



SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 12V, N

Electromechanical Relay Switches Technical Data Sheet

PE71S6398

Features

- Single Pole Double Throw
- DC to 12 GHz Frequency Range
- 2M Cycle Min Operating Life
- +12 Volt DC
- 200 Watt Avg Power
- Failsafe Actuator
- -25 to +70°C Operating Temperature
- Insertion Loss as low as 0.3 dB
- VSWR 1.4:1 Max
- N Female RF connectors
- Solder Pins DC Control
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request

Applications

- High Performance Relay Switch
- Military Communications
- Communications Systems
- Test & Measurement

Description

The PE71S6398 is a Single Pole Double Throw (SPDT) electromechanical relay switch that operates across a wide frequency range of DC to 12 GHz and can handle up to 200 Watts of CW input power in a break before make condition. The design features a Failsafe actuator and is rated for 2M life cycles for high reliability operation. Insertion loss is specified as low as 0.3 dB and Isolation up to 90 dB minimum. The Failsafe actuator has a +12 Vdc bias voltage, and operates over a temperature range of -25°C to +70°C. The rugged and compact package assembly supports N Female connectors and Solder Pins for DC control. The model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and vibration.

Electrical Specifications

Switch Type SPDT
Actuator Type Failsafe
Switching Sequence Break before Make

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Set Current @ 12 Volts		200		mA
VSWR		1.25:1	1.4:1	
Insertion Loss		0.3	0.5	dB
Isolation	70	90		dB
Input Power (CW)			200	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 Failsafe Switch, DC to 12 GHz, up to 600W, 12V, N PE71S6398](#)



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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	80	70		dB
Input Power, Typ (CW)	600	300	230	200		Watts

Mechanical Specifications

Size

Body Material and Plating

Package Type

Aluminum

Connectorized

Operating Life

2,000,000 Cycles

Connectors

RF Connector Type

RF Connector Contact Material and Plating

RF Connector Body Material and Plating

Control Connector

N Female

Beryllium Copper, Gold

Aluminum, Nickel

Solder Pin

Environmental Specifications

Temperature

Operating Range

Storage Range

-25 to +70 deg C

-55 to +100 deg C

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

Plotted and Other Data

Notes:

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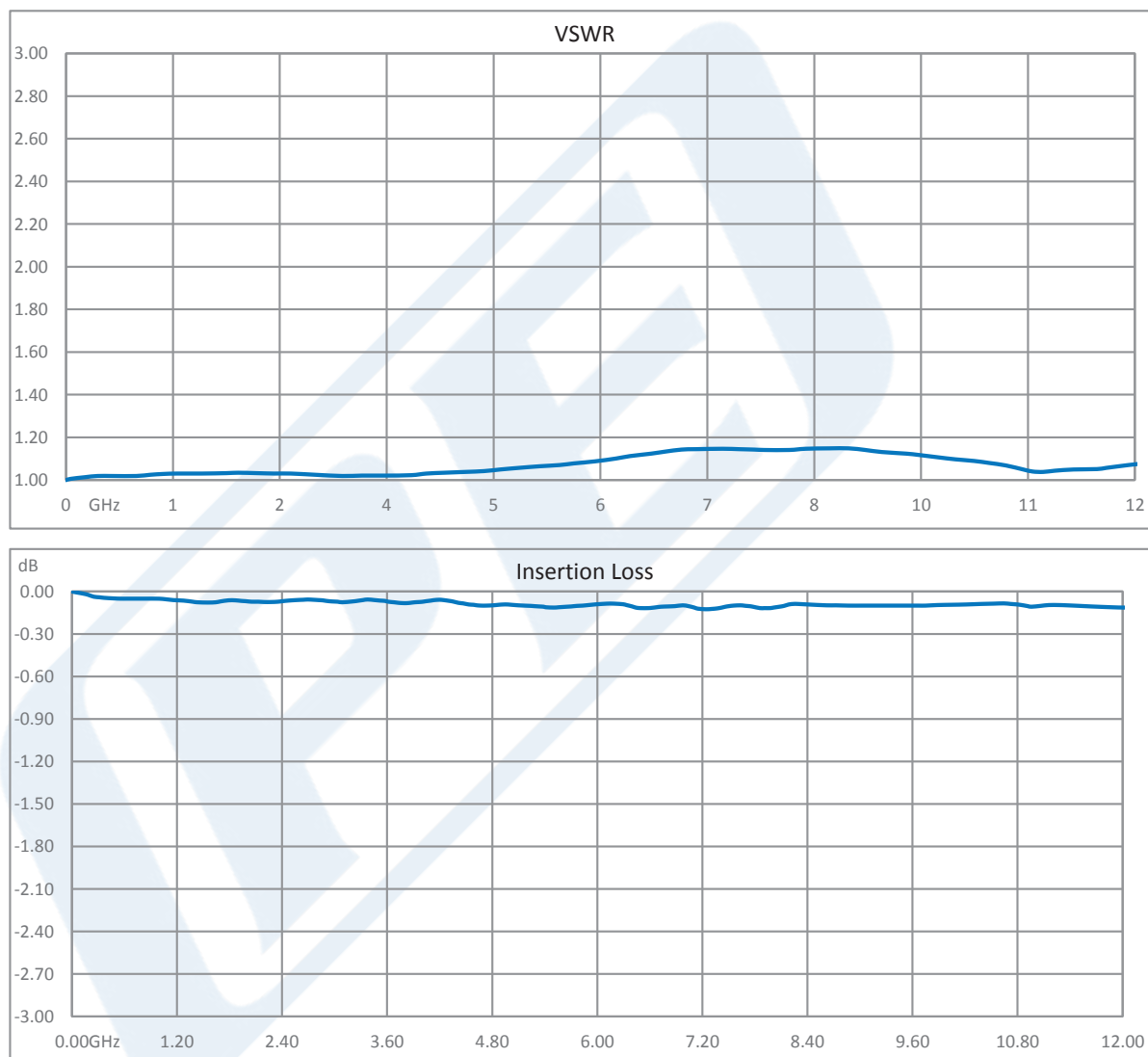


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Typical Performance Data



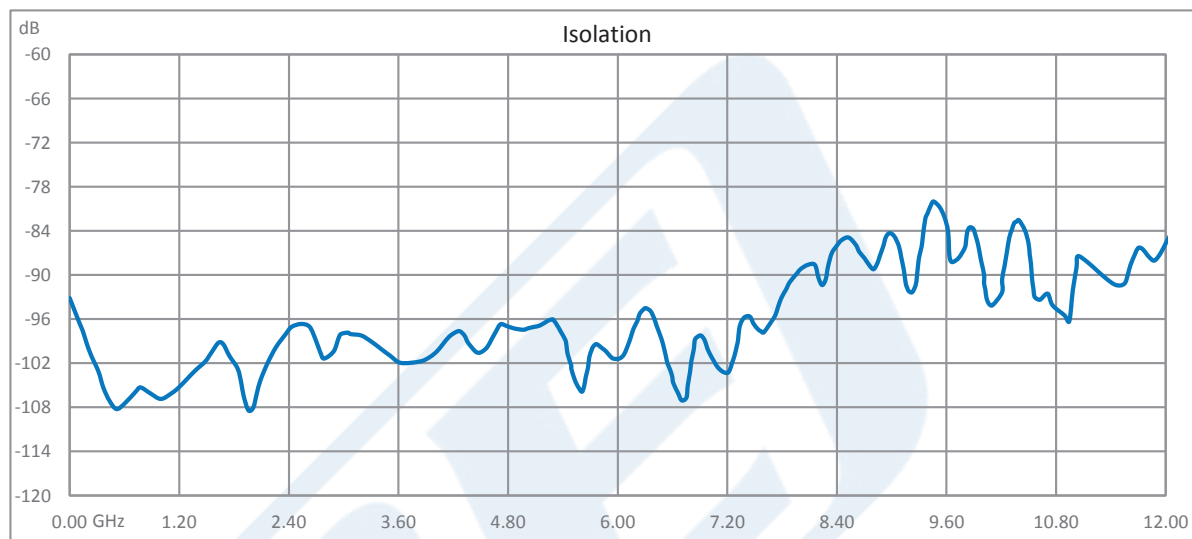
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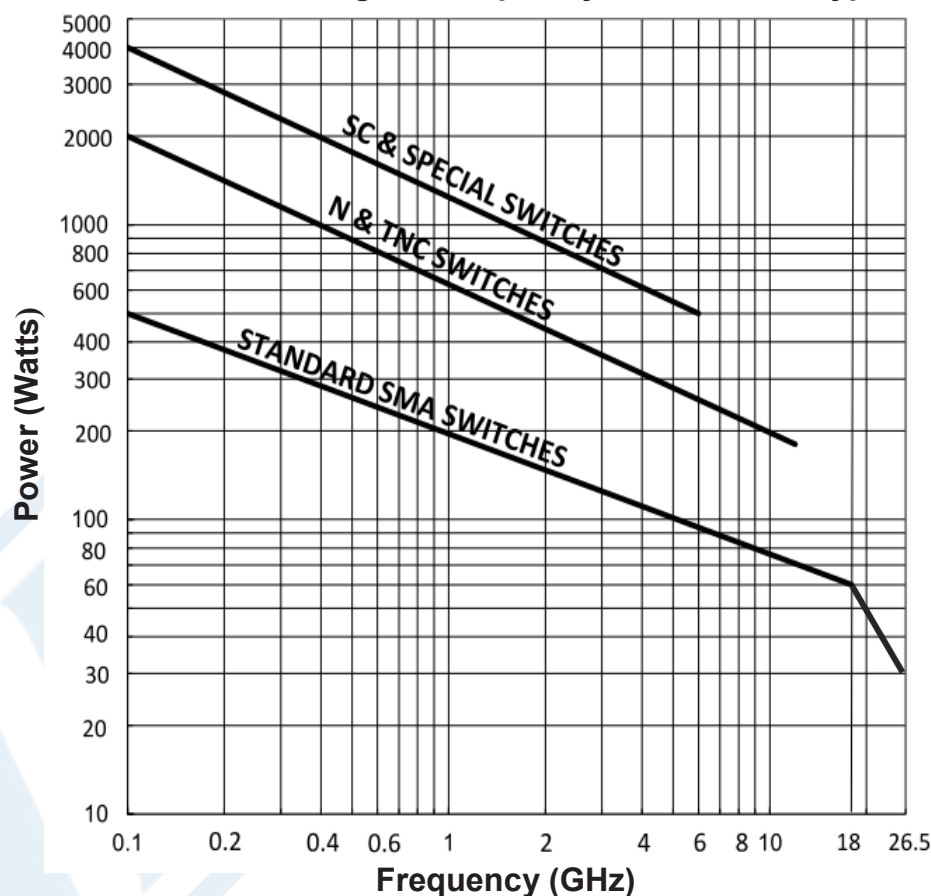


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Power Handling vs. Frequency & Connector Type



Environmental and Test Conditions:

- Ambient temperature of 25°C or less
- Altitude: Sea Level
- Load VSWR: 1.20:1 max.
- Cold Switching

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SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, 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 Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, N PE71S6398](https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-200w-12v-n-pe71s6398-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-200w-12v-n-pe71s6398-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.

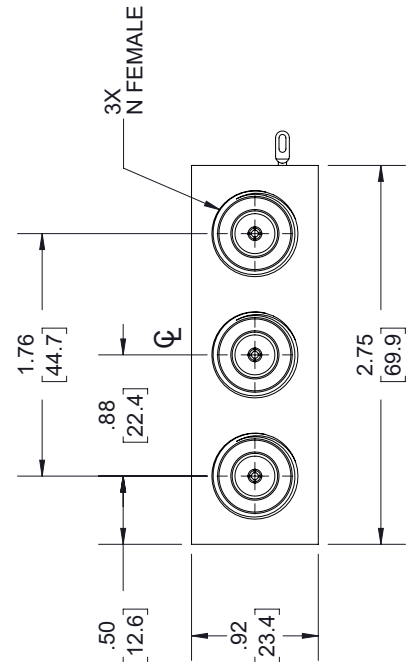
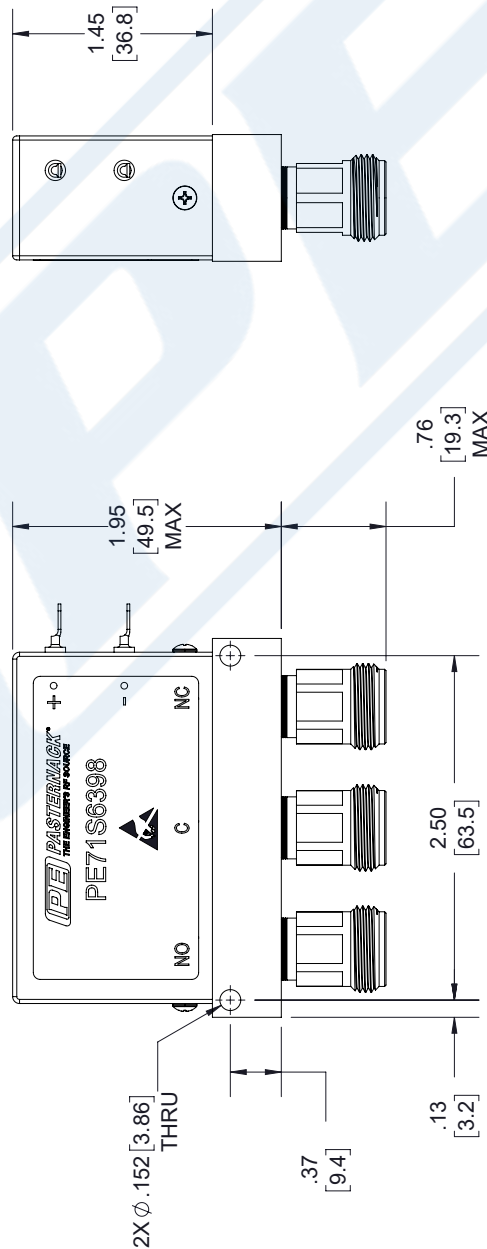
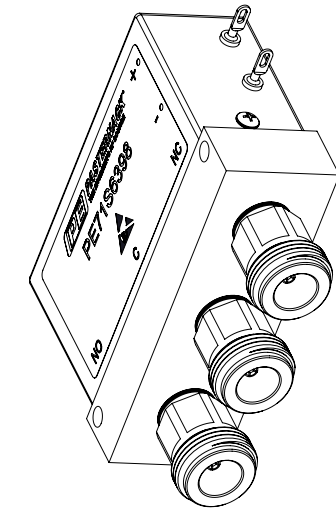
PE71S6398 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 12V, N

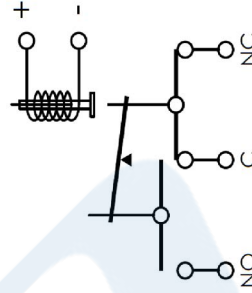
REV.	DESCRIPTION	DATE	APPROVED
A	PCR FMSW6397	1/6/2020	T.GALLA

REVISIONS

2X SOLDER TERMINALS
SOLDER WIRE USING SN96,
MAXIMUM TEMP 210°C FOR
NO MORE THAN 5 SEC.



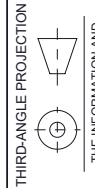
SCHEMATIC SHOWN IN FAILSAFE POSITION



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

TOLERANCES:	
.X = ±.2	[.08]
.XX = ±.02	[.51]
.XXX = ±.005	[.13]
ANGLES ± 1°	
CABLE LENGTH (L) TOLERANCES:	
L ≤ 12 [305]	±.125 [3.18]
12 [305] < L ≤ 60 [1524]	±.125 [3.18]
60 [1524] < L ≤ 120 [3048]	±.125 [3.18]
120 [3048] < L ≤ 300 [7620]	±.125 [3.18]
300 [7620] < L	±.125 [3.18]

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SHEET 1 OF 1

SCALE N/A



Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
Website: www.pasternack.com
E-mail: sales@pasternack.com

SIZE A CAGE CODE 53919 DRAWN BY K.DANG ITEM NO. REV A