

SMA High Power PIN Diode Switch From 10 MHz to 1000 MHz Rated at 30 Watts and Hot Switching

The FMSW8007 is a Single Pole Double Throw (SPDT) High Power PIN Diode Switch that operates over the frequency range of 10 MHz to 1000 MHz. The 50 ohm reflective design supports TTL control logic and is rated for cold switching up to 30 watts average power and hot switching up to 30 watts average power. Impressive typical performance includes 0.3 dB insertion loss, 55 dB isolation, and 1.3:1 VSWR. Operating voltages are +15Vdc @ 250 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: Com to J1
 Off: Com to J2

Description	Min	Typ	Max	Units
Frequency Range	10		1,000	MHz
Impedance		50		Ohms
VSWR		1.3:1	1.4:1	
Insertion Loss		0.3	0.75	dB
Isolation	40	55		dB
Switching Time*			40	us
Positive Operating Voltage		15		Vdc
Positive Operating Voltage 2		5		Vdc
Current @ 15 Vdc		250		mA
Current @ 5 Vdc		40		mA
Operating Temperature	-20		+70	deg C

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	10 to 500	500 to 1,000				MHz
Insertion Loss, Max	0.5	0.75				dB
Insertion Loss, Typ	0.2	0.4				dB
Isolation, Min	50	40				dB
Isolation, Typ	60	50				dB

Electrical Specification Notes:

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

Description	Min	Typ	Max	Units
Average Power, Hot Switching			30	Watts
Average Power, Cold Switching			30	Watts

Mechanical Specifications

Weight	0.55 lbs [249.48 g]
Design	SPDT



Features:

- Single Pole Double Throw (SPDT) High Power PIN Diode Switch
- Frequency Range 10 MHz to 1000 MHz
- Reflective Design
- TTL Control Logic
- Cold Switching up to 30 Watts Average Power
- Hot Switching up to 30 Watts Average Power
- Insertion Loss 0.3 dB typ
- Isolation 55 dB typ
- VSWR 1.3:1 max
- Switching Speed 40 microseconds max
- Operating Voltages +15 Vdc @ 250 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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RF Connector
Control Connector

SMA Female
Solder Pin

Environmental Specifications

Temperature

Operating Range
Storage Range

-20 to +70 deg C
-55 to +85 deg C

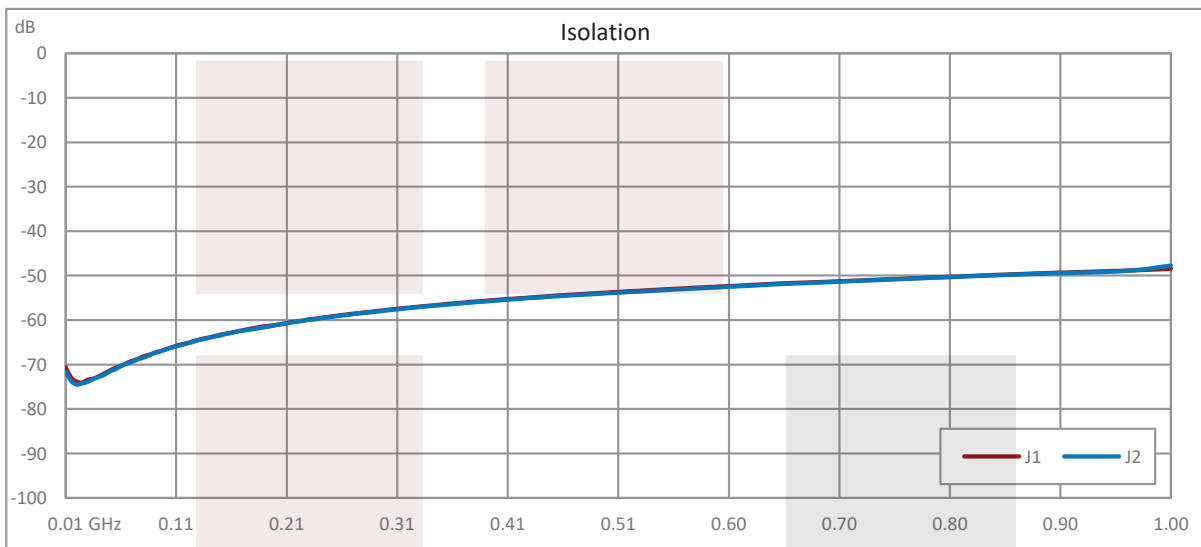
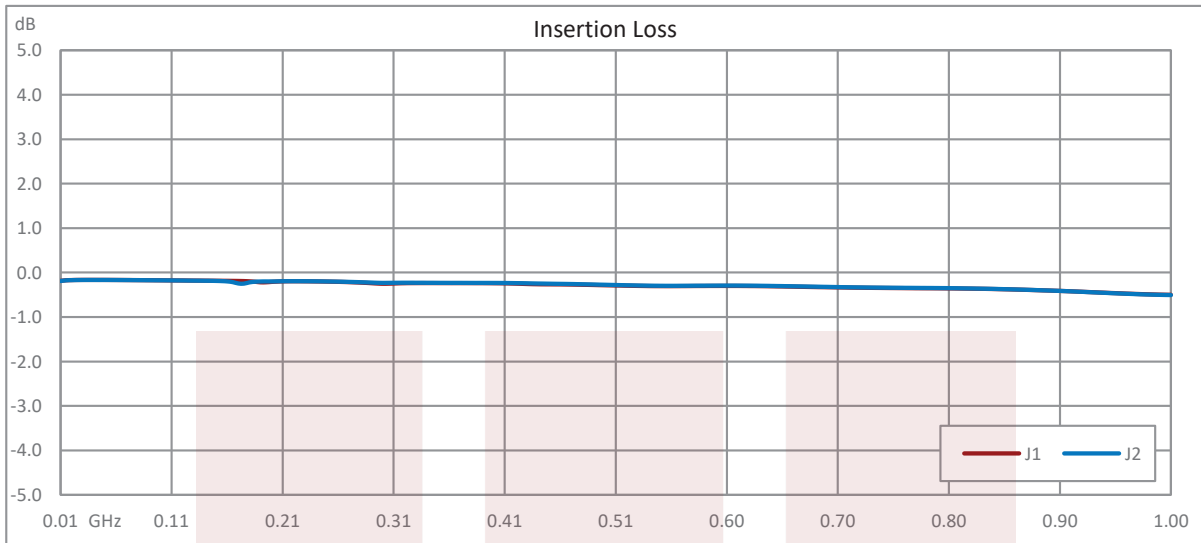
Compliance Certifications (see [product page](#) for current document)

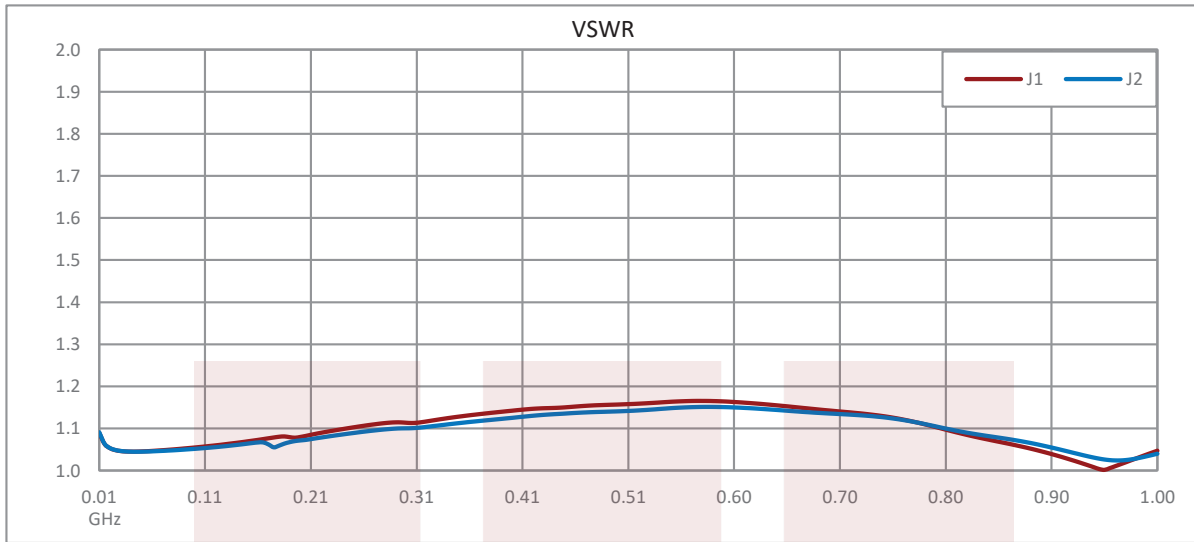
Plotted and Other Data

Notes:



Typical Performance Data





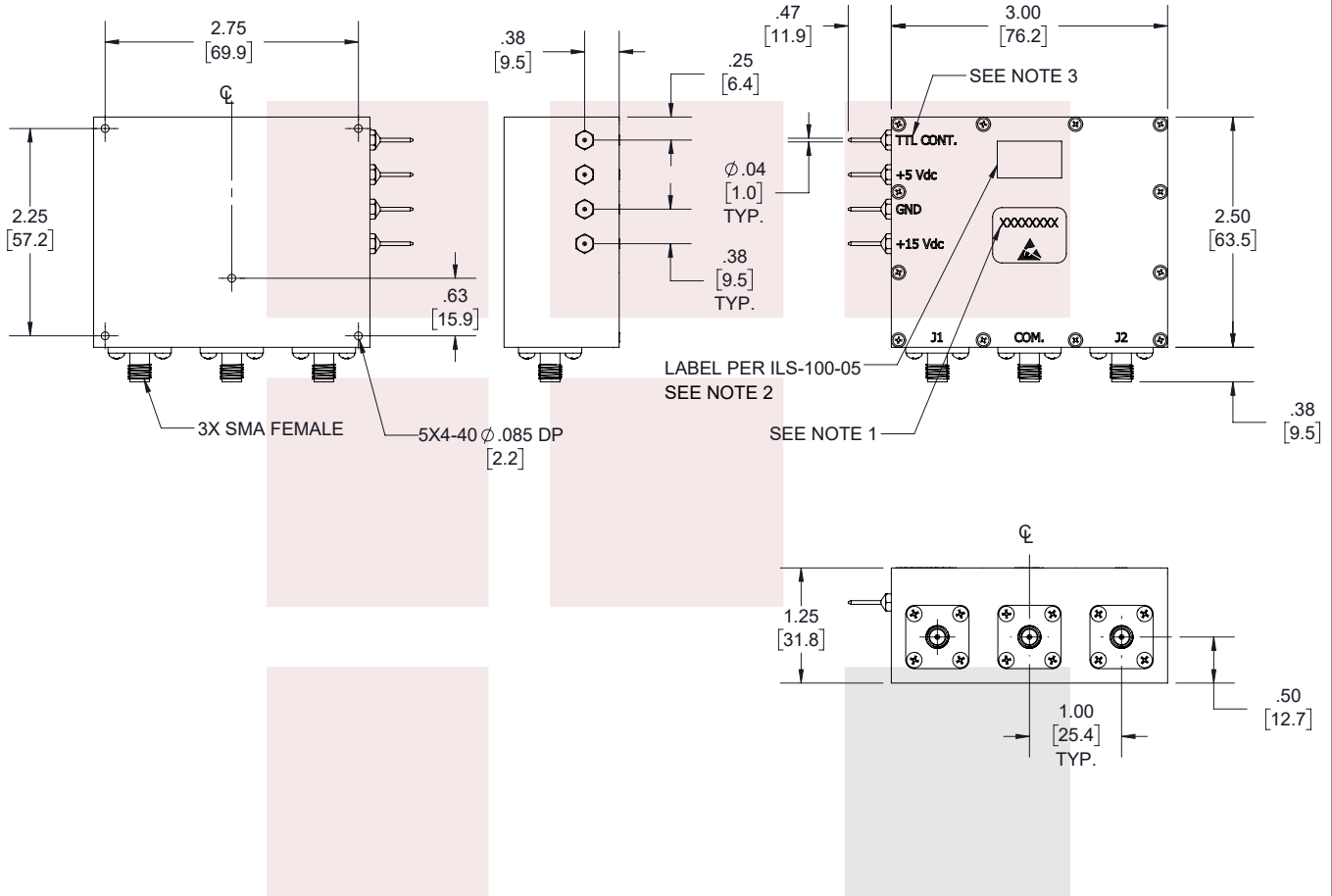
SMA High Power PIN Diode Switch From 10 MHz to 1000 MHz Rated at 30 Watts and Hot Switching from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA High Power PIN Diode Switch From 10 MHz to 1000 MHz Rated at 30 Watts and Hot Switching FMSW8007](https://www.fairviewmicrowave.com/sma-high-power-pin-diode-switch-from-10-mhz-to-1000-mhz-rated-at-30-watts-and-hot-switching-fmsw8007)

URL: <https://www.fairviewmicrowave.com/sma-high-power-pin-diode-switch-from-10-mhz-to-1000-mhz-rated-at-30-watts-and-hot-switching-fmsw8007-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 10 MHz to 1000 MHz Rated at 30 Watts and Hot Switching

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
X = ± 2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305]	= +1 [25] / -0
.XX = ± 0.02 [.51]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524]	= +2 [51] / -0
.XXX = ± 0.005 [.13]		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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY MVEERAPPAN	ITEM NO. FMSW8007	REV A
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T-Rev.D