

## 0 to 95 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female from 200 MHz to 8 GHz

The FMAT8006 is a broadband 7 Bit Solid State Programmable Attenuator which operates over the frequency range of 200 MHz to 8000 MHz. The 50 ohm design supports TTL control logic and has an attenuation range that covers 0 to 95 dB in 1 dB steps. Attenuation steps are 1, 2, 4, 8, 16, 32, and 32 dB. Insertion loss is 5 dB typical with a maximum RF input power of +25 dBm. Additional typical performance includes +/- 0.7 dB attenuation accuracy and switching speed of 0.35 microseconds. Operational temperature range is -40°C to +85°C, and the DC supply is +5 Vdc @ 2 mA nominal. The compact and rugged package design supports SMA female RF input/output connectors, and a 10 pin male connector socket for DC and TTL controls. A mating DC cable connector plug assembly (model PE3C4220-24) is available in stock as an accessory.

### Electrical Specifications (Values at 25°C, sea level)

Description	Min	Typ	Max	Unit
Frequency Range	0.2		8	GHz
Impedance		50		Ohms
Mean Attenuation Range	0		95	dB
Insertion Loss		5	7	dB
VSWR		1.6:1	2:1	
DC Voltage		+5		Vdc
DC Current		2		mA
Accuracy of Attenuation				dB
1 dB to 7 dB		±0.5		dB
8 dB to 15 dB		±0.6		dB
16 dB to 31 dB		±0.75		dB
32 dB to 95 dB		±1		dB
TTL Low for Thru Path		+0 to +0.8		Vdc
TTL High for Attenuation		+2 to +5		Vdc
Step Size	1			dB
Switching Time		0.35	1	us
RF Input Power (Operating- Input Side)			24	dBm
RF Input Power (Operating-Output Side)			15	dBm
RF Input Power (No Damage- Input Side)			25	dBm
RF Input Power (No Damage-Output Side)			16	dBm

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Freq. Range	0.2-0.2	0.2-4	4-8			GHz
Insertion Loss, Typ	4.1	5	6			dB

### Electrical Specification Notes:

1, 2, 4, 8, 16, 32, and 32 dB bit Attenuation Steps



### Features:

- Broadband 7 Bit Solid State Programmable Attenuator
- Frequency Range 100 MHz to 8 GHz
- Attenuation Range: 0 to 95 dB in 1 dB steps
- Attenuation Steps: 1, 2, 4, 8, 16, 32, and 32 dB
- Insertion Loss 5 dB typ
- Attenuation Accuracy +/- 0.7 dB typ
- Switching Speed 0.35 microseconds typ
- Max RF Input Power +25 dBm
- DC Voltage +5 Vdc
- DC Current 2 mA typ
- 50 Ohm Design
- -40°C to +85°C Operating Temperature
- SMA Female Connectors
- 10 Pin Male Connector for DC and TTL controls
- 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**

**Size**

Weight	0.25 lbs [113.4 g]
Connector 1	SMA Female
Connector 2	SMA Female

**Environmental Specifications**

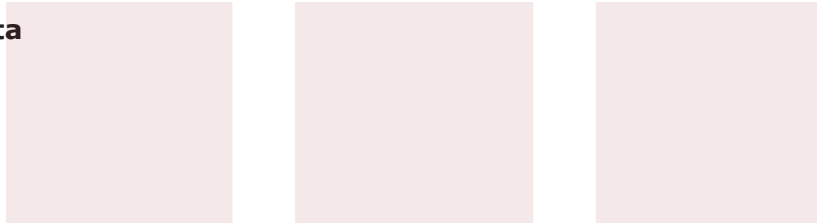
**Temperature**

Operating Range	-40 to +85 deg C
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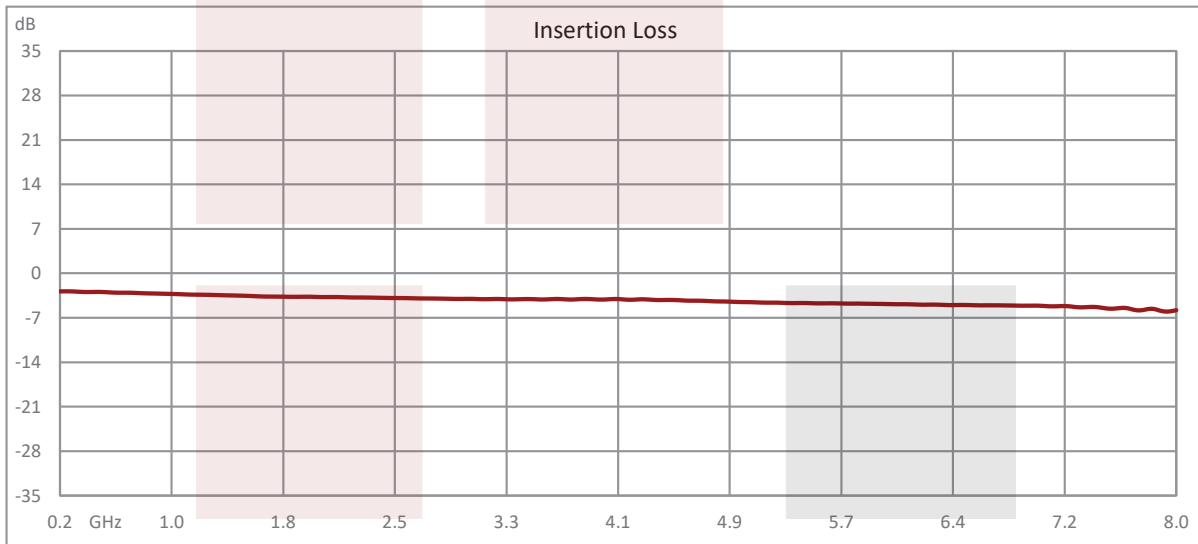
**Compliance Certifications** (see [product page](#) for current document)

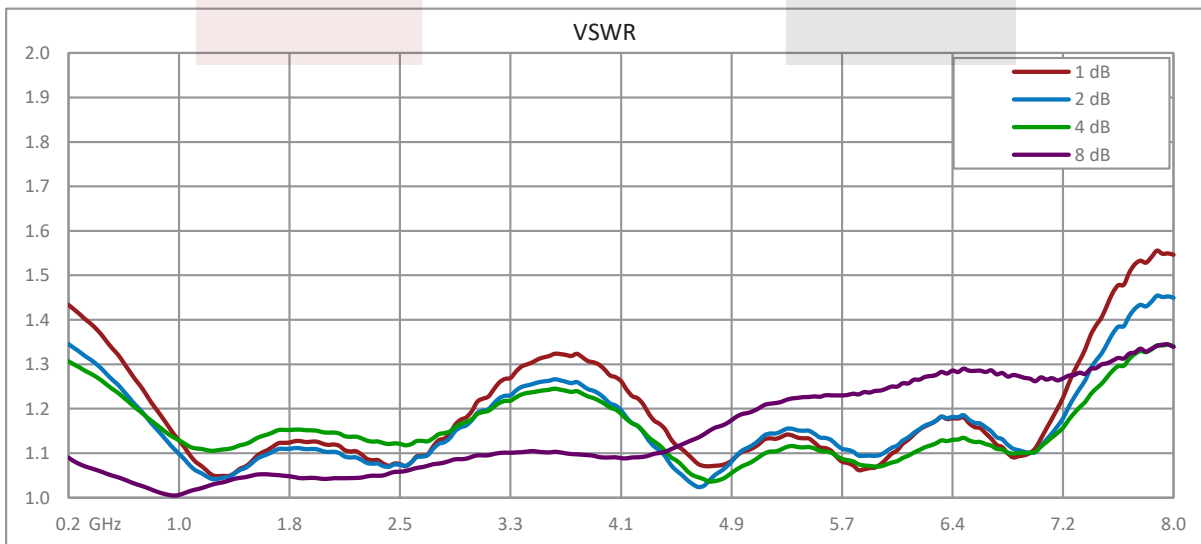
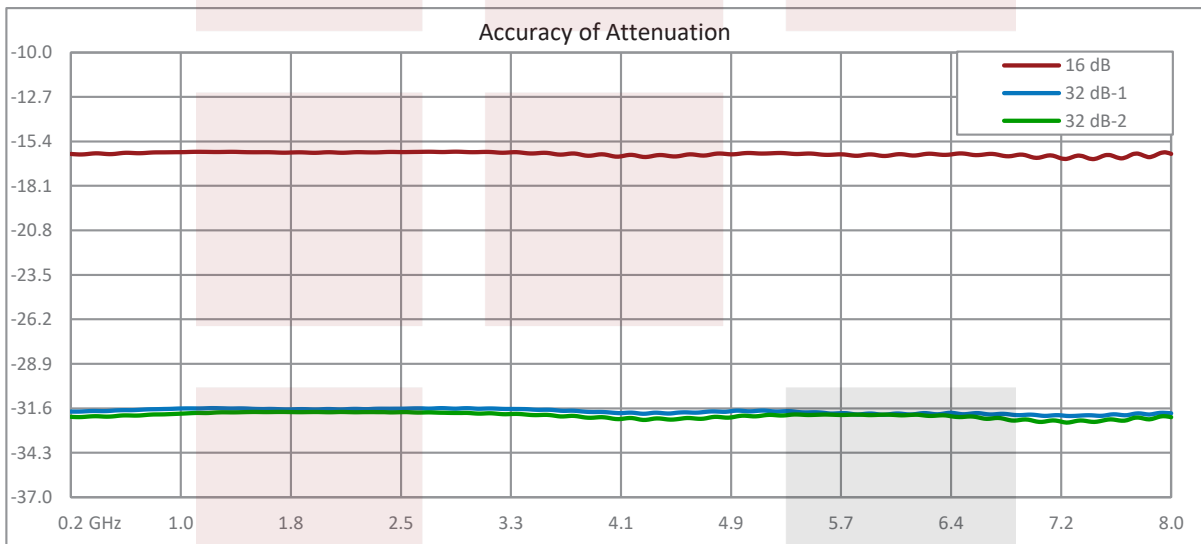
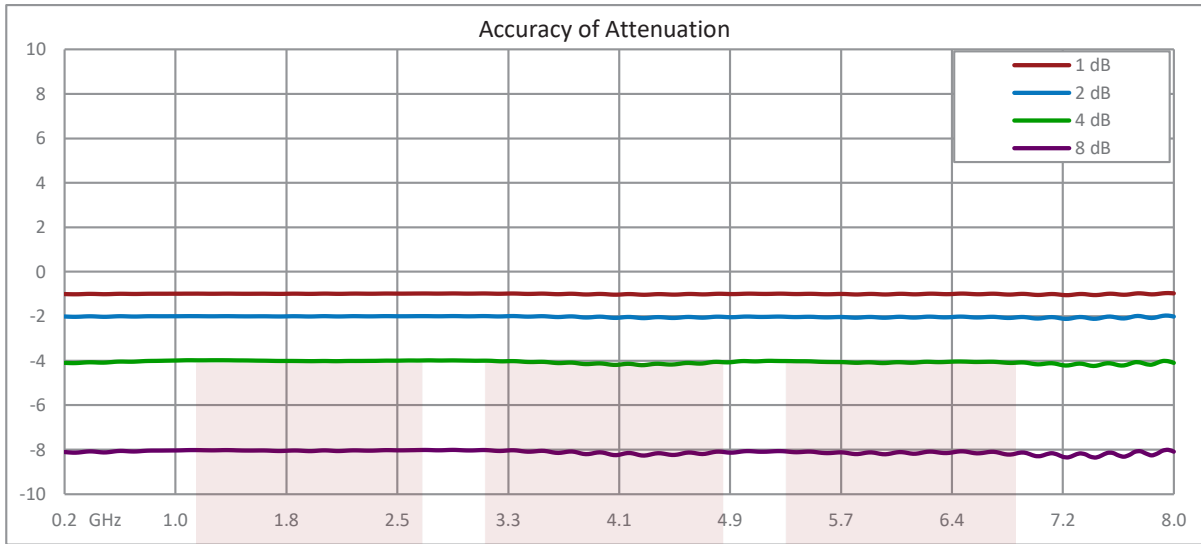
**Plotted and Other Data**

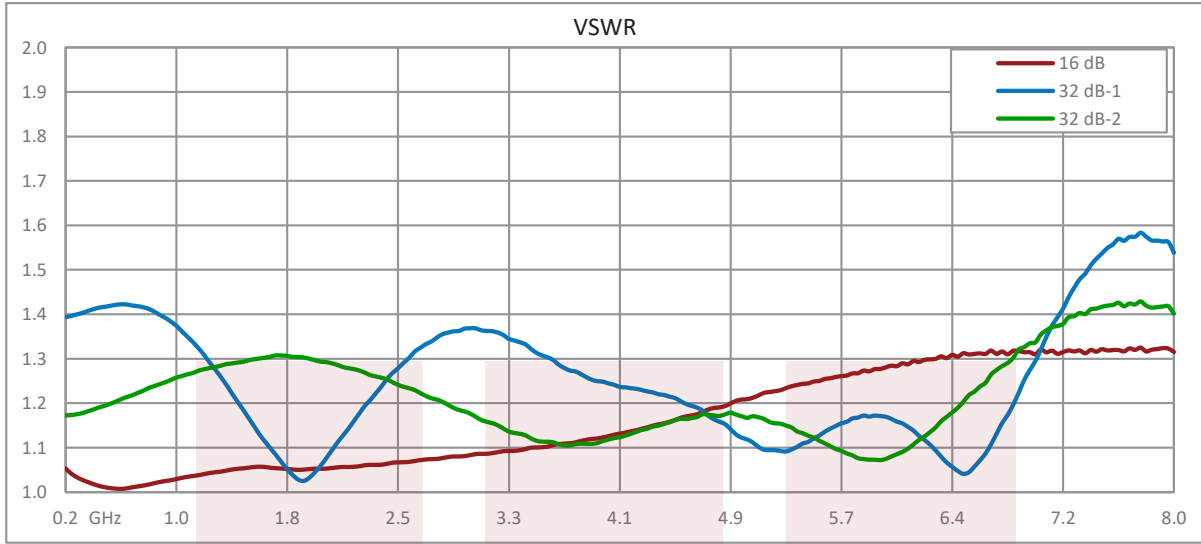
Notes:



**Typical Performance Data**







0 to 95 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female from 200 MHz to 8 GHz 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: [0 to 95 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female from 200 MHz to 8 GHz FMAT8006](https://www.fairviewmicrowave.com/0-to-95-db-programmable-ttl-controlled-step-attenuator-with-a-1-db-step-sma-female-to-sma-female-from-200-mhz-to-8-ghz-fmat8006)

URL: <https://www.fairviewmicrowave.com/0-to-95-db-programmable-ttl-controlled-step-attenuator-with-a-1-db-step-sma-female-to-sma-female-from-200-mhz-to-8-ghz-fmat8006-p.aspx>

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