VOLTAGE	RF PATH
POS 1	1-C	J1-J2, J3-J4
POS 2	2-C	J1-J3, J2-J4

SCHEMATIC

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

TOLERANCES:
X = ±.2 [5] FRACTIONS
.XX = ±.02 [.5] ±.132
.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
AND SUBJECT TO CHANGE WITHOUT NOTICE

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DESCRIPTION
TRAN, SMA, LATCHING, +COM, 18GHz, 12VDC, SOLDER
TERMINAL

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DMAY	PE71S6583

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	SCALE	SHEET
	NONE	2 OF 2

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