

Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm

FMSW6254 is a Single Pole Four Throw (SP4T) Absorptive PIN Diode Switch that operates from 12 GHz to 18 GHz. The output port is terminated in 50 ohms when switched in the isolation (off) state. Outstanding performance includes 3.75 dB max insertion loss, 70 dB min isolation, and 100 nsec max switching speed. The design incorporates TTL compatible driver circuitry for accurate logic control. Operational temperature range is -55°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	Min	Typ	Max	Units
Frequency Range	12		18	GHz
Impedance		50		Ohms
VSWR			2:1	
Insertion Loss			3.75	dB
Isolation	70			dB
Switching Time			100	ns
Input Power (CW)			0.1	Watts
Survival Power			1	Watts
Positive Operating Voltage		5		V
Negative Operating Voltage		-15		V
Operating Temperature	-55		+85	deg C

Mechanical Specifications

Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.4 in [10.16 mm]
Finish	Blue

Configuration

Design	Absorptive, SP4T
RF Connector	SMA Female
Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-55 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



Features:

- SP4T Absorptive Switch
- 12.0 GHz to 18.0 GHz
- Insertion Loss 3.75 dB max
- Isolation 70 dB min
- 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

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Temperature Cycling
 ESD Sensitivity

MIL-STD-202F, Method 107D, Condition A
 ESD Sensitive Material, Transport material in Approved ESD bags. Handle only
 in ESD Workstation.



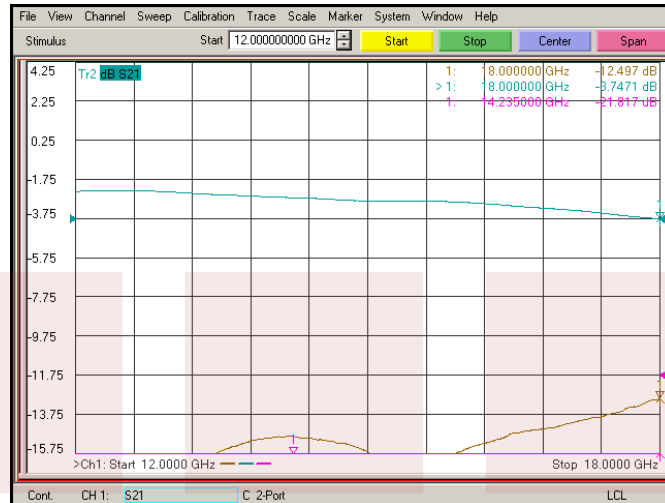
Compliance Certifications (visit www.FairviewMicrowave.com for current document)
 REACH Compliant 12/17/2015

Plotted and Other Data

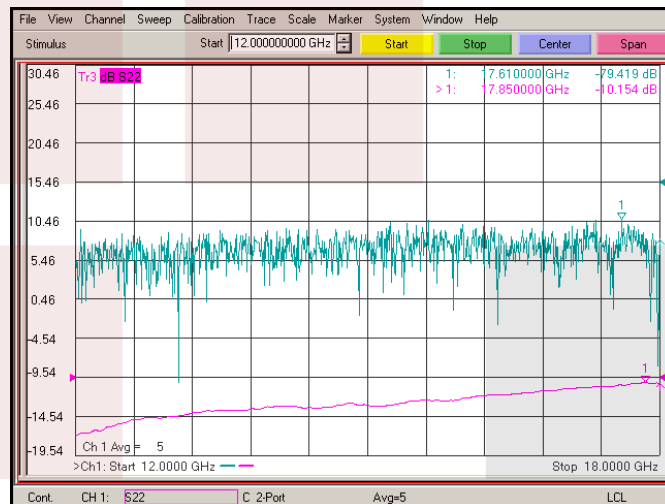
Notes:

Typical Performance Data

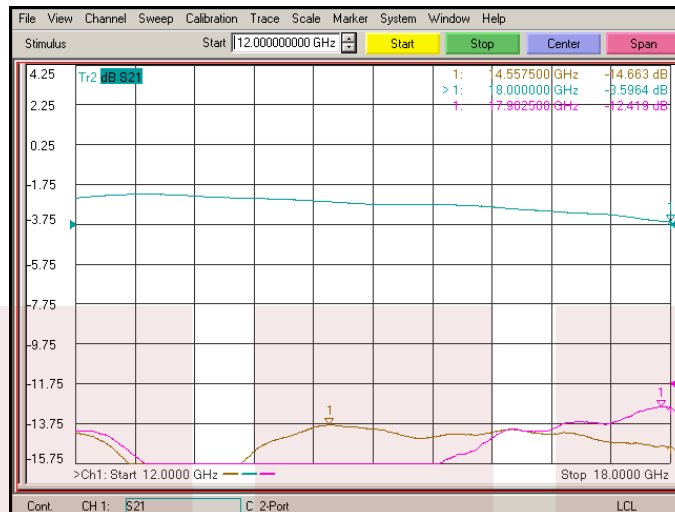
(J1 – J2) Insertion Loss and Return Loss



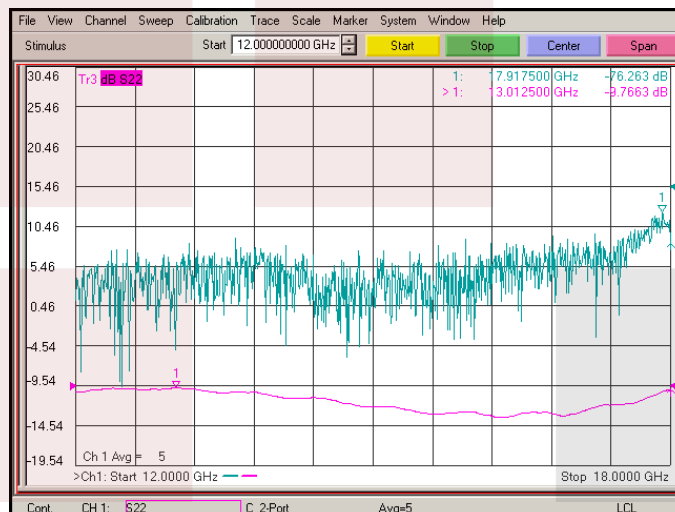
(J1 – J2) Isolation and Termination Return Loss



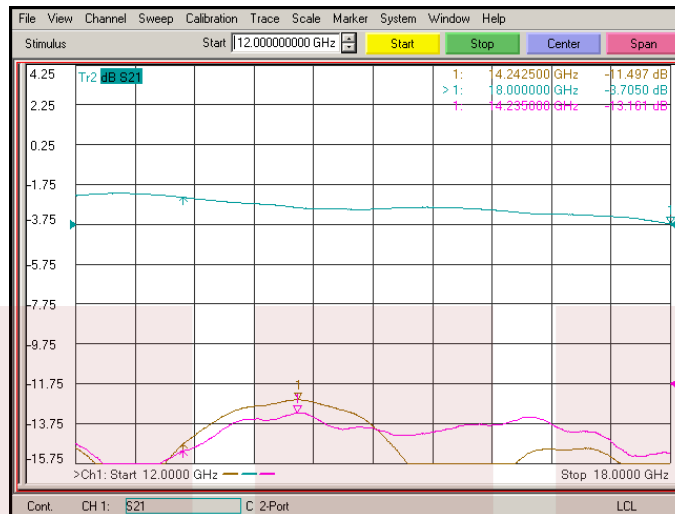
(J1 – J3) Insertion Loss and Return Loss



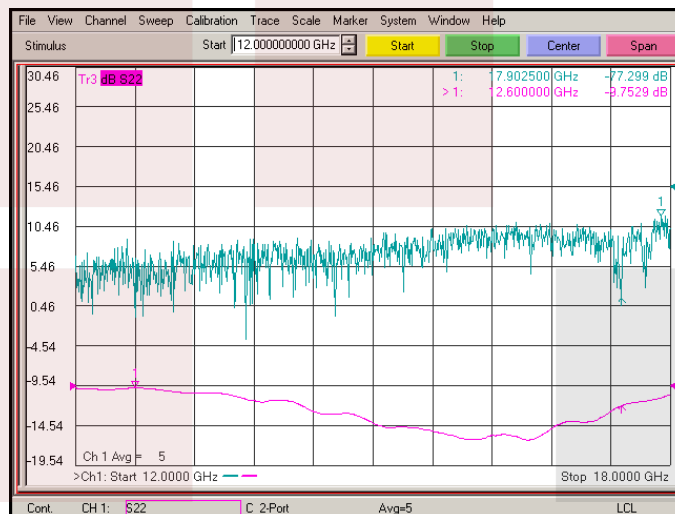
(J1 – J3) Isolation and Termination Return Loss



(J1 – J4) Insertion Loss and Return Loss



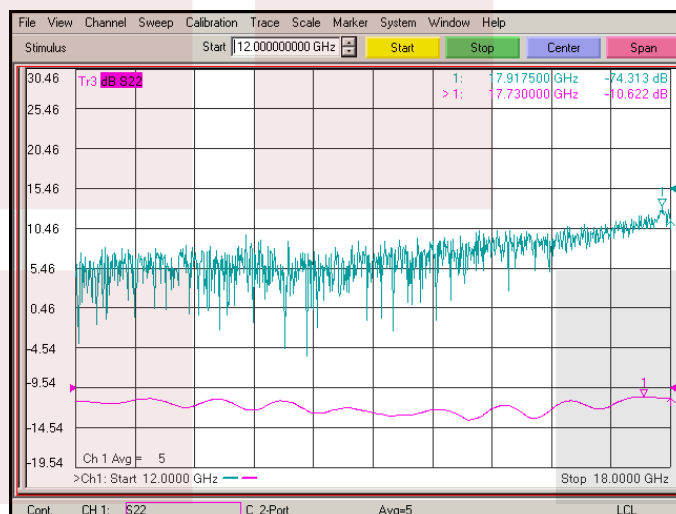
(J1 – J4) Isolation and Termination Return Loss



(J1 – J5) Insertion Loss and Return Loss



(J1 – J5) Isolation and Termination Return Loss

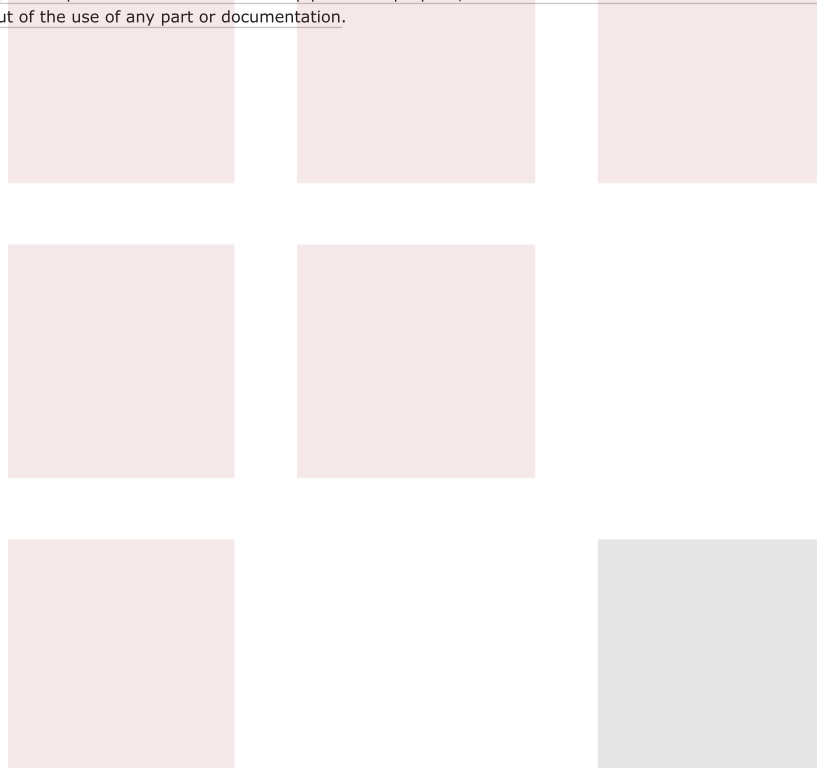


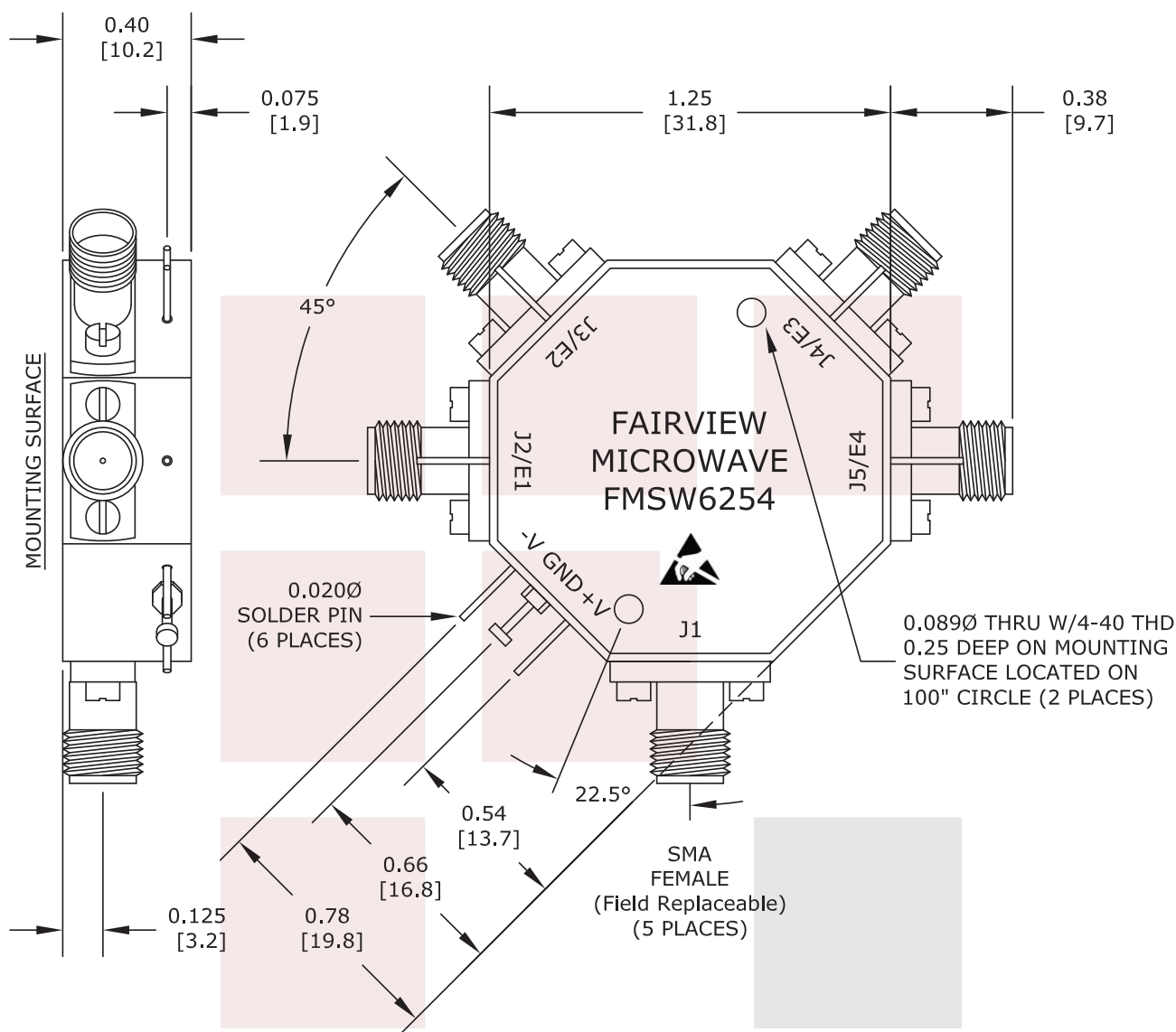
Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA SP4T PIN Diode Switch Absorptive From 12 GHz to 18 GHz Rated at +20 dBm FMSW6254](#)

URL: <http://www.fairviewmicrowave.com/sma-sp4t-pin-diode-switch-12-18-ghz-20-dbm-fmsw6254-p.aspx>

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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN: inches
[mm]

TOLERANCES ARE:
X.XX ± 0.020 [± 0.508]
X.XXX ± 0.010 [± 0.254]

* THESE DIMENSIONS AND TOLERANCES SUPERSEDE NOTE #1 ON TITLE BLOCK.

TTL LOGIC TABLE

E1	E2	E3	E4	Low Loss
0	1	1	1	J1-J2
1	0	1	1	J1-J3
1	1	0	1	J1-J4
1	1	1	0	J1-J5

NOTE:
0 = LOW LOSS
1 = ISOLATION

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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].

TITLE
Field Replaceable SMA SP4T PIN Diode Switch
Absorptive From 12 GHz to 18 GHz Rated at +20 dBm

DWG NO		CAGE CODE			
FMSW6254		3FKR5			
CAD FILE	033116	SHEET	SCALE	N/A	SIZE A
					2233