



SPDT Electromechanical Relay Latching Switch, Terminated,  
 DC to 22 GHz, 20W, 12V Self Cut Off, Diodes, TTL, SMA

## Electromechanical Relay Switches Technical Data Sheet

PE71S6297

### Features

- Single Pole Double Throw Terminated Relay Switch
- DC to 22 GHz Frequency Range
- 1M Cycle Min Operating Life
- Self Cut Off
- Latching Actuator
- TTL Logic
- Diodes
- Insertion Loss 0.6 dB max
- Isolation 55 dB min
- 20 Watts Avg Power Max
- Switching Sequence Break Before Make

### Applications

- Test & Measurement
- Communications System
- Instrumentation
- Military Communications

### Description

The PE71S6297 is a Single Pole Double Throw (SPDT) Terminated Electromechanical Relay Switch that operates from DC to 22 GHz and has a rating of 20 Watts input power (CW) in a Break Before Make condition. The output port is terminated in 50 ohms when switched in the isolation (off) state. The design features Self Cut Off TTL Logic control Latching Actuator with Diodes and Internal Terminations. It is rated for 1M Life Cycles for high reliability operation. Insertion loss is specified from 0.2 dB max and Isolation from 80 dB min at 3 GHz, with +12 Vdc operating voltage. Performance is guaranteed over -35°C to +85°C and the switch assembly is RoHS compliant. The package interface uses solder terminals and SMA Female connectors.

### Electrical Specifications

Switch Type	SPDT, Terminated
Actuator Type	Latching
Switching Sequence	Break Before Make
Actuator Options	Self Cut Off, Diodes, TTL Logic
TTL Control	on: 3.5 to 5.5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		22	GHz
Impedance		50		Ohms
Operating Voltage	10.8	12	13.2	Volts
Actuating Current @ 12 Volts			420	mA
Insertion Loss			0.6	dB
Input Power (CW)			20	Watts
Termination Input Power (CW)			5	Watts
Switching Time			20	ms Max

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 Latching Switch, Terminated, DC to 22 GHz, 20W, 12V Self Cut Off, Diodes, TTL, SMA PE71S6297](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 3	3 to 8	8 to 12.4	12.4 to 18	18 to 22	GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.5:1	1.7:1	
Insertion Loss, Max	0.2	0.3	0.4	0.5	0.6	dB
Isolation, Min	80	70	60	60	55	dB

### Mechanical Specifications

#### Size

Weight	0.192 lbs [87.09 g]
Body Material and Plating	Aluminum, Nickel
Package Type	Connectorized
Operating Life	1,000,000 Cycles

#### Connectors

RF Connector Type	SMA Female
RF Connector Contact Material and Plating	Beryllium Copper, Gold
RF Connector Body Material and Plating	Passivated Stainless Steel
Control Connector	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-35 to +85 deg C
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**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

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 Latching Switch, Terminated, DC to 22 GHz, 20W, 12V Self Cut Off, Diodes, TTL, SMA PE71S6297](#)

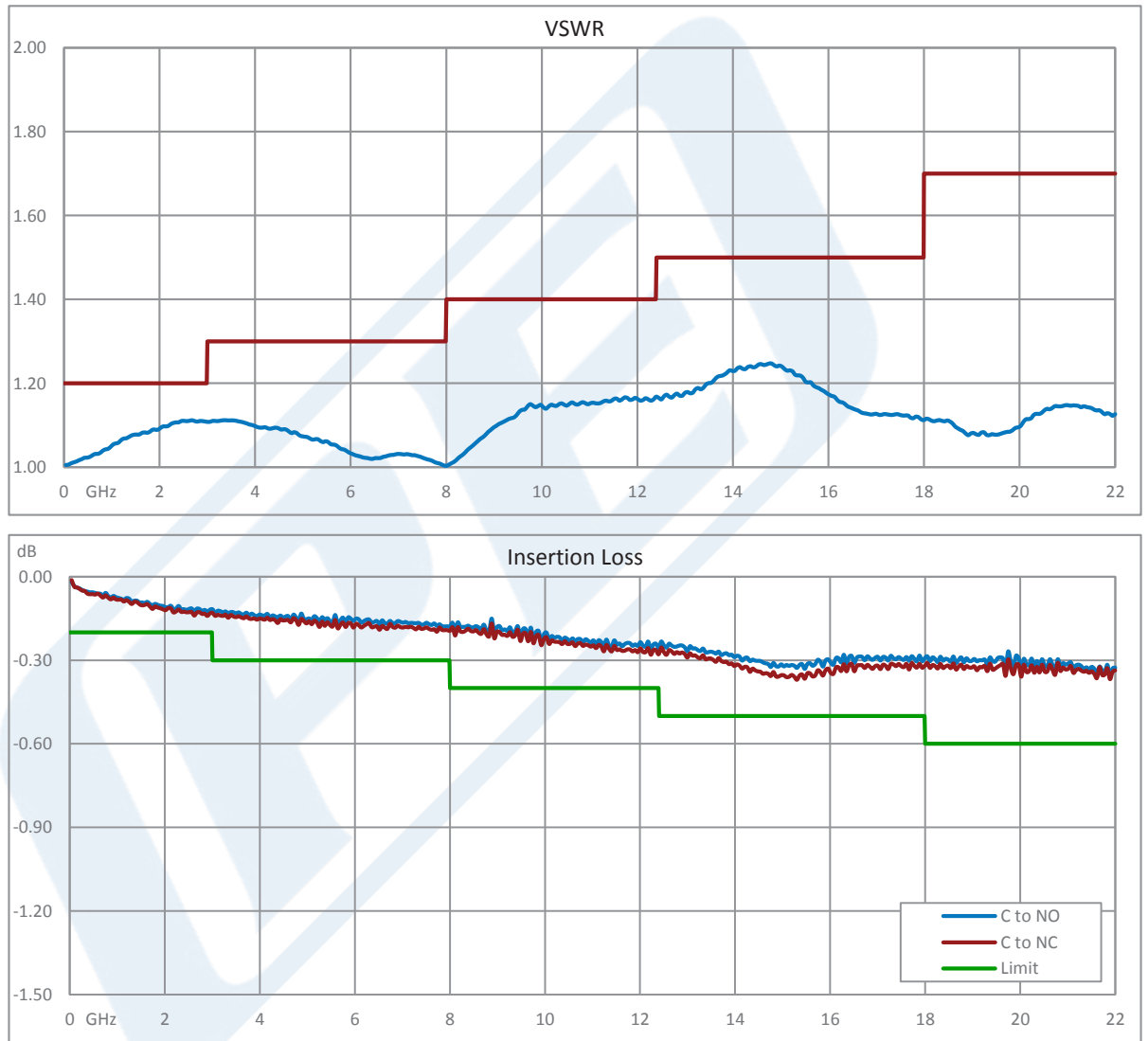


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Electromechanical Relay Switches Technical Data

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Typical Performance Data



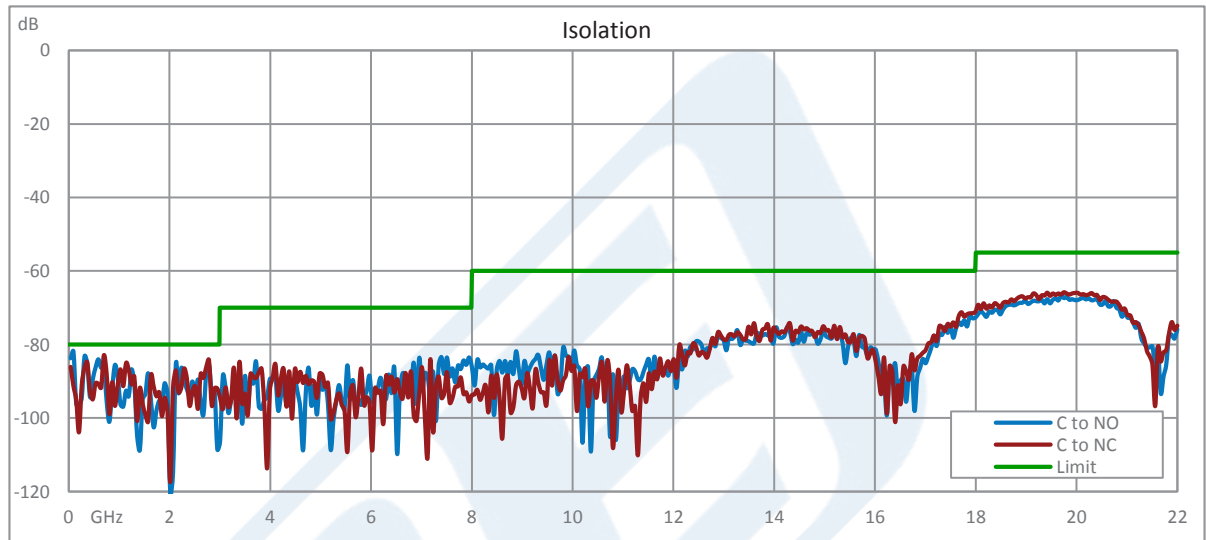
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SPDT Electromechanical Relay Latching Switch, Terminated, DC to 22 GHz, 20W, 12V Self Cut Off, Diodes, TTL, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

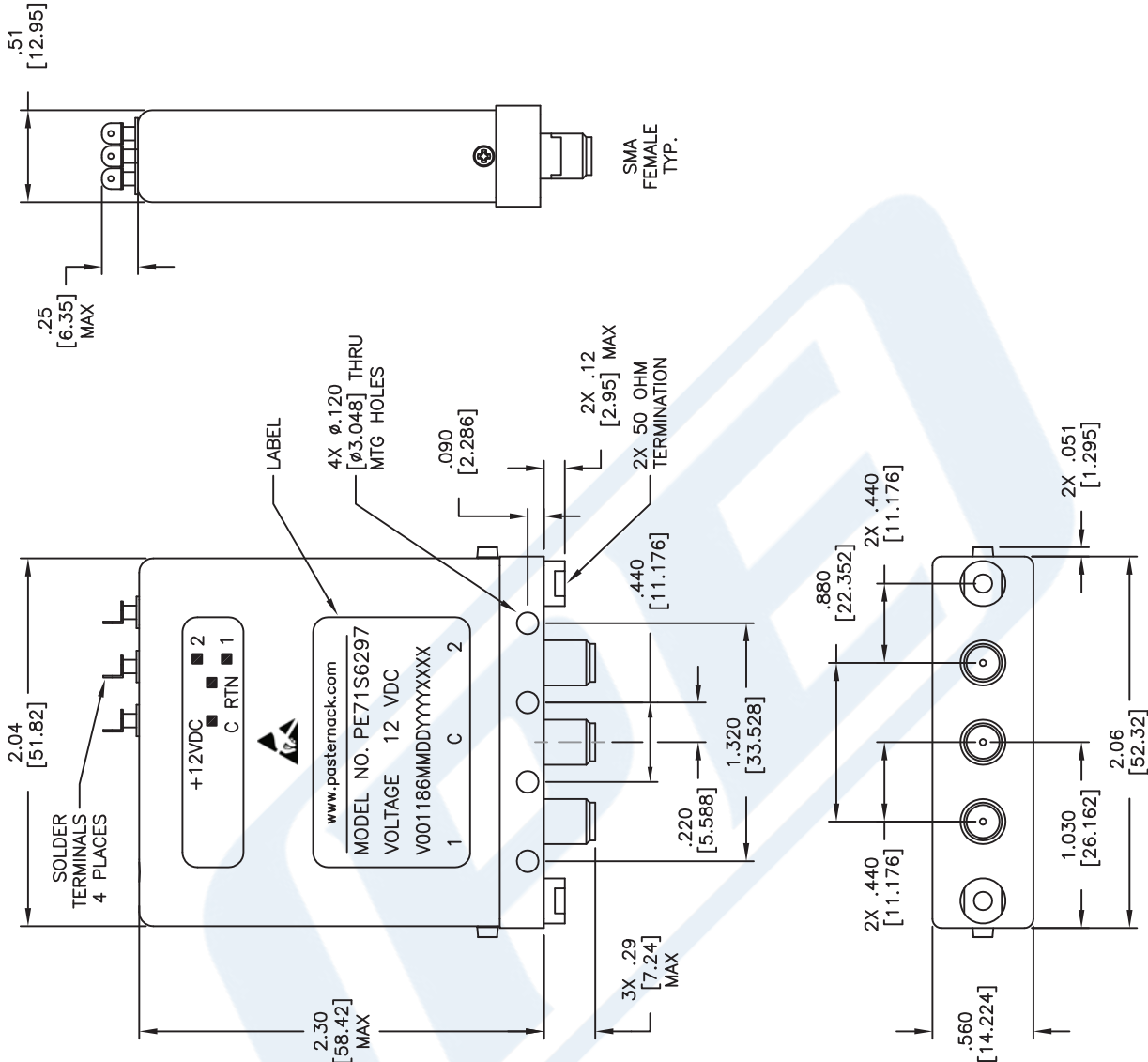
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URL: <https://www.pasternack.com/sma-spdt-electromechanical-relay-latching-switch-self-cut-off-diodes-ttl-terminated-pe71s6297-p.aspx>

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# PE71S6297 CAD Drawing

SPDT Electromechanical Relay Latching Switch, Terminated, DC to 22 GHz, 20W, 12V Self Cut Off, Diodes, TTL, SMA



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		ANGLES	
DECIMALS	(0.76)	±1°	
.XX ± .03	(0.254)	FRACTIONS	±1/16
HOLE DIAMETER	TOLERANCE		
.0135 TO .125	+0.004 TO -0.001		
(0.343 TO 3.175)	(+0.102 TO -0.025)		
.126 TO .250	+0.005 TO -0.001		
(3.200 TO 6.350)	(+0.127 TO -0.025)		
.251 TO .500	+0.006 TO -0.001		
(6.375 TO 12.700)	(+0.152 TO -0.025)		
.501 TO .750	+0.008 TO -0.001		
(12.725 TO 19.050)	(+0.203 TO -0.025)		
.751 TO 1.000	+0.010 TO -0.001		
(19.075 TO 25.400)	(+0.254 TO -0.025)		
1.001 TO 2.000	+0.012 TO -0.001		
(25.425 TO 50.800)	(+0.305 TO -0.025)		

\* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

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THE ENGINEER'S RF SOURCE  
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DWG TITLE  
**PE71S6297**

FSCM NO. 53919

CAD FILE 070516

SCALE N/A

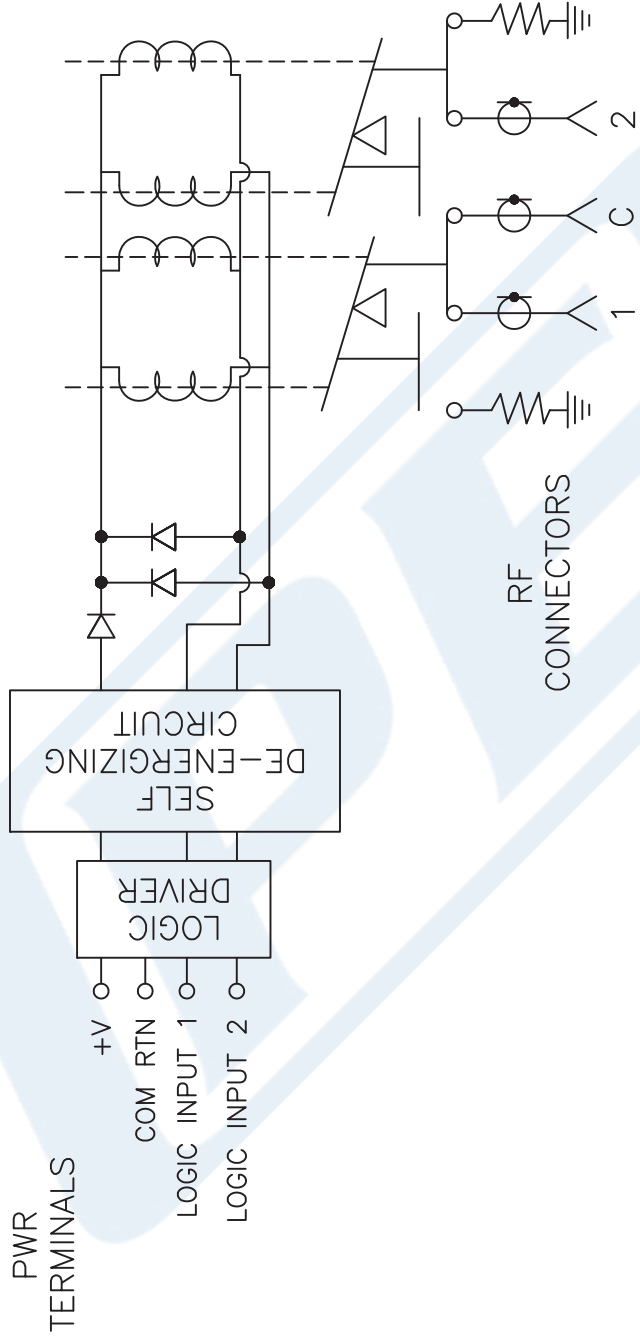
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2233

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
 3. DIMENSIONS ARE IN INCHES [mm].

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SCHEMATIC LATCHING IN POSITION 1

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