

SMA High Power PIN Diode Switch From 500 MHz to 3000 MHz Rated at 30 Watts Hot Switching

The FMSW8008 is a Single Pole Double Throw (SPDT) High Power PIN Diode Switch that operates over the frequency range of 500 MHz to 3 GHz. The 50 ohm reflective design supports TTL control logic and is rated for hot switching up to 30 watts average power. Impressive typical performance includes 0.7 dB insertion loss, 70 dB isolation, 6 microsecond switching speed, and 1.3:1 VSWR. Operating voltages are +15Vdc @ 80 mA nominal and +5 Vdc @ 40 mA nominal. The rugged Mil Grade package design supports SMA female connectors, and solder pins for DC and TTL control logic. The operational temperature range is -20°C to +70°C.

Electrical Specifications

TTL Control:

On: Common to J1
 Off: Common to J2

Description	Min	Typ	Max	Units
Frequency Range	0.5		3	GHz
Impedance		50		Ohms
VSWR		1.3:1	1.5:1	
Insertion Loss		0.7	1.25	dB
Isolation	55	70		dB
Switching Time*		6	10	us
Positive Operating Voltage		15		Vdc
Positive Operating Voltage 2		5		Vdc
Current @ 15 Vdc		80		mA
Current @ 5 Vdc		40		mA
Operating Temperature	-20		+70	deg C

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.5 to 1	1 to 2	2 to 3			GHz
Insertion Loss, Max	0.75	0.9	1.25			dB
Insertion Loss, Typ	0.5	0.6	0.9			dB
Isolation, Min	65	65	55			dB
Isolation, Typ	75	75	65			dB

Electrical Specification Notes:

*Switching Speed: 50% TTL to 10% or 90% RF

Description	Min	Typ	Max	Units
Average Power, Hot Switching			30	Watts
Switching Transients		< 1.0	< 2.0	V Pk-Pk
Spurious Noise (Out of Band) 100-500 MHz		< -73		dBm
1-100 MHz		< -50		dBm



Features:

- Single Pole Double Throw (SPDT) High Power PIN Diode Switch
- Frequency Range 500 MHz to 3 GHz
- Reflective Design
- TTL Control Logic
- Hot Switching up to 30 Watts Average Power
- Insertion Loss 0.7 dB
- Isolation 70 dB
- VSWR 1.3:1
- Switching Speed 6 microseconds typ
- Operating Voltages +15 Vdc @ 80 mA and +5 Vdc @ 40 mA typ
- 50 Ohm Design
- -20°C to +70°C Operating Temperature
- SMA Female Connectors
- Solder Pins for DC and TTL Control
- Rugged Mil Grade Package Design

Applications:

- Military & Commercial Communication Systems
- Microwave Radio Systems
- Radar Systems
- Test & Measurement
- Research & Development
- RF Wideband Front Ends

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Mechanical Specifications

Weight	0.6 lbs [272.16 g]
Design	SPDT
RF Connector	SMA Female
Control Connector	Solder Pin

Environmental Specifications

Temperature

Operating Range	-20 to +70 deg C
Storage Range	-55 to +85 deg C

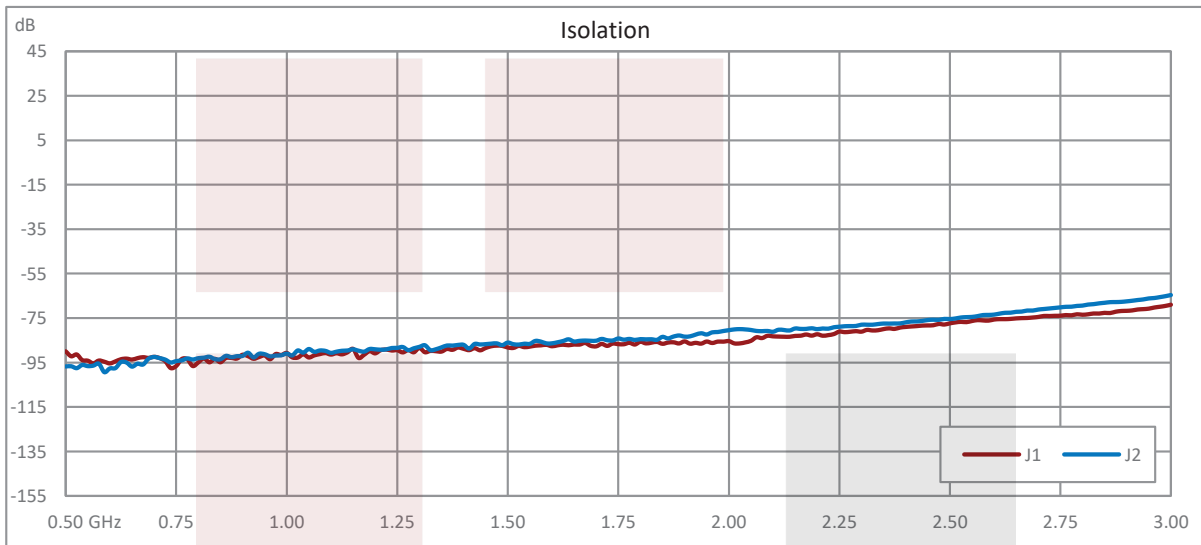
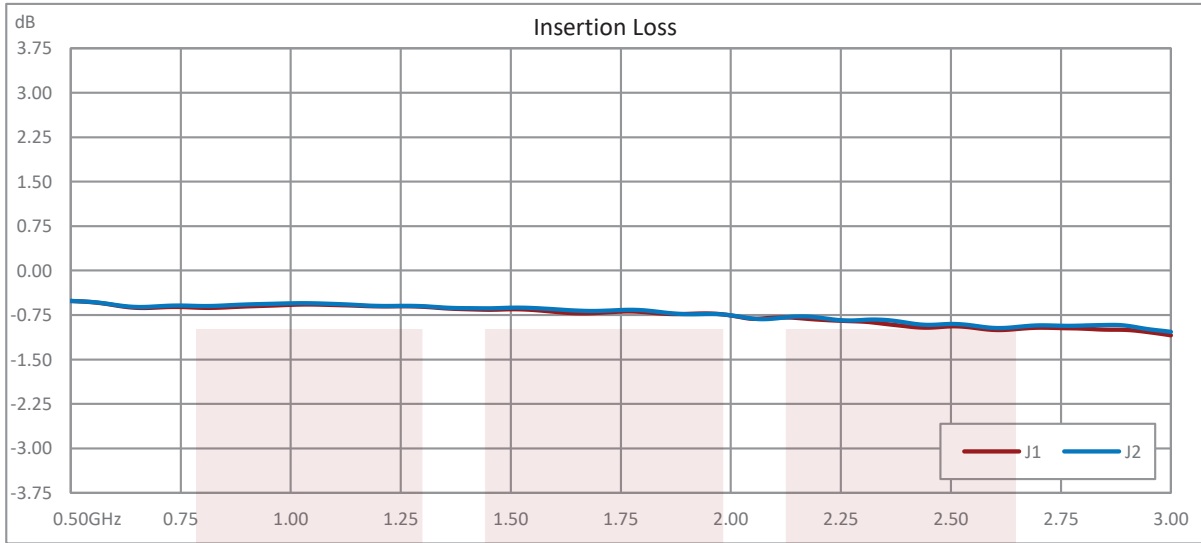
Compliance Certifications (see [product page](#) for current document)

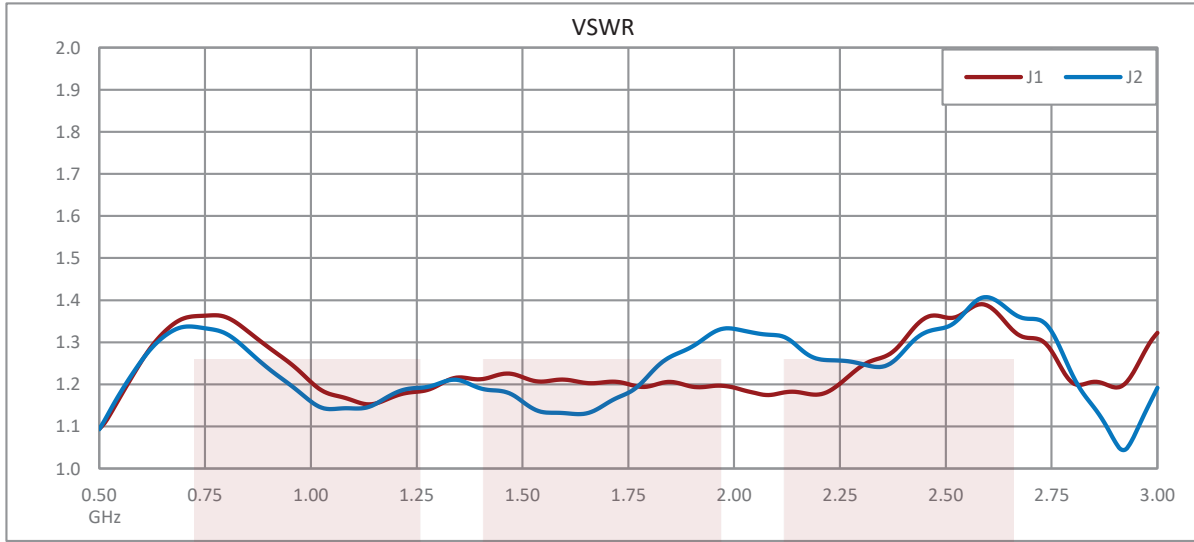
Plotted and Other Data

Notes:



Typical Performance Data





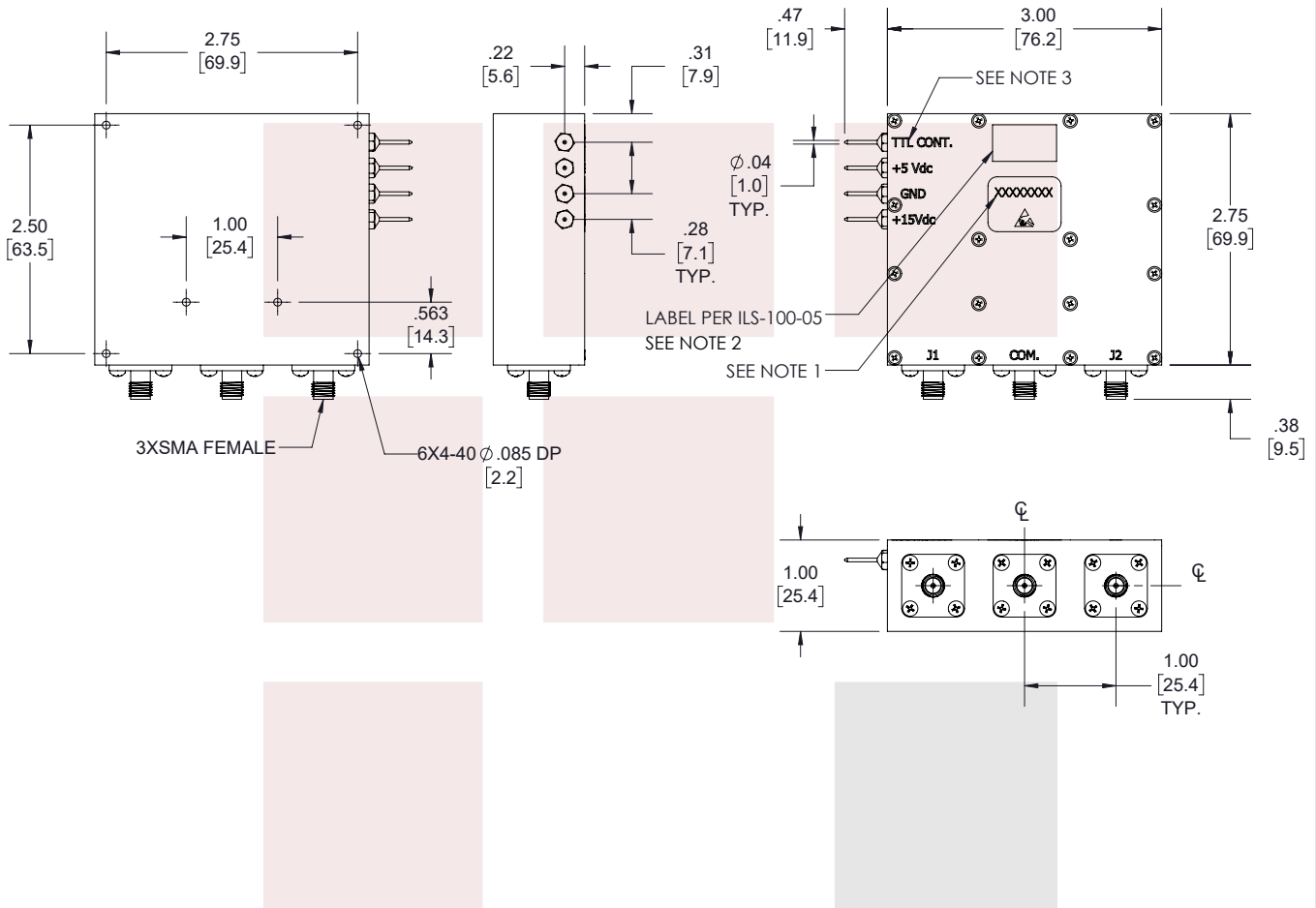
SMA High Power PIN Diode Switch From 500 MHz to 3000 MHz Rated at 30 Watts Hot Switching from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA High Power PIN Diode Switch From 500 MHz to 3000 MHz Rated at 30 Watts Hot Switching FMSW8008](https://www.fairviewmicrowave.com/sma-high-power-pin-diode-switch-from-500-mhz-to-3000-mhz-rated-at-30-watts-hot-switching-fmsw8008)

URL: <https://www.fairviewmicrowave.com/sma-high-power-pin-diode-switch-from-500-mhz-to-3000-mhz-rated-at-30-watts-hot-switching-fmsw8008-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	14-08-2021	TGALLA



NOTES:

1. SERIAL NUMBER AND DATE CODE ARE COMBINED. EX: 202008280001.
2. LABEL PER ILS-100-05. FOR INTERNAL REFERENCE ONLY. LABEL LOCATION SHOULD BE SAME AS SHOWN.
3. TTL LOW= COMMON TO J1, TTL HIGH= COMMON TO J2

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TITLE
SMA High Power PIN Diode Switch From 500 MHz to 3000 MHz Rated at 30 Watts Hot Switching

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS
TOLERANCES: FRACTIONS CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION
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SHEET	1	OF	1
SCALE	N/A		

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	MVEERAPPAN	FMSW8008
			REV
			A

T-Rev.D