

N SPDT High Power PIN Diode Switch From 800 MHz to 3000 MHz Rated at 75 Watts and Hot Switching

The FMSW8006 is a Single Pole Double Throw (SPDT) High Power PIN Diode Switch that operates over the frequency range of 800 MHz to 3 GHz. The 50 ohm reflective design supports TTL control logic and is rated for cold switching up to 75 watts average power and hot switching up to 30 watts average power. Impressive typical performance includes 0.75 dB insertion loss, 70 dB isolation, 6 microsecond switching speed, and < 1.4:1 VSWR. Operating voltages are +15Vdc @ 80 mA nominal and +5 Vdc @ 40 mA nominal. The rugged Mil Grade package design supports N type female connectors, and solder pins for DC and TTL control logic. The operational temperature range is -20°C to +70°C.

Electrical Specifications

Description	TTL Low COM J-1 TTL High COM J-2 SPDT			Units
	Min	Typ	Max	
Frequency Range	0.8		3	GHz
Impedance		50		Ohms
VSWR		1.3:1	1.4:1	
Operating Temperature	-20		+70	deg C

Electrical Specification Notes:

*Note: Spurious Noise is to be tested with the common port with J1 and J2 terminated into 50 ohms

Description	Min	Typ	Max	Units
Average Cold Switched (-20°C to +50°C)			75	Watts
Average Cold Switched (+50°C to +70°C)			50	Watts
Average Hot Switched (-20°C to +70°C)			30	Watts
Switching Time (50% TTL to 10% or 90% RF)		6	10	us
DC Voltage		+15		Vdc
DC Current		80		mA
DC Voltage		+5		Vdc
DC Current		40		mA
Isolation (800-2000 MHz)		75	65	dB
Isolation (2000-3000 MHz)		65	55	dB
Insertion Loss (800-2000 MHz)		0.6	1	dB
Insertion Loss (2000-3000 MHz)		0.9	1.3	dB
Spurious Noise (Out-of-Band) (100-800 MHz)*		< -73		dBm
Spurious Noise (1-100 MHz)*		< -50		dBm



Features:

- Single Pole Double Throw (SPDT) High Power PIN Diode Switch
- Frequency Range 800 MHz to 3 GHz
- Reflective Design
- TTL Control Logic
- Cold Switching up to 75 Watts Average Power
- Hot Switching up to 30 Watts Average Power
- Insertion Loss 0.75 dB
- Isolation 70 dB
- VSWR < 1.4:1
- 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
- N-Type 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	0.75 lbs [340.19 g]
Design	SPDT
RF Connector	SMA Female
Control Connector	Solder Pin

Environmental Specifications

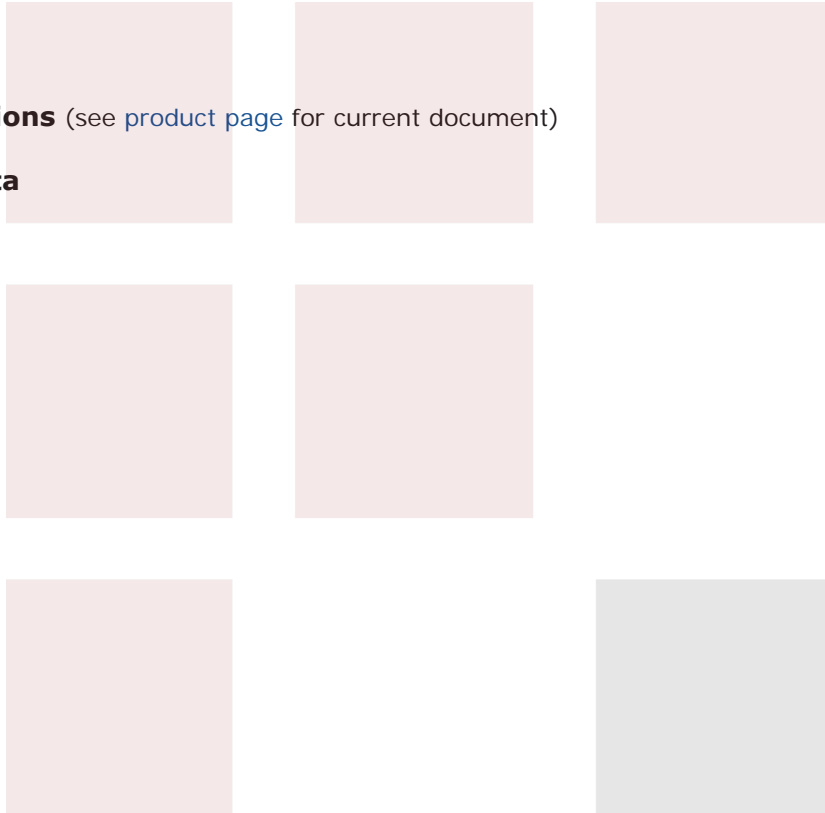
Temperature

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

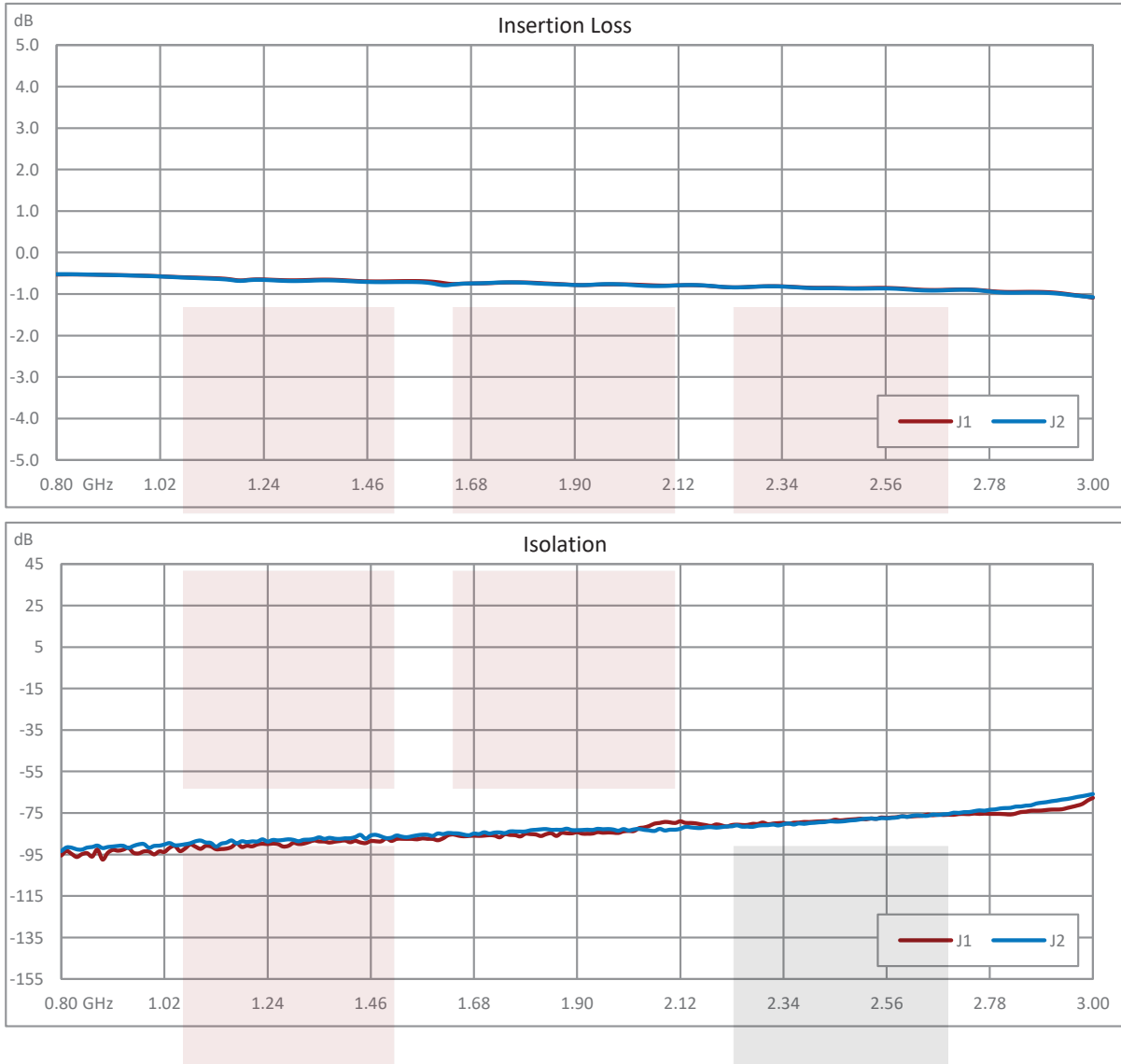
Compliance Certifications (see [product page](#) for current document)

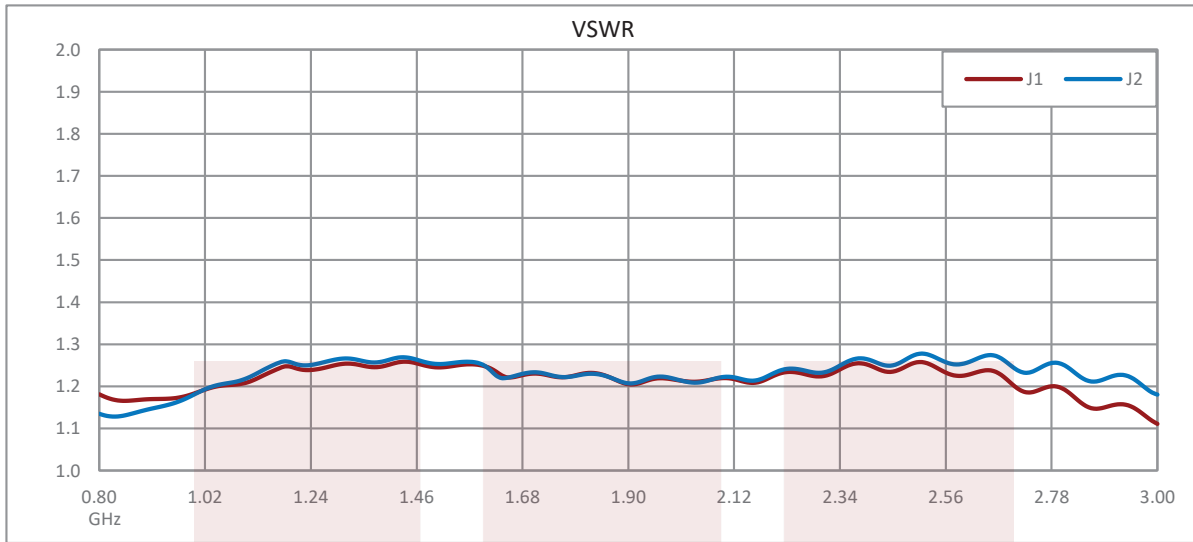
Plotted and Other Data

Notes:



Typical Performance Data





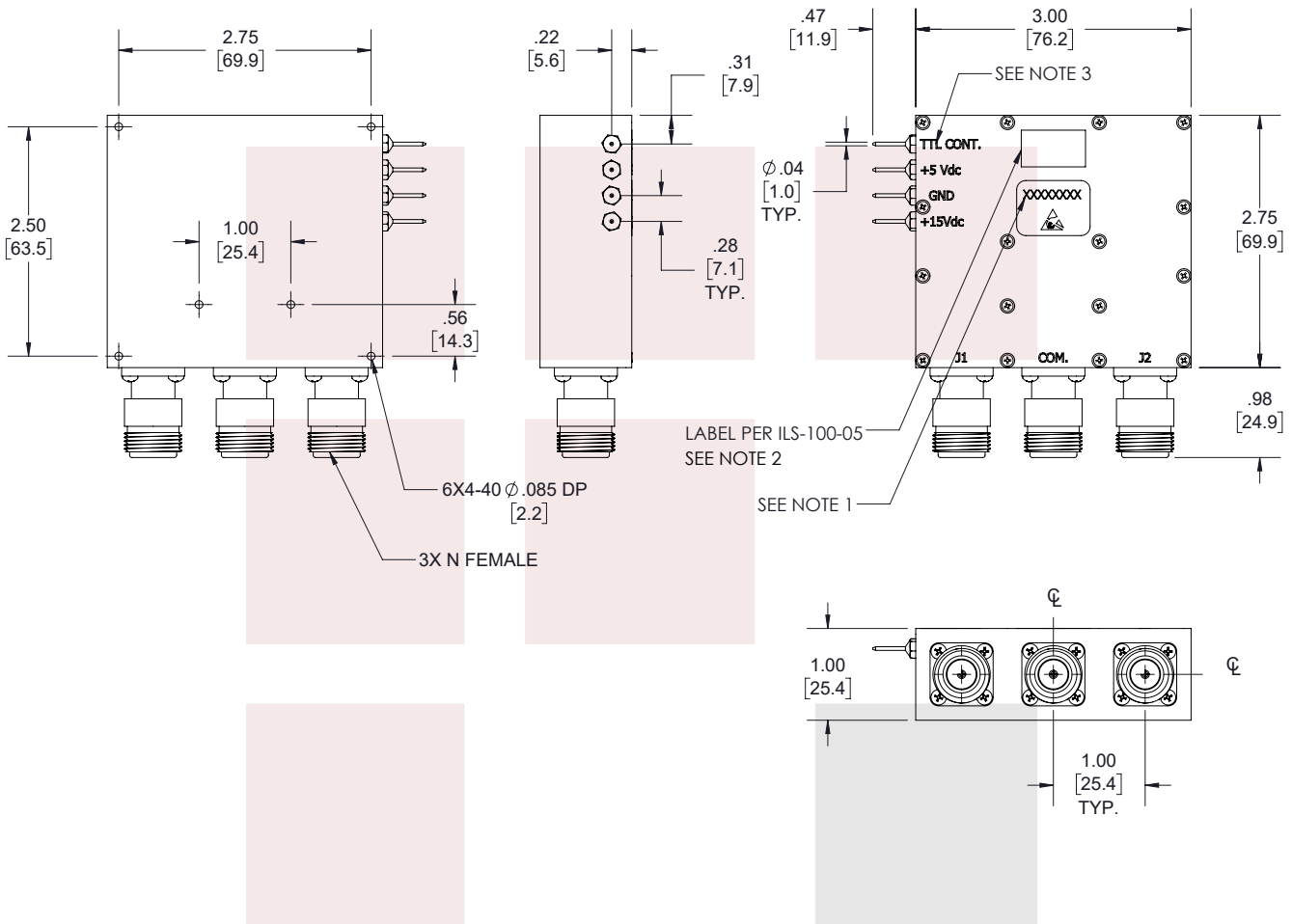
N SPDT High Power PIN Diode Switch From 800 MHz to 3000 MHz Rated at 75 Watts and Hot Switching from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [N SPDT High Power PIN Diode Switch From 800 MHz to 3000 MHz Rated at 75 Watts and Hot Switching FMSW8006](https://www.fairviewmicrowave.com/n-spdt-high-power-pin-diode-switch-from-800-mhz-to-3000-mhz-rated-at-75-watts-and-hot-switching-fmsw8006)

URL: <https://www.fairviewmicrowave.com/n-spdt-high-power-pin-diode-switch-from-800-mhz-to-3000-mhz-rated-at-75-watts-and-hot-switching-fmsw8006-p.aspx>

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



NOTES:

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

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	<p>TITLE</p> <p>N SPDT High Power PIN Diode Switch From 800 MHz to 3000 MHz Rated at 75 Watts and Hot Switching</p>	<p>SHEET 1 OF 1</p> <p>SCALE N/A</p>	
<p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>	<p>SIZE A</p> <p>CAGE CODE 3FKR5</p> <p>DRAWN BY MVEERAPPAN</p> <p>ITEM NO. FMSW8006</p>	<p>REV A</p>	

T-Rev.D