



SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6541

Features

- Single Pole Double Throw (SP2T) Ruggedized Electro-mechanical Relay Switch
- IP64 Level 1 Rated
- DC to 12 GHz Frequency Range
- Latching Actuator
- 1M Lifecycle Rating
- Insertion Loss 0.15 dB typ
- Isolation > 90 dB typ
- VSWR as low as 1.25:1 max
- Solder Terminal Pins for DC Control
- +28 Volt DC Bias
- N-Type Female Connectors
- -54°C to +85°C Operating Temperature
- Up to 600 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 PE71S6541 is a Ruggedized Single Pole Double Throw (SP2T) electromechanical relay switch that operates across a broadband frequency range of DC to 12 GHz and can handle up to 600W of average power in a break before make condition. The 50 Ohm design is IP64 compliant with a Level 1 moisture seal and specifically designed to operate reliably in harsh usage environments and conditions, such as over extreme temperatures and wet or dusty environments. Intrusion protection offers full protection against dust and other particulates. Moisture protection enables resistance to splashes in all directions. The switch features a Latching Actuator that magnetically latches in place after the control voltage is removed. For power sensitive applications, this is the best actuator option. Impressive typical performance includes 0.15 dB insertion loss and isolation greater than 90 dB. This switch requires +12Vdc bias voltage, operates over a wide temperature range of -54°C to +85°C, and is rated for 1 million lifecycles. The rugged and compact package assembly supports female N-Type connectors and terminal solder 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 SPDT
 Actuator Type Latching

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current			160	mA
VSWR		1.2:1	1.4:1	
Insertion Loss		0.15	0.5	dB
Isolation	60	90		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](#)



SPDT, 1P64 Rated Electromechanical Relay Latching
Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data

PE71S6541

Switching Time <20 ms Typ

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 1	1 to 4	4 to 8	8 to 12		GHz
VSWR, Max	1.25:1	1.3:1	1.4:1	1.4:1		
Insertion Loss, Max	0.3	0.4	0.4	0.5		dB
Isolation, Min	90	80	70	60		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	0.174 lbs [78.93 g]

Connectors

RF Connector Type	N Female
Control Connector	Solder Terminals

Environmental Specifications

Temperature

Operating Range	-54 to +85 deg C
Storage Range	-55 to +100 deg C

Ingress Protection (IP) Rating
Shock

IP64
MIL-STD-202 Method 213, Condition D, 500 G (non oper)
MIL-STD-202 Method 204, Condition D, 10G RMS (non oper)

Vibration

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, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](#)

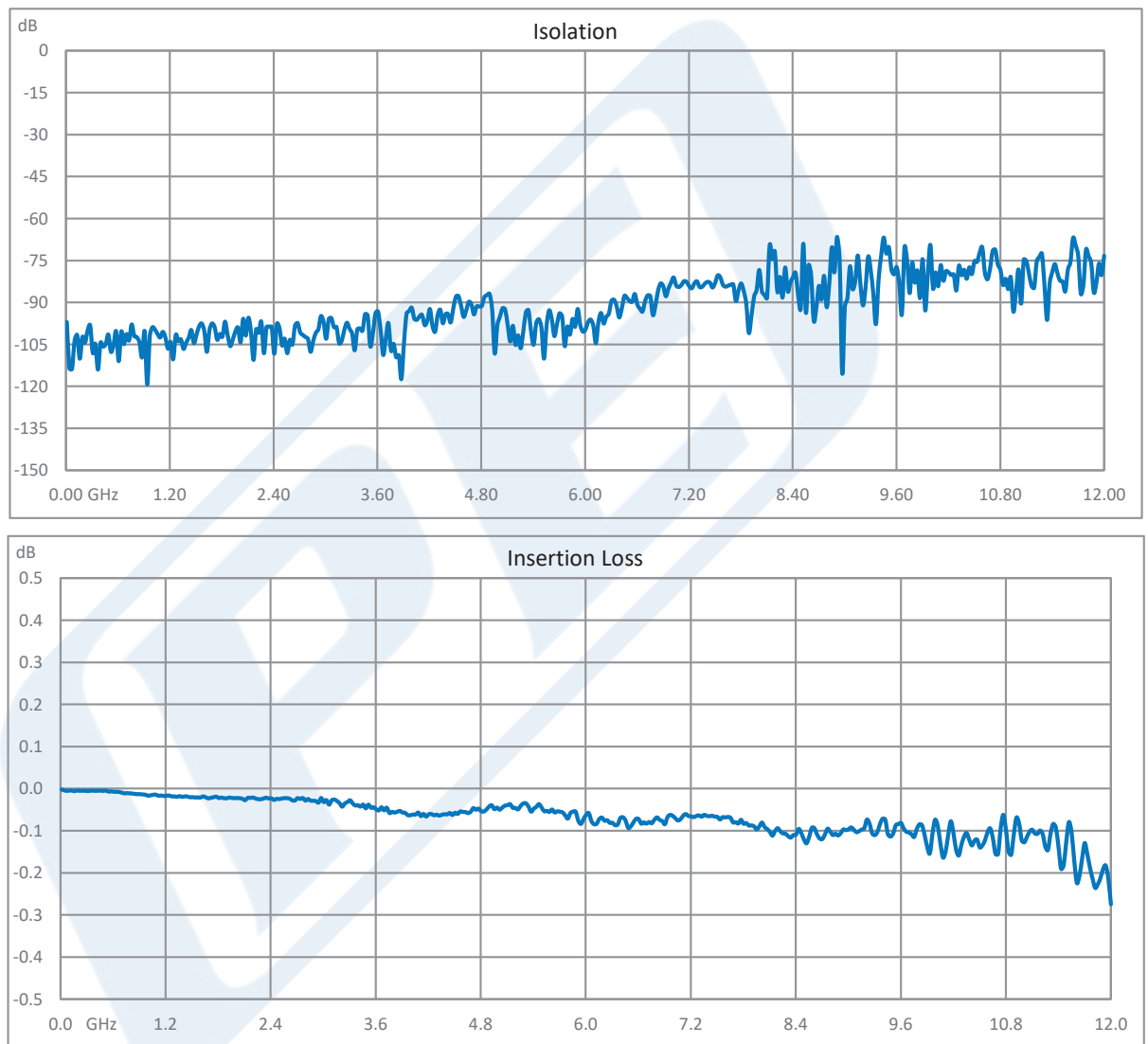


SPDT, 1P64 Rated Electromechanical Relay Latching
Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data

PE71S6541

Typical Performance Data



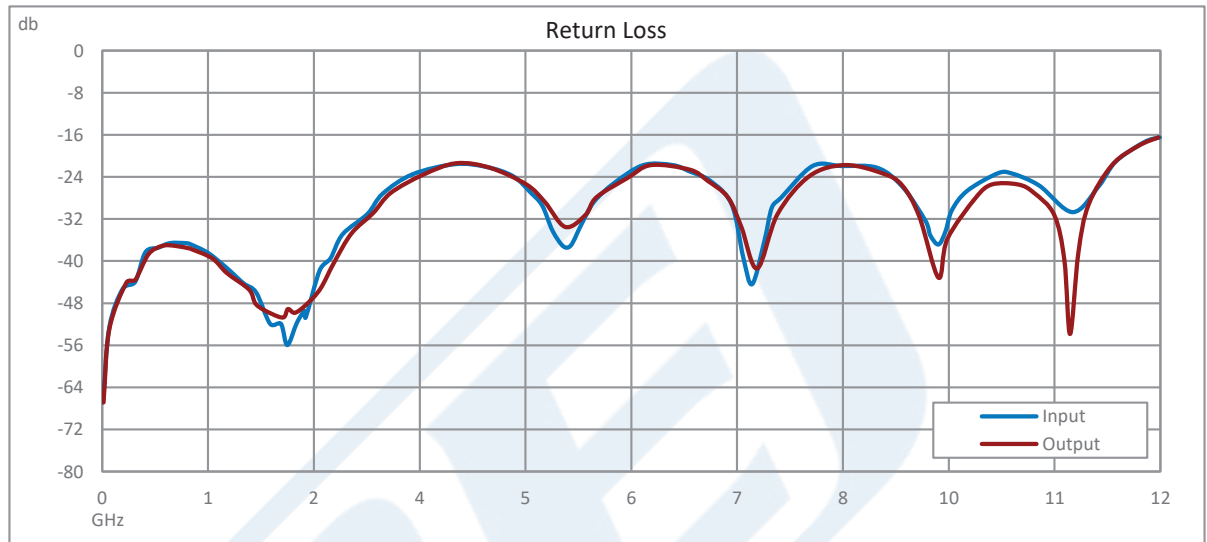
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](#)



SPDT, 1P64 Rated Electromechanical Relay Latching
Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data

PE71S6541



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](#)

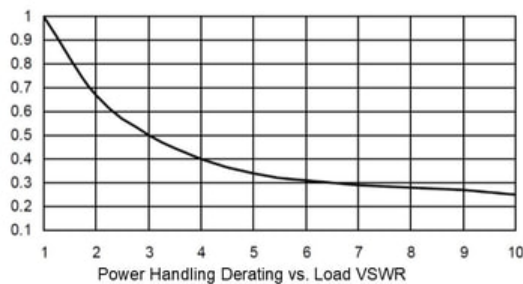


SPDT, 1P64 Rated Electromechanical Relay Latching
Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data

PE71S6541

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](#)



SPDT, 1P64 Rated Electromechanical Relay Latching
Switch, DC to 12 GHz, 600W, 28Vdc, N

Electromechanical Relay Switches Technical Data

PE71S6541

SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N 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.

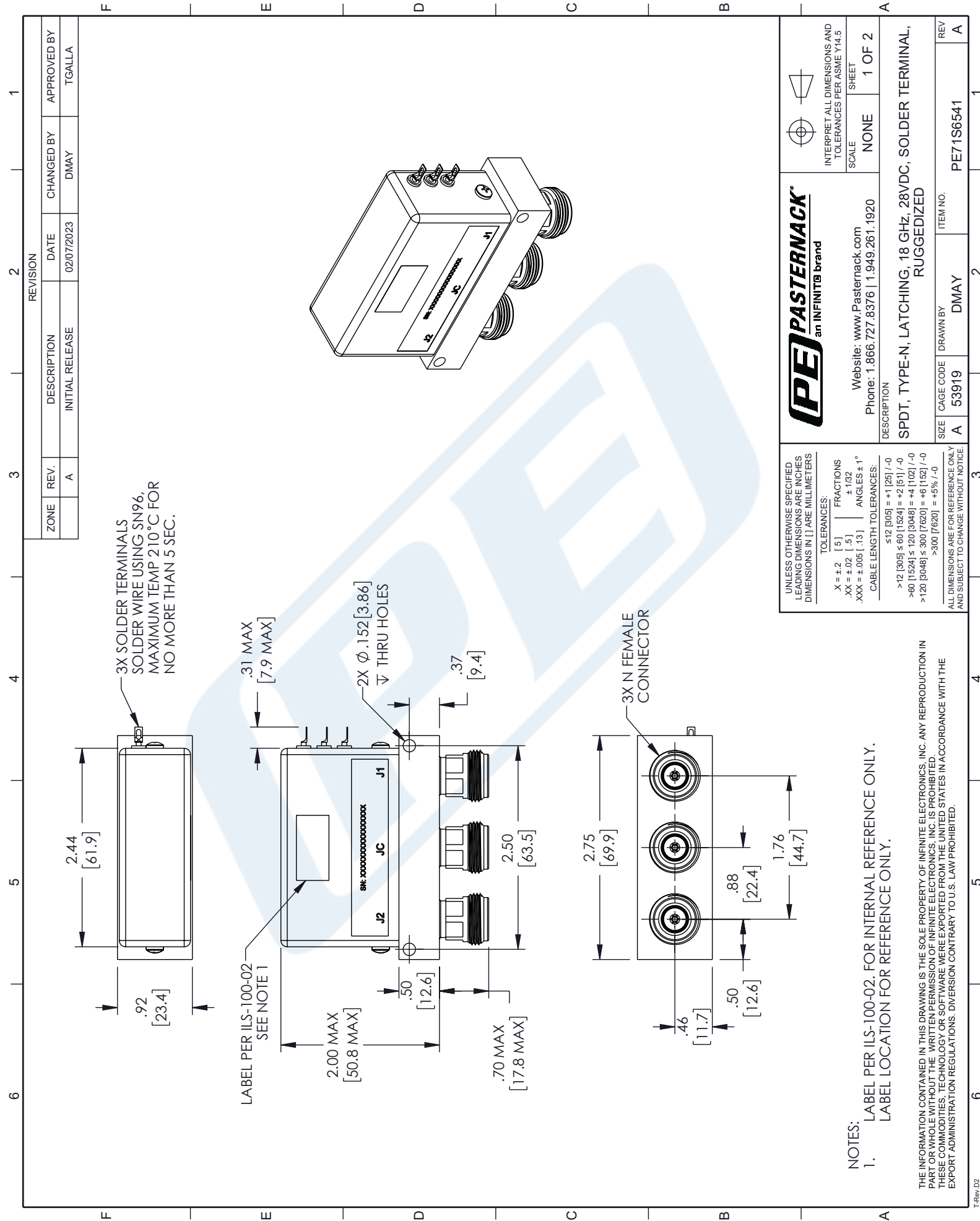
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N PE71S6541](https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-12-ghz-n-pe71s6541-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-latching-switch-12-ghz-n-pe71s6541-p.aspx>

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.

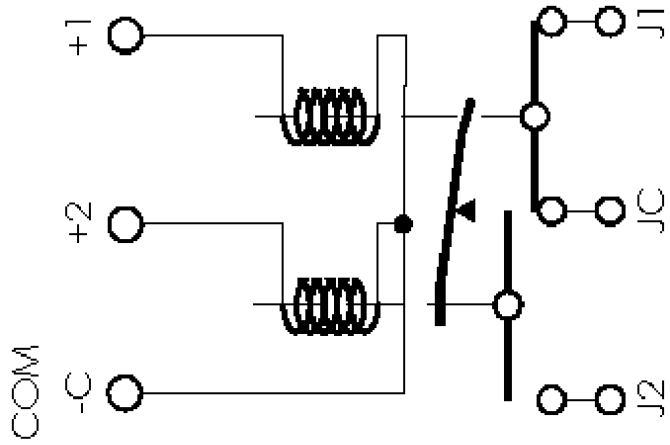
PE71S6541 CAD Drawing

SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N



PE71S6541 CAD Drawing

F SPDT, 1P64 Rated Electromechanical Relay Latching Switch, DC to 12 GHz, 600W, 28Vdc, N A



 PASTERNAK an INFINITI [®] brand		 INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	
Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920		SCALE	SHEET
DESCRIPTION		NONE	2 OF 2
SPDT, TYPE-N, LATCHING, 18 GHz, 28VDC, SOLDER TERMINAL, RUGGEDIZED			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DMAY	PE71S6541
		REV	A

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

TOLERANCES:

X = ±.2 [.5] FRACTIONS ±.132
.XX = ±.02 [.5] ANGLES ± 1°
.XXX = ±.005 [.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

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED.
THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.