

0 to 63 dB High Power Programmable Relay Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female Up to 2.7 GHz with Heatsink

The FMAT8014 is a 6 Bit Relay Controlled High Power Programmable Attenuator with integrated heatsink that operates over the frequency range of DC to 2700 Mhz. The 50 ohm design has an attenuation range that covers 0 to 63 dB in 1 dB steps. Attenuation steps are 1, 2, 4, 8, 16, and 32 dB. Insertion loss is 3.5 dB typical with a maximum RF input power rating of 10 watts average. Additional typical performance includes +/- 0.75 dB attenuation accuracy, +/- 0.1 dB repeatability, and switching speed of 10 milliseconds. Operational temperature range is -20°C to +60°C, and the DC supply is +12 Vdc @ 30 mA per relay. The compact and rugged package design supports SMA female RF input/output connectors, and a DE-9P D-Sub connector for DC and TTL controls.

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

Description	Min	Typ	Max	Unit
Frequency Range	DC		2.7	GHz
Impedance		50		Ohms
Mean Attenuation Range	0		63	dB
Insertion Loss		3.5	5	dB
VSWR		1.2:1	1.5:1	
DC Voltage		+12		Vdc
DC Current (per relay)		30		mA
Step Size	1			dB
Switching Time		10		us

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Freq. Range	DC-1	1-2	2-2.7			GHz
Insertion Loss, Typ	2.5	4	4.5			dB

Electrical Specification Notes:

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

Absolute Maximum Rating

Description	Min	Typ	Max	Units
RF Input Power (Average)			10	Watts
Repeatability @ 2.0 Ghz		± 0.05		dB
@ 2.5 Ghz		± 0.10		dB
@ 3.0 Ghz		± 0.15		dB
Accuracy of Attenuation (1, 2, 4, 8, 16 dBpads)			± 0.50	dB
(32 dB pads)			± 0.75	dB



Features:

- 6 Bit Relay Controlled High Power Programmable Attenuator
- Integrated Heatsink
- Frequency Range DC to 2700 MHz
- Attenuation Range: 0 to 63 dB in 1 dB steps
- Attenuation Steps: 1, 2, 4, 8, 16, and 32 dB
- Insertion Loss 3.5 dB typ
- Attenuation Accuracy +/- 0.75 dB typ
- Repeatability +/- 0.1 dB
- Switching Speed 10 milliseconds typ
- Max RF Input Power 0.5 Watts Average and 100 Watts Peak
- DC Voltage +12 Vdc
- DC Current 30 mA per relay
- 50 Ohm Design
- -20°C to +60°C Operating Temperature
- SMA Female Connectors
- DE-9P D-Sub 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

dB
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Mechanical Specifications

Size

Connector 1 SMA Female
 Connector 2 SMA Female

Environmental Specifications

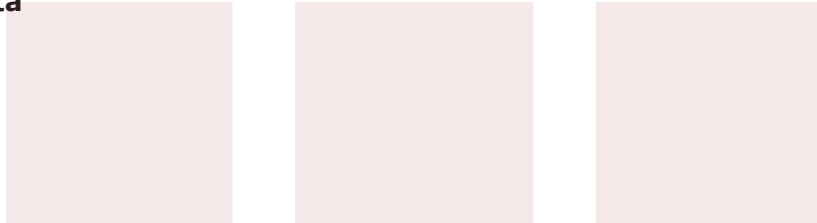
Temperature

Operating Range -20 to +60 deg C

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

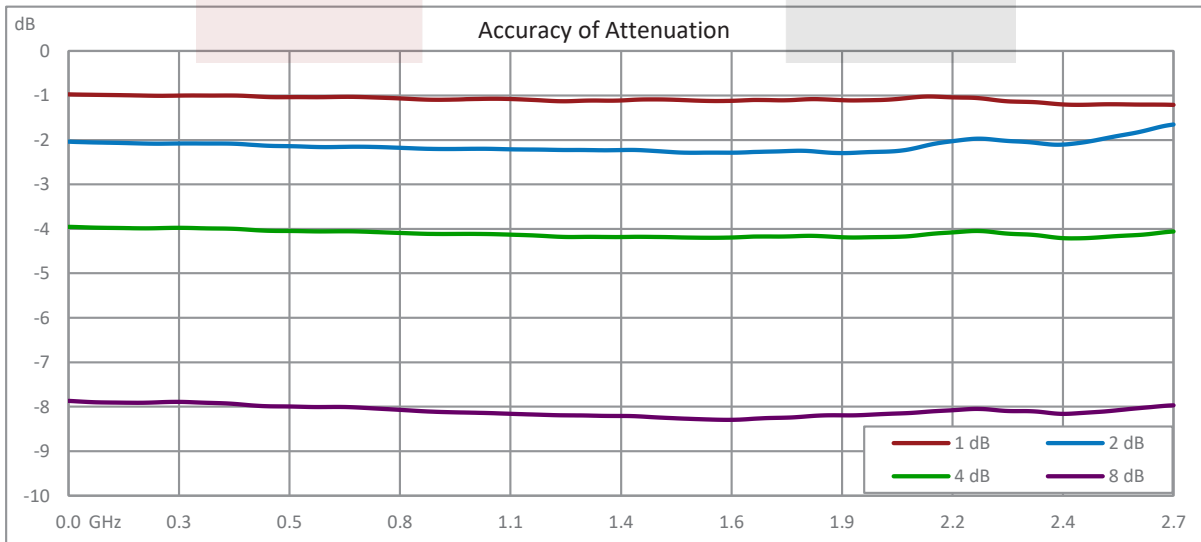
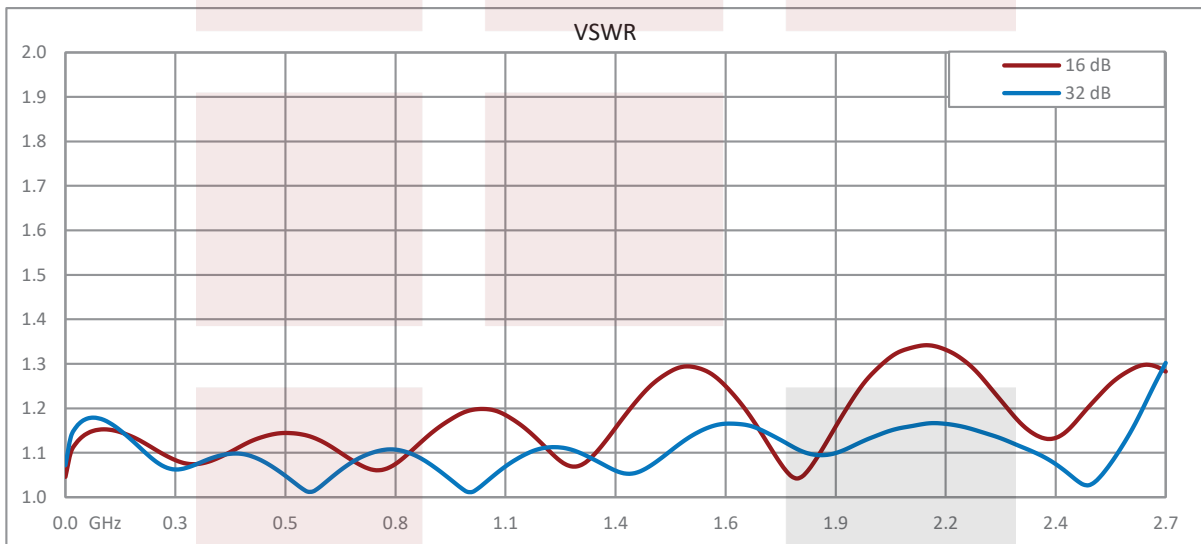
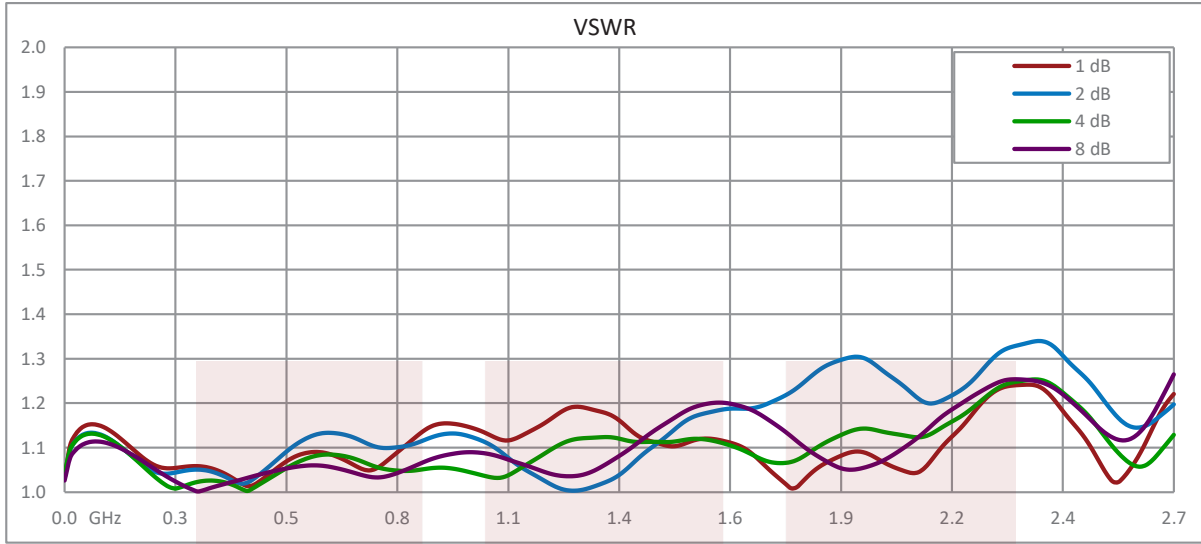
Plotted and Other Data

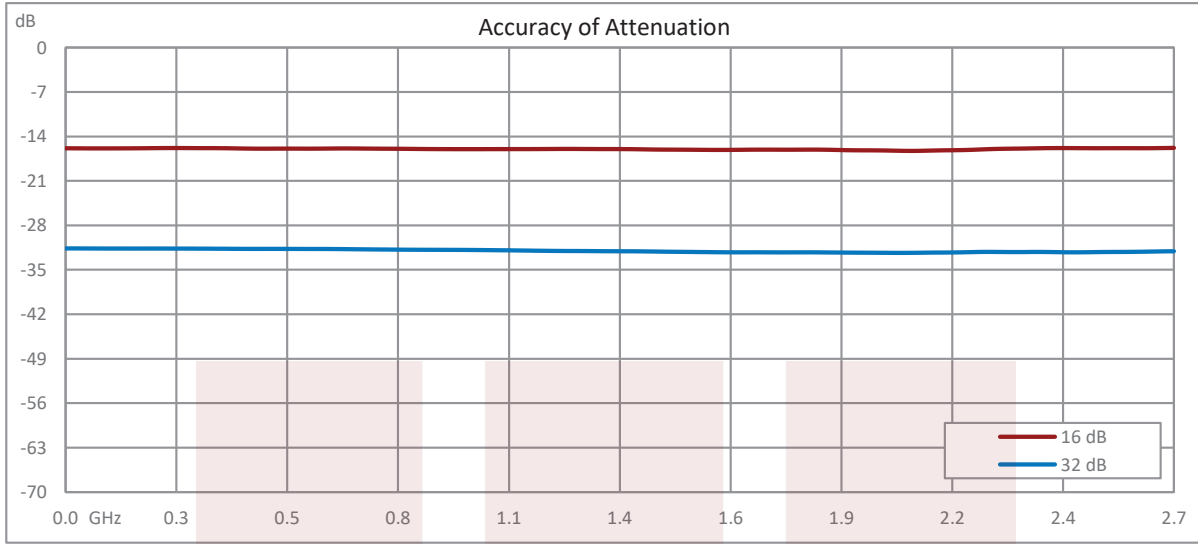
Notes:



Typical Performance Data







0 to 63 dB High Power Programmable Relay Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female Up to 2.7 GHz with Heatsink 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 63 dB High Power Programmable Relay Controlled Step Attenuator with a 1 dB Step SMA Female to SMA Female Up to 2.7 GHz with Heatsink FMAT8014](https://www.fairviewmicrowave.com/0-to-63-db-high-power-programmable-relay-controlled-step-attenuator-with-a-1-db-step-sma-female-to-sma-female-up-to-2.7-ghz-heatsink-fmat8014-p.aspx)

URL: <https://www.fairviewmicrowave.com/0-to-63-db-high-power-programmable-relay-controlled-step-attenuator-with-a-1-db-step-sma-female-to-sma-female-up-to-2.7-ghz-heatsink-fmat8014-p.aspx>

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