



Absorptive SP3T PIN Diode Switch Operating From 1 GHz to 18 GHz Up to 0.1 Watts (+20 dBm) and Field Replaceable SMA

PIN Diode Switches Technical Data Sheet

PE71S6248

Features

- SP3T Absorptive Switch
- 1.0 GHz to 18.0 GHz
- Insertion Loss 3.75 dB max
- Isolation 65 dB typ
- Power Input 20 dBm CW max
- Field Replaceable Connectors

Applications

- Test & Measurement
- Military Communication
- Commercial Communication
- Wireless Communications
- SATCOM
- Military Electronic Systems
- RF Test Stations

Description

The PE71S6248 is a Single Pole Triple Throw (SP3T) Absorptive PIN Diode Switch that operates from 1 GHz to 18 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Performance includes 3.75 dB max insertion loss, 65 dB typ isolation, and 100 nsec max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -40°C to +85°C and dual voltage controls of +5 DC and -15 DC are required. The rugged package is designed to meet a series of MIL-STD-202F environmental conditions including humidity, shock, vibration, and temperature cycle. Package interfaces include solder terminals and female SMA connectors.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3.75	dB
Isolation		65		dB
Rise Time			65	ns
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		Vdc
Negative Operating Voltage		-15		Vdc
Current @ 5 Vdc		150		mA
Current @ -15 Vdc		100		mA
Operating Temperature	-40		+85	deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Absorptive SP3T PIN Diode Switch Operating From 1 GHz to 18 GHz Up to 0.1 Watts \(+20 dBm\) and Field Replaceable SMA PE71S6248](#)



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Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	1.5 in [38.1 mm]
Height	0.4 in [10.16 mm]
Weight	0.094 lbs [42.64 g]
Finish	Blue Paint

Configuration

Design	Absorptive, SP3T
RF Connector	SMA Female
RF Connector Option	Field Replaceable
TTL Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B
Temperature Cycling	MIL-STD-202F, Method 107D, Condition A
ESD Sensitivity	ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



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

Plotted and Other Data

Notes:

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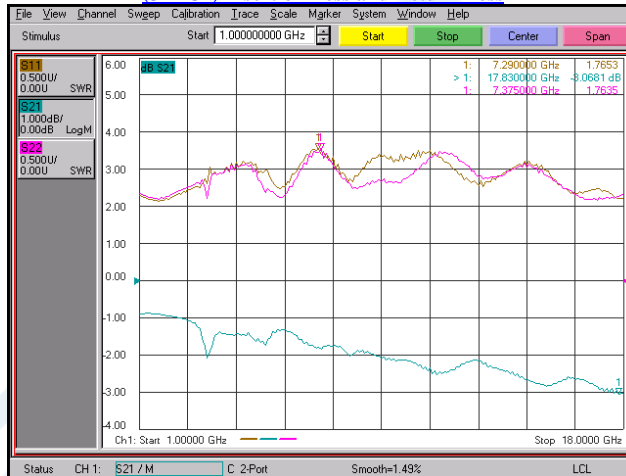
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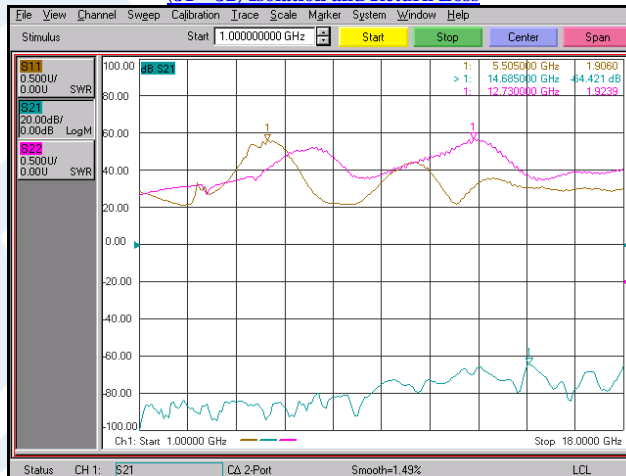
PE71S6248

Typical Performance Data

(J1 – J2) Insertion Loss and Return Loss



(J1 – J2) Isolation and Return Loss



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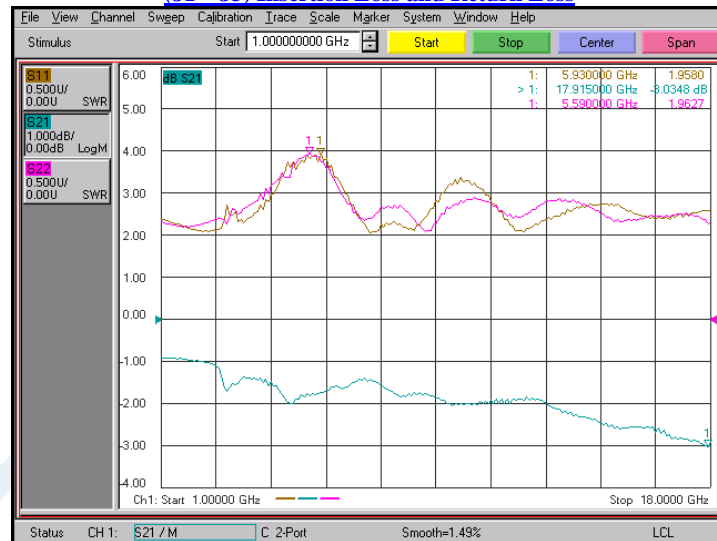


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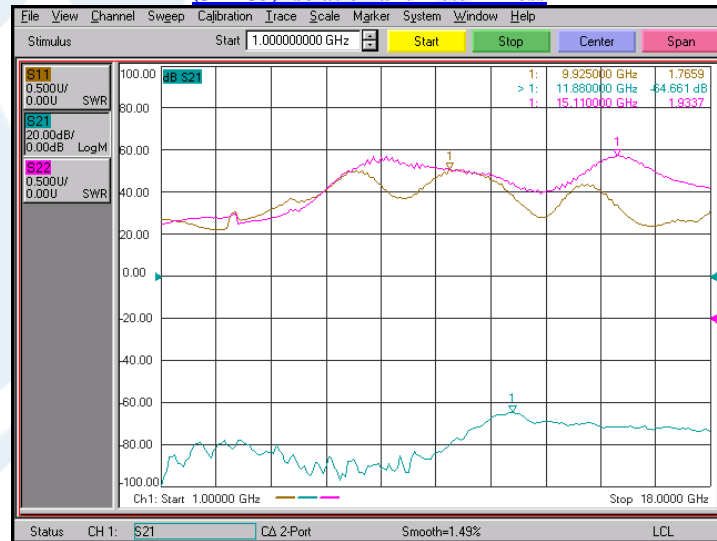
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(J1 – J3) Insertion Loss and Return Loss



(J1 – J3) Isolation and Return Loss



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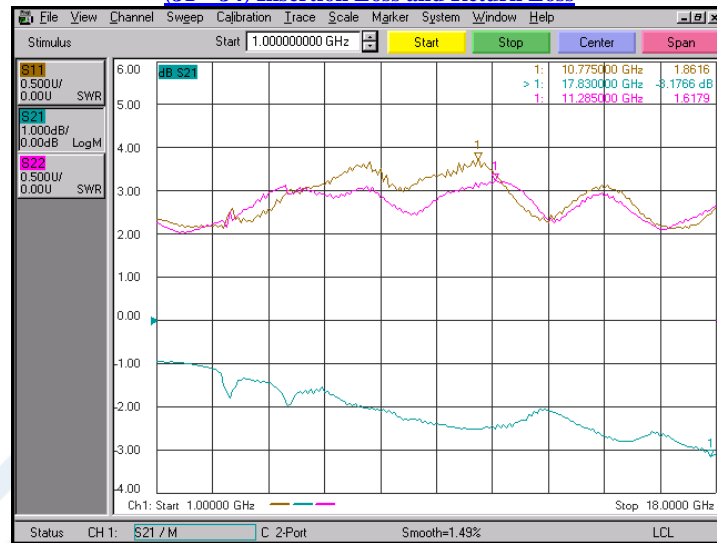


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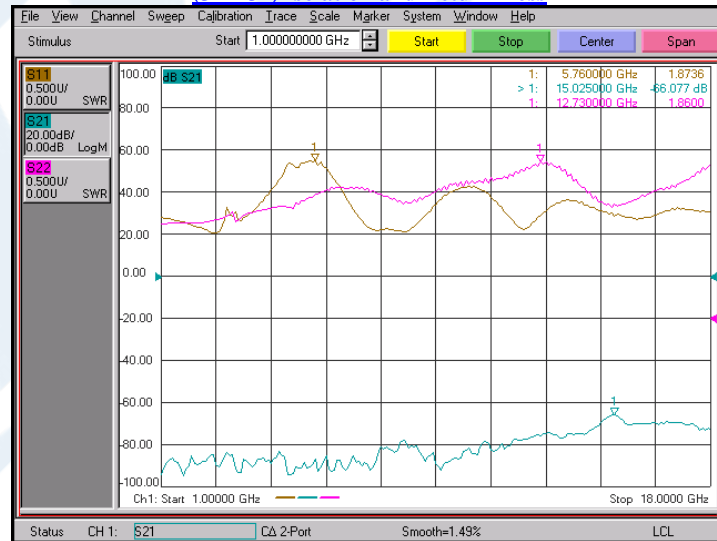
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(J1 – J4) Insertion Loss and Return Loss



(J1 – J4) Isolation and Return Loss



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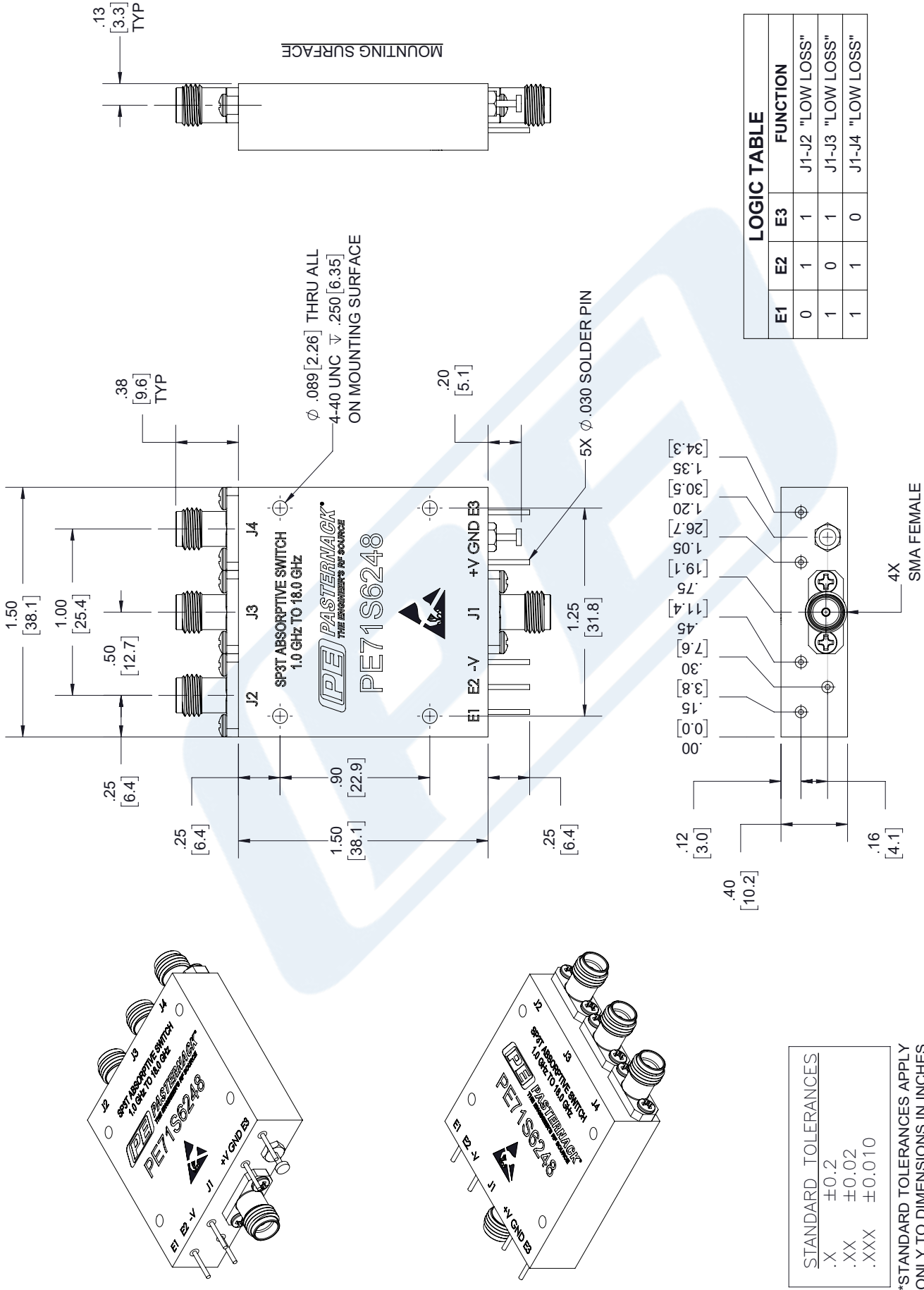
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PE71S6248 CAD Drawing

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DWG TITLE
PE71S6248

CAGE CODE **53919**

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SCALE N/A

SIZE A 7361