



SP6T Electromechanical Relay Latching Switch, +COM, DC to 26.5 GHz, 90W, 12VDC, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6577

Features

- Single Pole Six Throw (SP6T) Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Latching Actuator
- Positive Common (+COM) Configuration
- 5M Lifecycle Rating
- Insertion Loss 0.4 dB typ
- Isolation > 70 dB typ
- VSWR as low as 1.25:1 max
- 15 PIN D-SUB Connector 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 PE71S6577 is a Single Pole Six Throw (SP6T) electromechanical relay switch that operates across a broadband frequency range from DC to 26.5 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 0.4 dB insertion loss and isolation greater than 70 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 a 15 Pin D-SUB Connector 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		SP6T Latching		
Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		26.5	GHz
Operating Voltage	11	12	13	Volts
Actuating Set Current @		280		mA
Actuating Reset Current		1.68		A
VSWR		1.25:1	1.8:1	
Insertion Loss		0.4	0.8	dB
Isolation	50	70		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: [SP6T Electromechanical Relay Latching Switch, +COM, DC to 26.5 GHz, 90W, 12VDC, SMA PE71S6577](#)



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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	18 to 26.5		GHz
VSWR, Max	1.25:1	1.4:1	1.5:1	1.8:1		
Insertion Loss, Max	0.2	0.4	0.5	0.8		dB
Isolation, Min	70	60	60	50		dB

Mechanical Specifications

Size

Length	1.95 in [49.53 mm]
Width/Diameter	2.75 in [69.85 mm]
Height	0.92 in [23.37 mm]
Weight	0.18 lbs [81.65 g]

Connectors

RF Connector Type	SMA Female
Control Connector	D-Subminiature

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

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

Plotted and Other Data

Notes:

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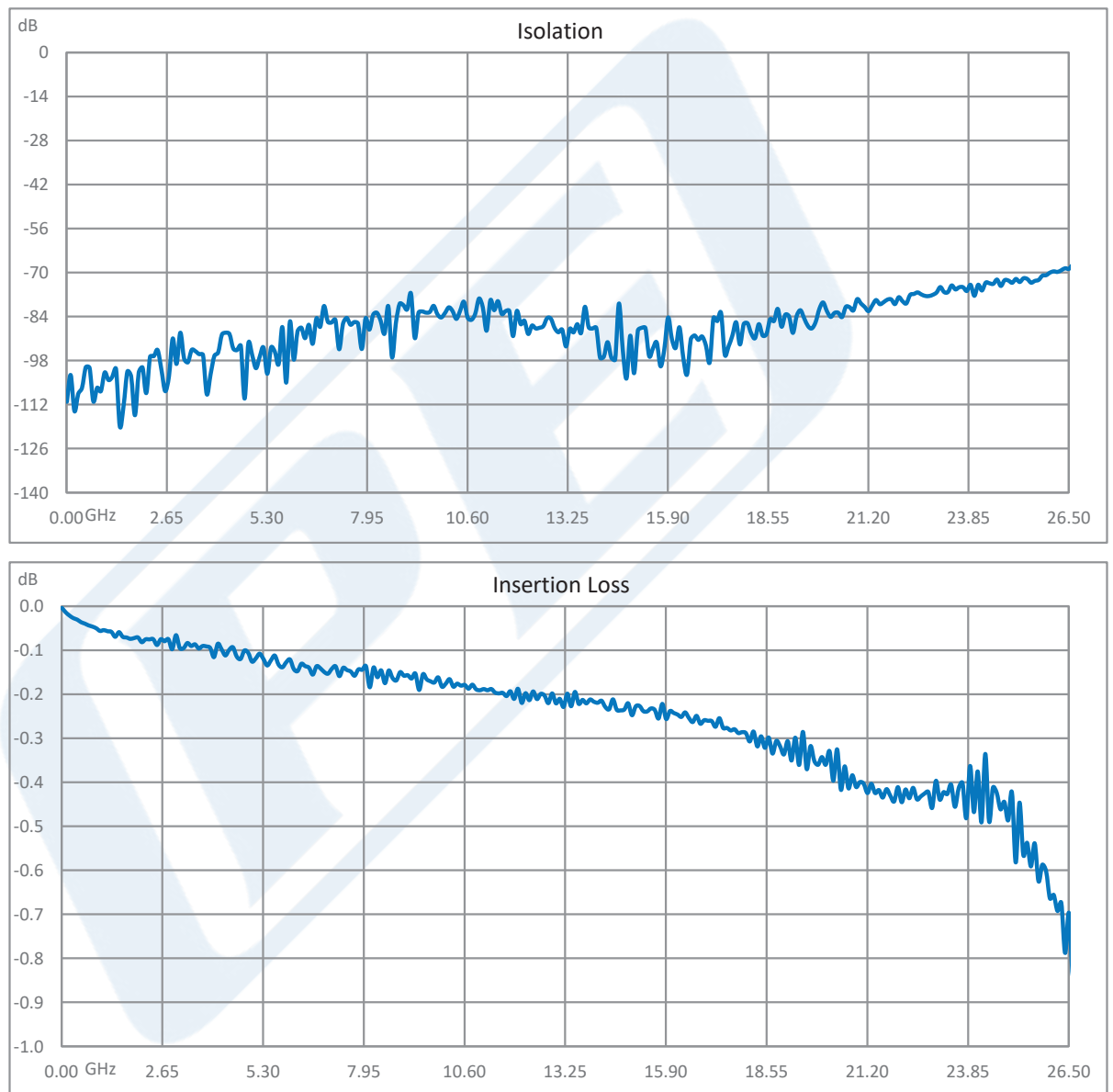


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Typical Performance Data



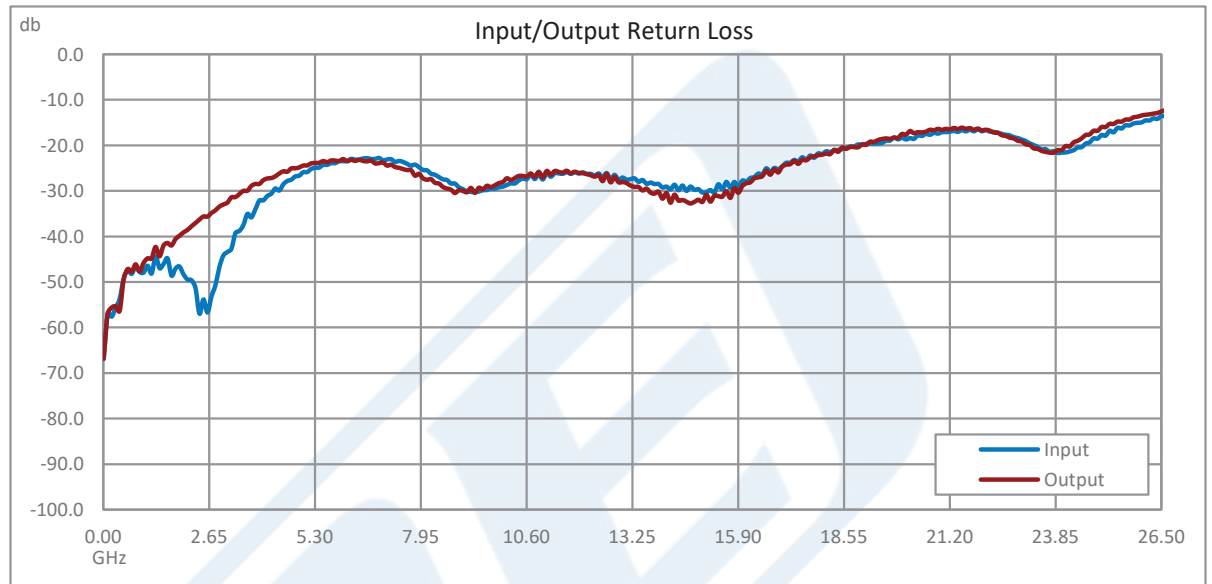
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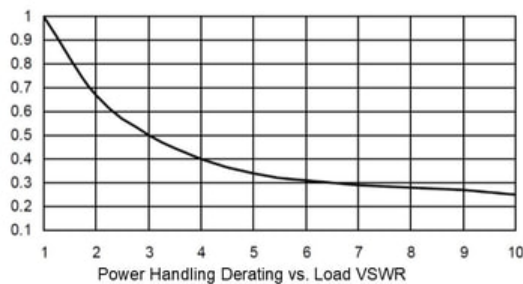


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Power Handling vs. Frequency



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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SP6T Electromechanical Relay Latching Switch, +COM, DC to 26.5 GHz,90W, 12VDC, SMA 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.

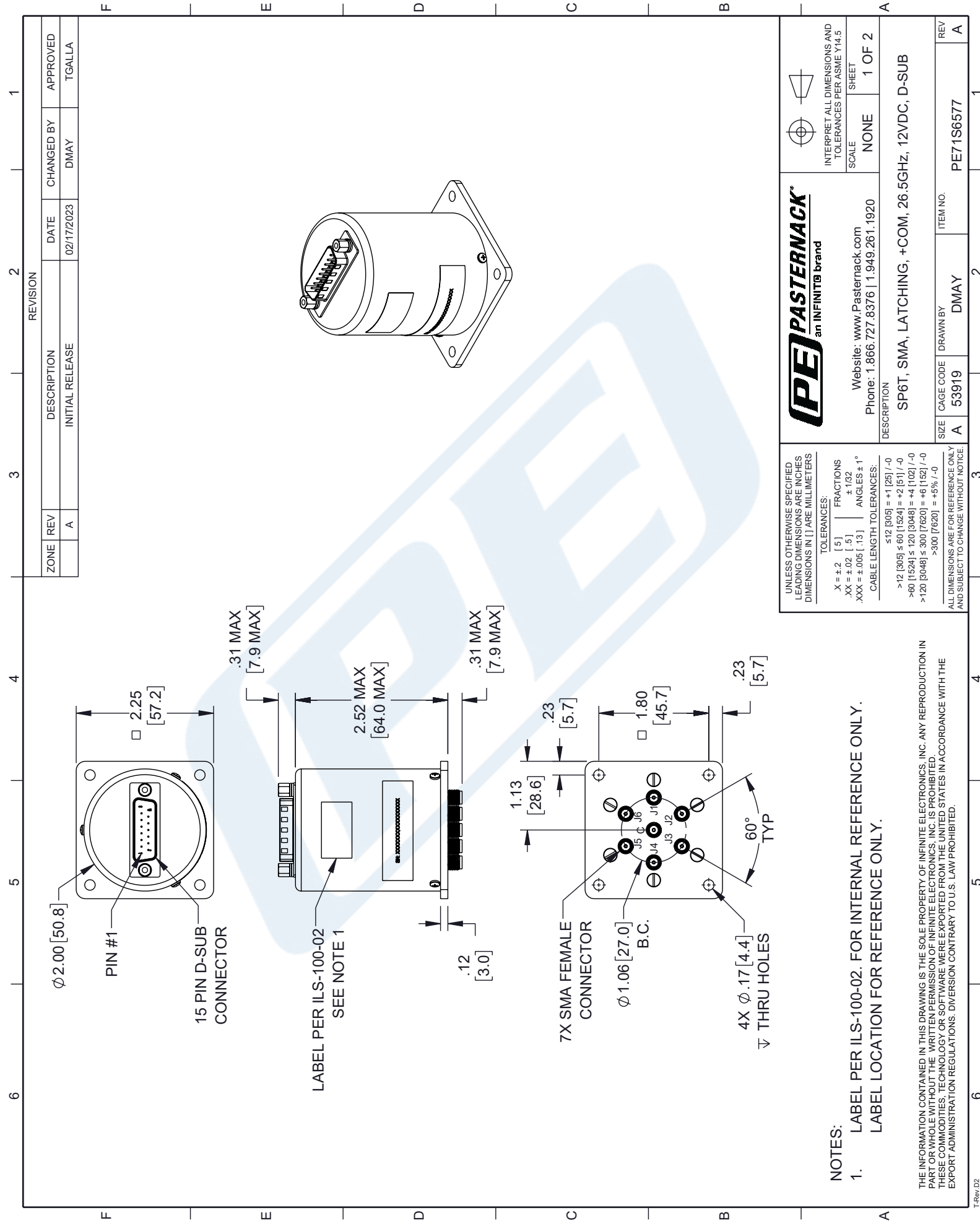
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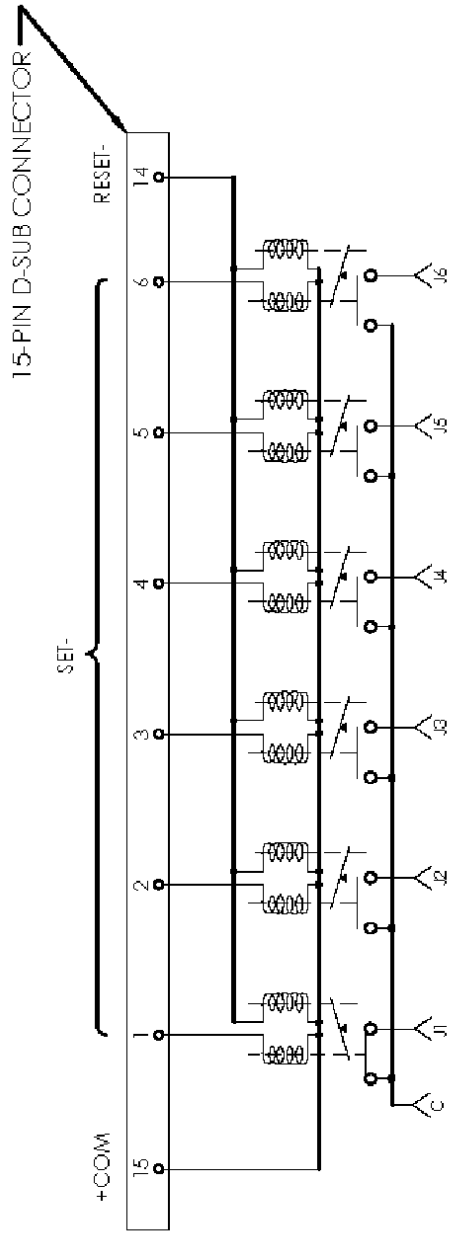
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PE71S6577 CAD Drawing

SP6T Electromechanical Relay Latching Switch, +COM, DC to 26.5 GHz, 90W, 12VDC, SMA





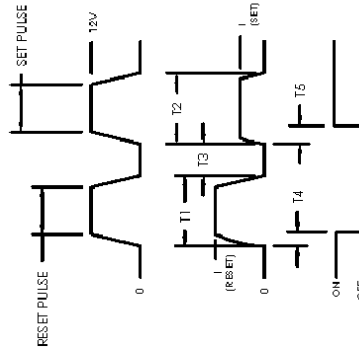
SCHEMATIC

(COIL 1 SHOWN LAST ENERGIZED)

ACTUATION

CHARACTERISTICS:

- REQUIRES TWO (2) SEQUENTIAL PULSES (RESET & SET)
- T1 & T2 = 30mSEC MIN
- T3 = 10mSEC MIN
- T4 & T5 = 20mSEC MAX



TRUTH TABLE/PIN ASSIGNMENT :
PIN ASSIGNMENT

TERMINALS	RF PATH					
D-SUB PIN ASSIGNMENT	J1	J2	J3	J4	J5	J6
1 (SET-)	ON	OFF	OFF	OFF	OFF	OFF
2 (SET-)	OFF	ON	OFF	OFF	OFF	OFF
3 (SET-)	OFF	OFF	ON	OFF	OFF	OFF
4 (SET-)	OFF	OFF	OFF	ON	OFF	OFF
5 (SET-)	OFF	OFF	OFF	OFF	ON	OFF
6 (SET-)	OFF	OFF	OFF	OFF	OFF	ON
14 (RESET-)	ALL OFF					

PIN 15. +COM

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

PE PASTERNAK
an INFINITON brand

Website: www.Pasternack.com
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DESCRIPTION

SP6T, SMA, LATCHING, +COM, 26.5GHz, 12VDC, D-SUB



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

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