

SP4T High Isolation PIN Diode Switch 6 GHz to 12 GHz, 75 dB, 27 dBm, 2.5 dB Loss and SMA

SDS-0612-SP4T-SMA is a general purpose 6.0 GHz to 12.0 GHz single pole, four throw high isolation reflective switch. This switch offers 75 dB typical port-to-port isolation, and a typical insertion loss of 2.5 dB at room temperature. It has an excellent 40 ns typical switching speed, and independently TTL controlled.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	6		12	GHz
Insertion Loss		2.5	3	dB
Isolation		75	70	dB
VSWR		1.5:1	2:1	
Switching Speed		40	50	ns
DC Bias at 5 VDC		70	80	mA
DC Bias at -15 VDC		40	50	mA
Control Input		TTL		
Power Handling		+27	+27	dBm

TTL Logic Table

TRUTH TABLE				
A0	A1	A2	E	POSITION
1	0	0	1	J0-J1
0	1	0	1	J0-J2
0	0	1	1	J0-J3
1	0	1	1	J0-J4
X	X	X	0	DISABLED

Absolute Maximum Rating

Parameter	Rating	Units
Positive Voltage	+7	Volts
Negative Voltage	-14	Volts
RF input Power	+24	dBm
Operating Temperature	-54 to +85	°C
Storage Temperature	-55 to +100	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Mechanical Specifications

Weight 0.089 lbs [40.37 g]

Environmental Specifications By Design

Temperature

Operating Range -54 to +85 deg C
 Humidity Mil-STD-810 507.4



Features:

- SP4T GaAs PIN Diode Reflective Switch
- 6 GHz to 12 GHz Frequency Range
- Insertion Loss: 2.5 db typical
- High Isolation: 75 dB typical
- VSWR: 1.5:1
- Fast Switching Speed: 40 nsec.
- Integrated TTL Driver
- Power Handling: +27 dBm
- Operating Temperature Range: -54 °C to 85°C

Applications:

- Electronic Warfare
- Radar
- Test & Measurements
- Military & Space
- Military Communication Systems
- GaAs MMIC-based PIN Diode Switch

Fairview Microwave
 1130 Junction Dr. #100
 Allen, TX 75013
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Shock Mil-STD-810 method 504, 516.5
 Vibration Mil-STD-810 514.6
 Temperature Cycling Mil-STD-810 501.5, 502.5

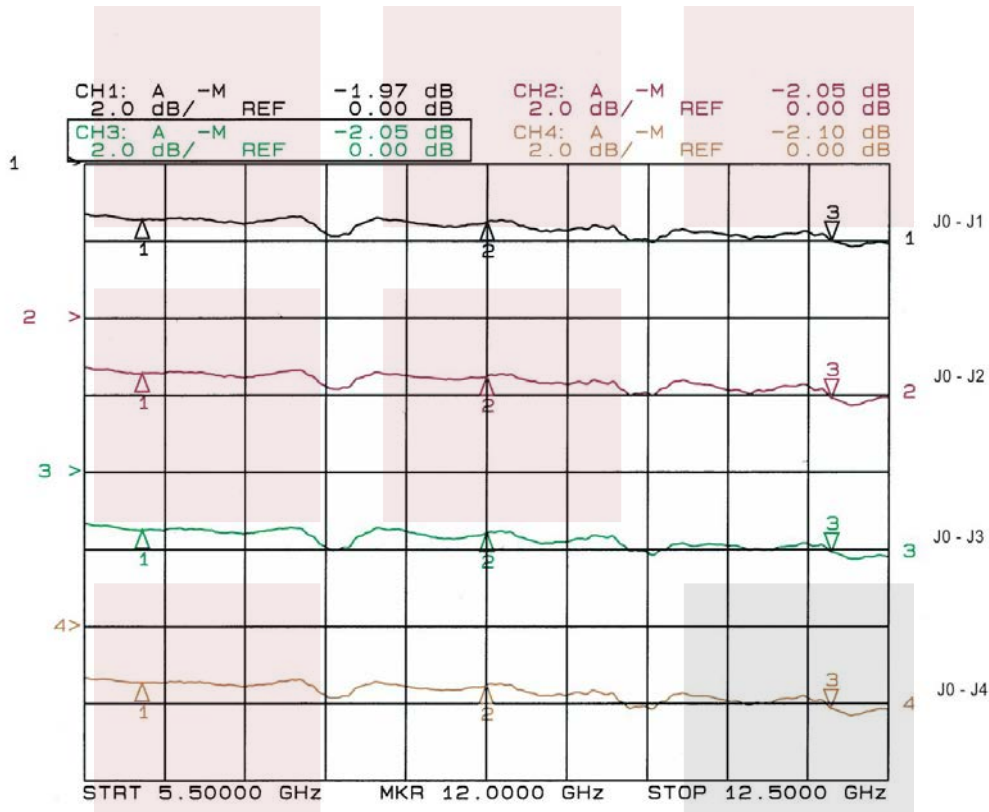
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

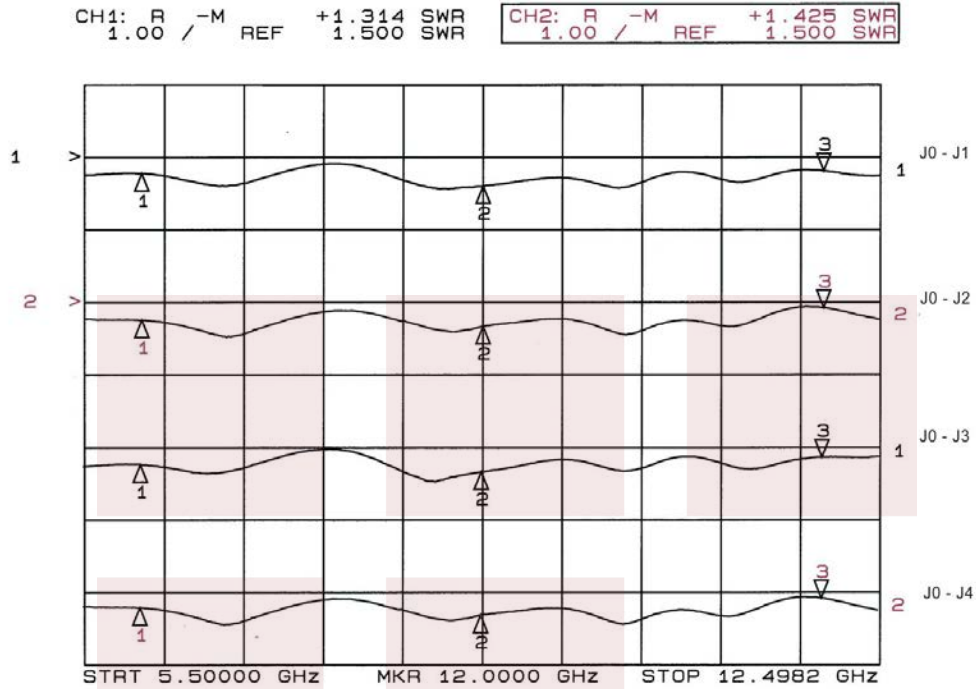
Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

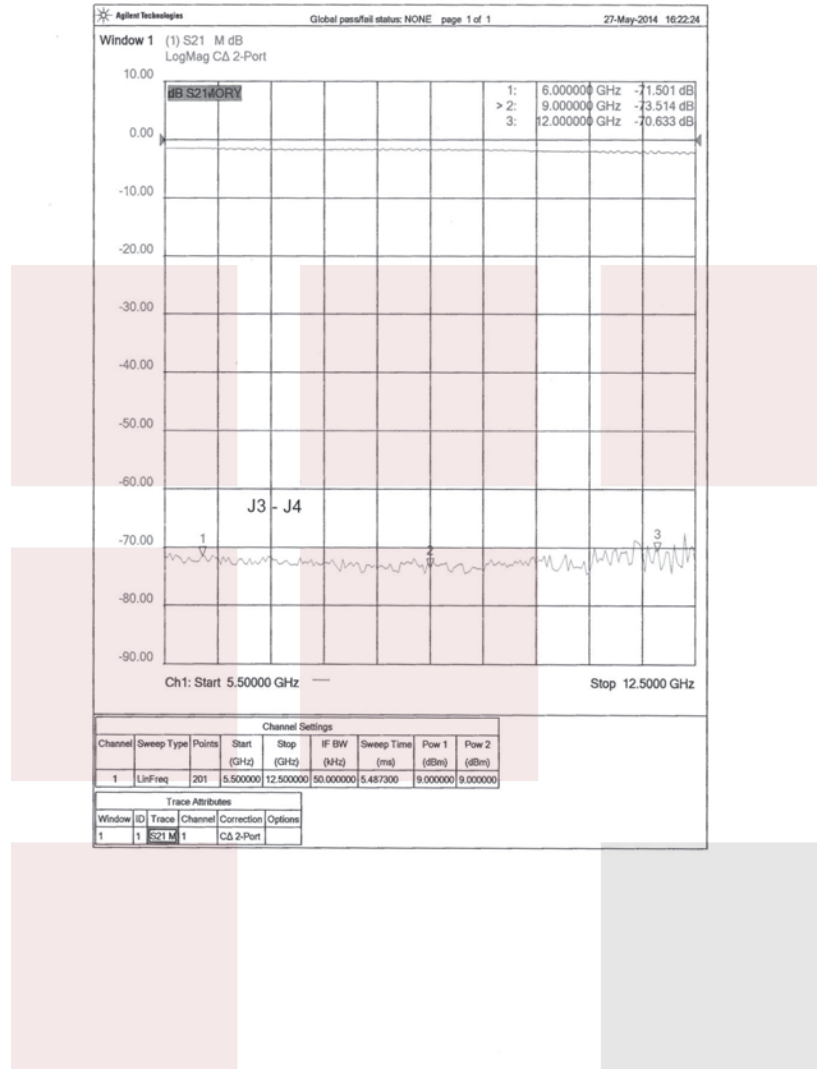
Typical Performance Data



Insertion Loss



Insertion Loss



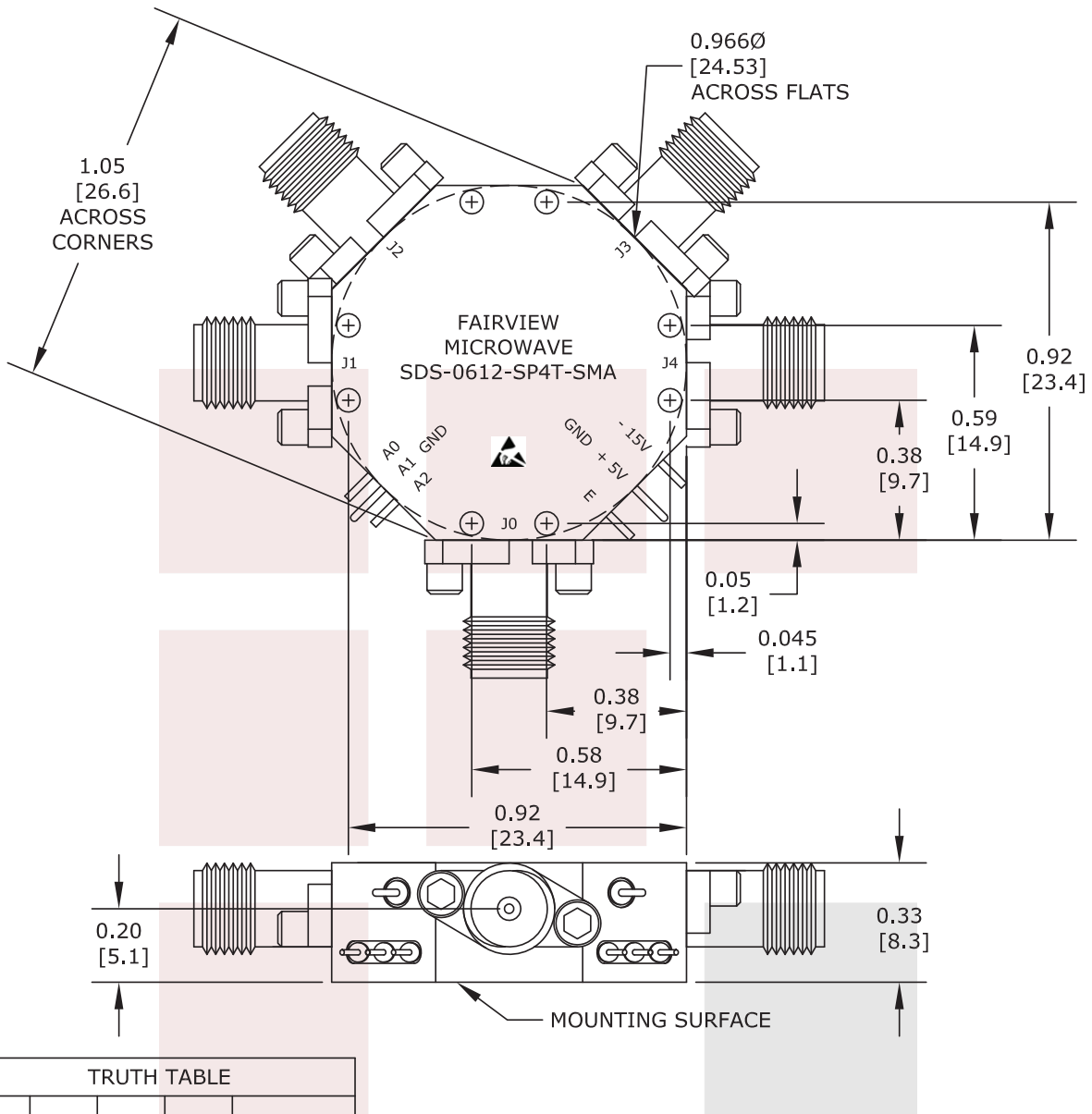
Isolation J3 to J4

SP4T High Isolation PIN Diode Switch 6 GHz to 12 GHz, 75 dB, 27 dBm, 2.5 dB Loss and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SP4T High Isolation PIN Diode Switch 6 GHz to 12 GHz, 75 dB, 27 dBm, 2.5 dB Loss and SMA SDS-0612-SP4T-SMA](#)

URL: <https://www.fairviewmicrowave.com/high-isolation-pin-diode-switch-12-ghz-75db-2.5db-sds-0612-sp4t-sma-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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



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1	0	1	1	J0-J4
X	X	X	0	DISABLED

FAIRVIEW MICROWAVE INC.		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].			
ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		DWG NO SDS-0612-SP4T-SMA		CAGE CODE 3FKR5	
TITLE SP4T High Isolation PIN Diode Switch 6 GHz to 12 GHz, 75 dB, 27 dBm, 2.5 dB Loss and SMA		CAD FILE 092815	SHEET	SCALE N/A	SIZE A 2233