

SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N



PE71S6460

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 12 GHz Frequency Range
- Failsafe Actuator
- TTL Logic Control
- Suppression Diodes
- Indicators
- 2M Lifecycle Rating
- Insertion Loss < 0.2 dB typ
- Isolation > 80 dB typ
- VSWR as low as 1.25:1 max
- +12 Volt DC Bias
- Solder Terminal Pins for DC Control
- N Type Female Connectors
- -25°C to +65°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 PE71S6460 is a Single Pole Double Throw (SP2T) electromechanical relay switch that operates across a wide 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 rated for 2 million lifecycles and features a Failsafe Actuator. Additional features include TTL control logic, suppression diodes which limit voltage spikes or reverse current, and indicators. Impressive typical performance includes 0.2 dB insertion loss and isolation greater than 80 dB. This switch requires +12Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports N type female connectors and solder terminal pins for all command control functions. 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	SPDT
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts
TTL Control Current	450mA at 5.5 Volts 450mA at 0.8 Volts

Description	Min	Typ	Max	Units
Frequency Range	DC		12	GHz
Impedance		50		Ohms
Operating Voltage	11	12	13	Volts
Actuating Current @ 12 Volts			450	mA
VSWR		1.3:1	1.4:1	
Insertion Loss		0.2	0.5	dB

SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N



PE71S6460

Description	Min	Typ	Max	Units
Isolation	70	80		dB
Input Power (CW)			1	kWatts
Switching Time			20	ms

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	0.3	0.4	0.5		dB
Isolation, Min	90	80	80	70		dB

Mechanical Specifications

Size

Length	2.36 in [59.94 mm]
Width/Diameter	2.75 in [69.85 mm]
Height	0.92 in [23.37 mm]
Weight	0.5 lbs [226.8 g]
Finish	NICKEL
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	N Female
-------------------	----------

Environmental Specifications

Temperature

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C
Humidity	Moisture resistant or immersion sealing available
Shock	MIL-STD-202 Method 213, Condition D, 500G (non oper)
Vibration	MIL-STD-202 Method 214, Condition D, 10G RMS (non oper)

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

Plotted and Other Data

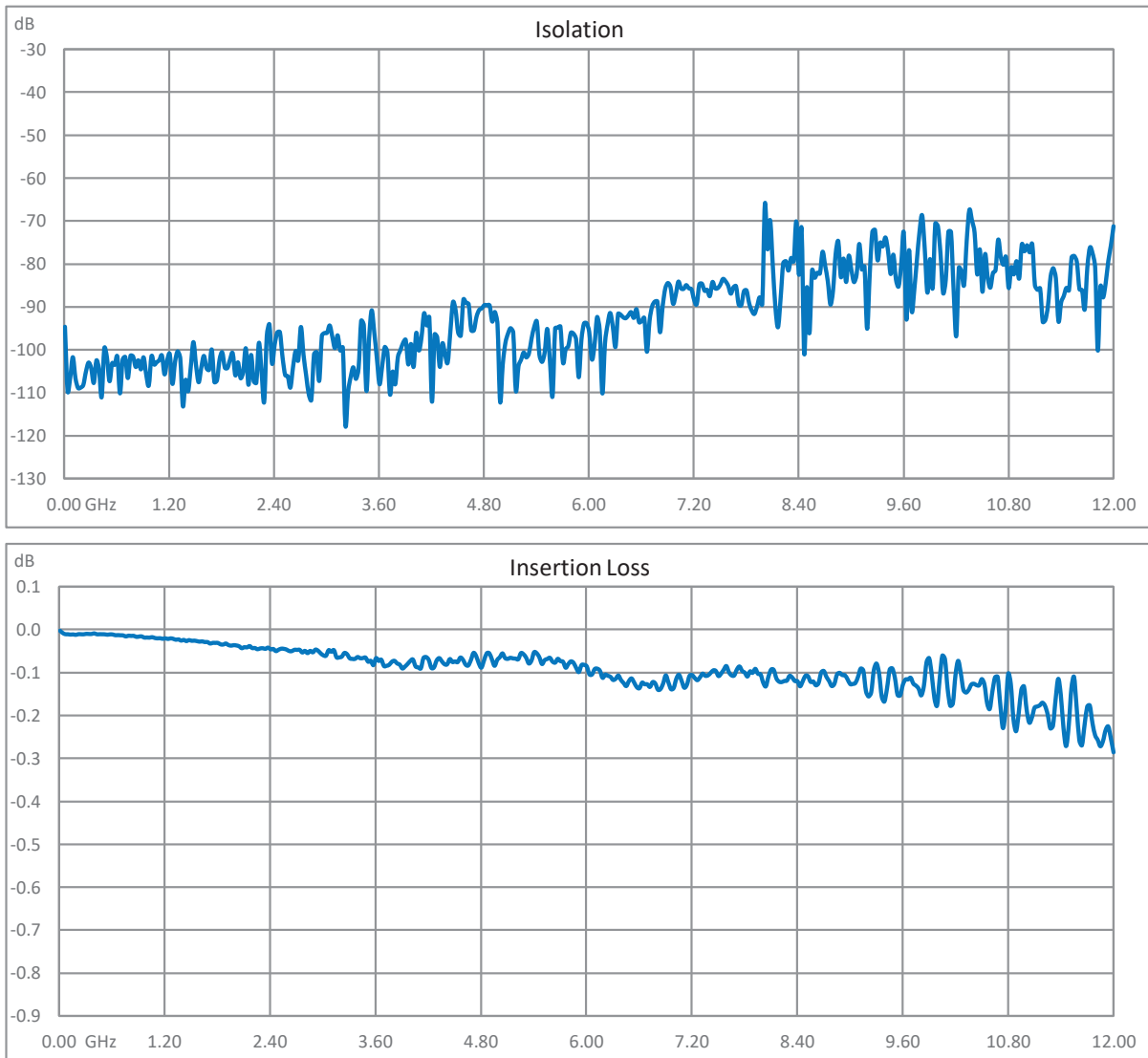
Notes:

SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N



PE71S6460

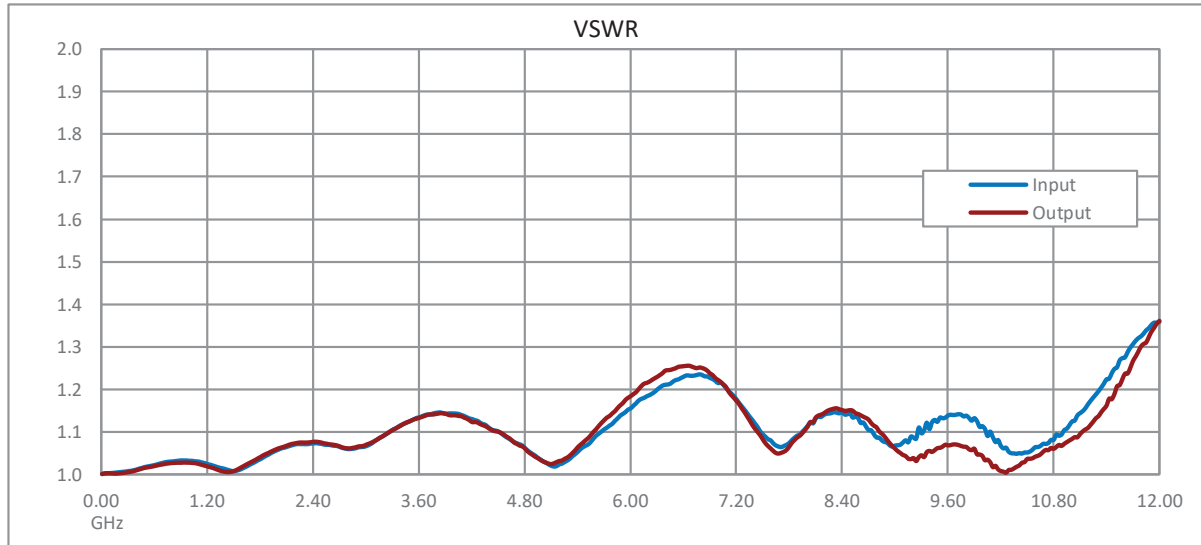
Typical Performance Data



SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N

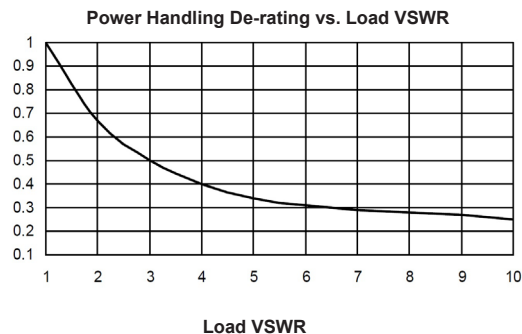
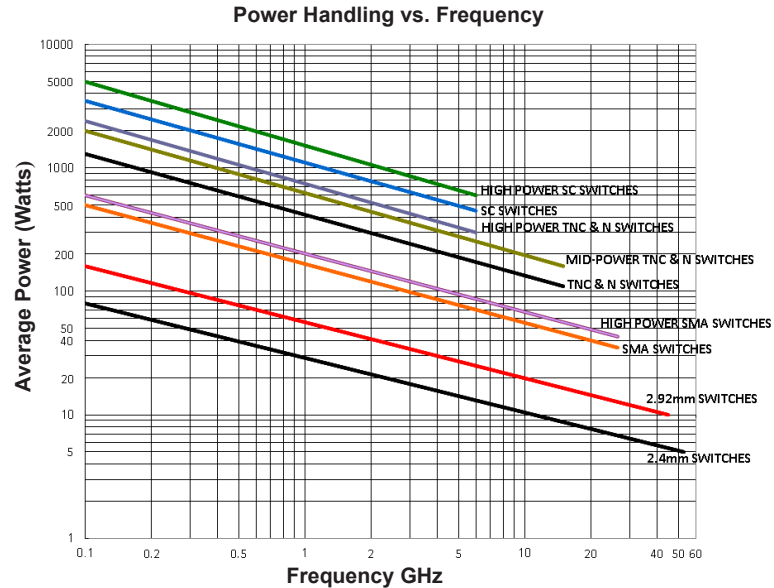


PE71S6460



SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N

PE71S6460



Power Handling Chart and Derating Curves based
on the following Test and Environmental Conditions:
Ambient temperature: 20 - 25°C
Altitude: Sea Level to 1,000 feet
Relative Humidity: 50 - 55%
Load VSWR: $\leq 1.20:1$
Operation: Cold Switching

SPDT Electromechanical Relay Failsafe Switch,
DC to 12 GHz, up to 600W, 2M Lifecycles, 12V,
Indicators, TTL, Suppression Diodes, N

PE71S6460



SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 2M Lifecycles, 12V, Indicators, TTL, Suppression Diodes, 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.

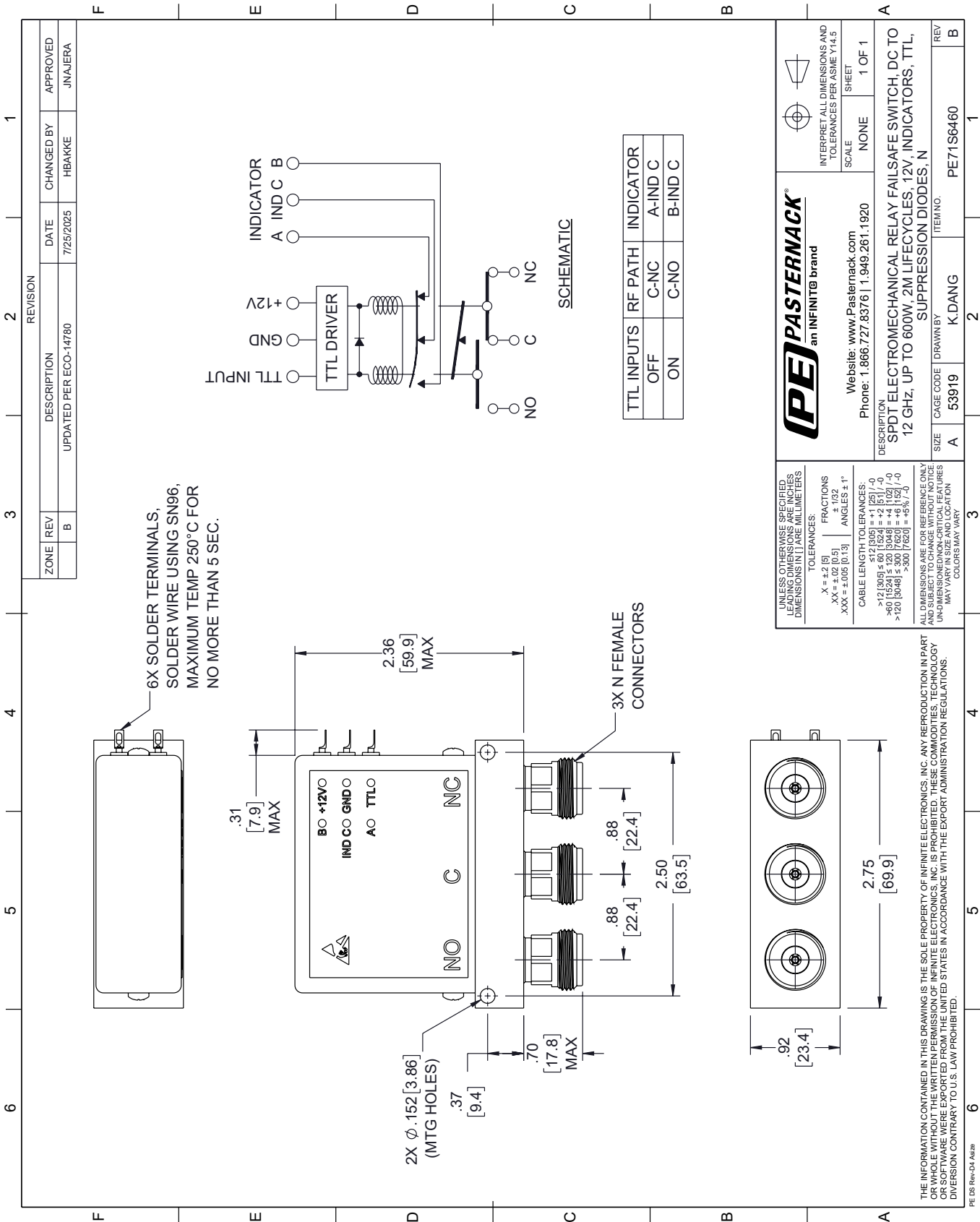
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 2M Lifecycles, 12V, Indicators, TTL, Suppression Diodes, N PE71S6460](https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-1000w-12v-indicators-ttl-n-pe71s6460-p.aspx)

URL: <https://www.pasternack.com/spdt-electromechanical-relay-failsafe-switch-12-ghz-1000w-12v-indicators-ttl-n-pe71s6460-p.aspx>

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE71S6460 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W, 2M Lifecycles, 12V, Indicators, TTL, Suppression Diodes, N



PE71S6460 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, DC to 12 GHz, up to 600W,
2M Lifecycles, 12V, Indicators, TTL, Suppression Diodes, N

