

0 to 127 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step F Female to F Female from 450 MHz to 2.15 GHz

The FMAT5011 is a 7 Bit Programmable Attenuator which operates over the frequency range of 451 MHz to 2150 MHz. The 50 ohm design supports TTL control logic and has an attenuation range that covers 0 to 127 dB in 1 dB steps. Attenuation steps are 1, 2, 4, 8, 16, 32, and 64 dB. Insertion loss is 4.5 dB maximum with a maximum RF input power up to +20 dBm. Additional typical performance includes +/- 1.0 dB attenuation accuracy and switching speed of 0.7 microseconds. The DC supply is +5 Vdc @ 50 mA. The compact and rugged package design supports F type 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 FMCA1325-24) is available in stock as an accessory. The FMAT5011 has an operational temperature range of -40°C to +85°C.

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

Description	Min	Typ	Max	Unit
Frequency Range	0.45		2.15	GHz
Mean Attenuation Range	0		127	dB
Insertion Loss			4.5	dB
Input VSWR			1.5:1	
Survival Power Average			+30	dBm
Power Handling Capacity			+20	dBm
Step Size	1			dB
Switching Time			2	us
Logic Input				
Logic "0" (Bit Off) @ 5μA	0		1.5	Volts
Logic "1" (Bit On) @ 800μA	2		5	Volts

Electrical Specification Notes:
1, 2, 4, 8, 16, 32, and 64 dB bit Steps

Mechanical Specifications Size

Weight	0.7325 lbs [332.26 g]
Connector 1	F Female
Connector 2	F 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:



Features:

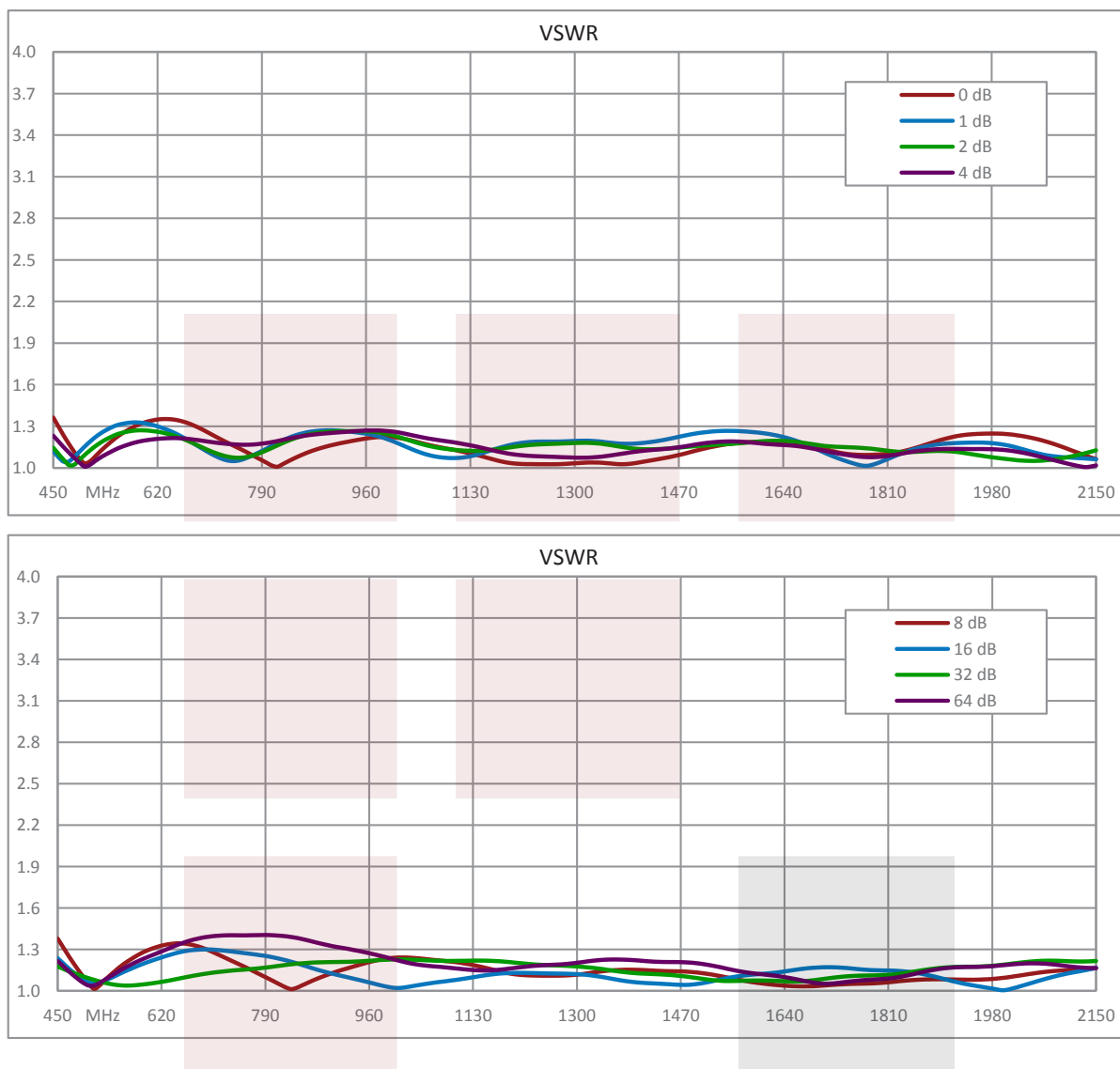
- 7 Bit Programmable Attenuator
- 450 to 2150 MHz Bandwidth
- 0-127 dB attenuation
- 1 dB Step Size
- 50 Ohms
- Switching Speed: 0.7 microseconds typ
- Insertion Loss: 4.5 dB max
- Attenuation Accuracy: +/-1.0 dB typ
- DC Bias: +5 Vdc @ 50 mA
- F type female connectors

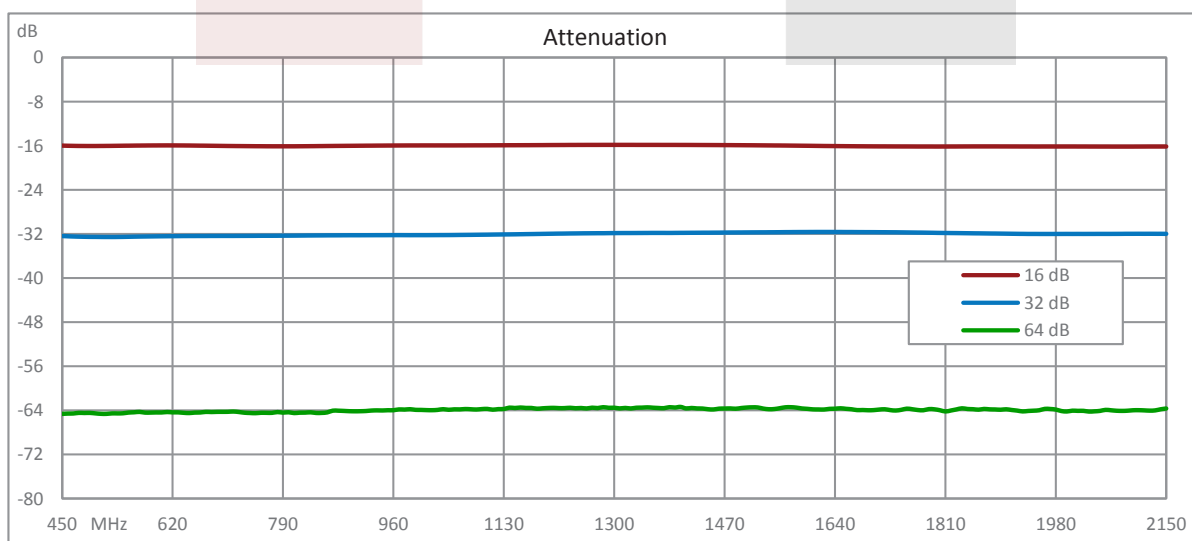
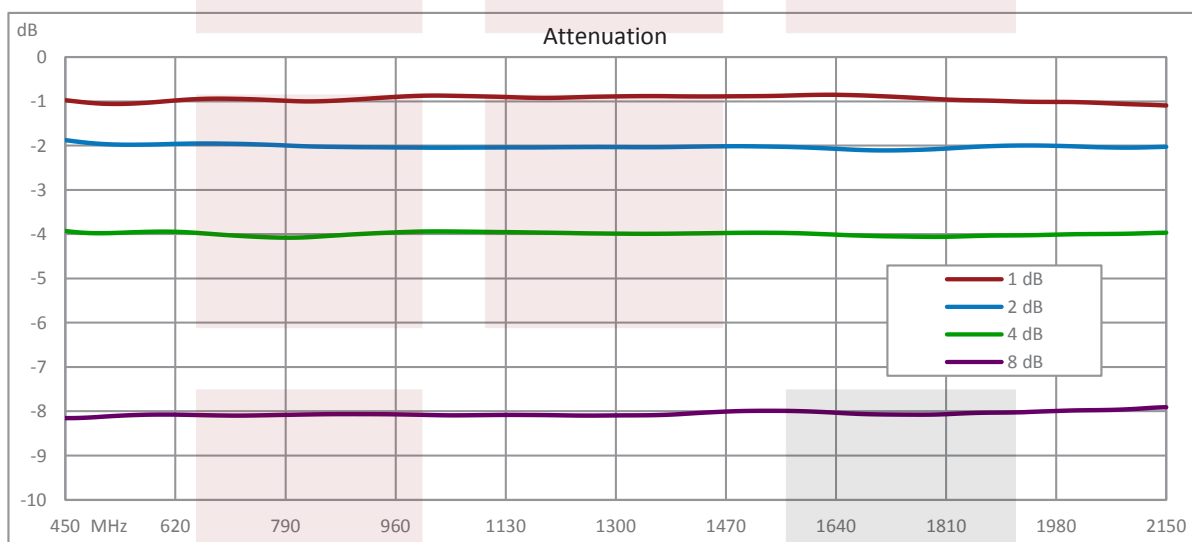
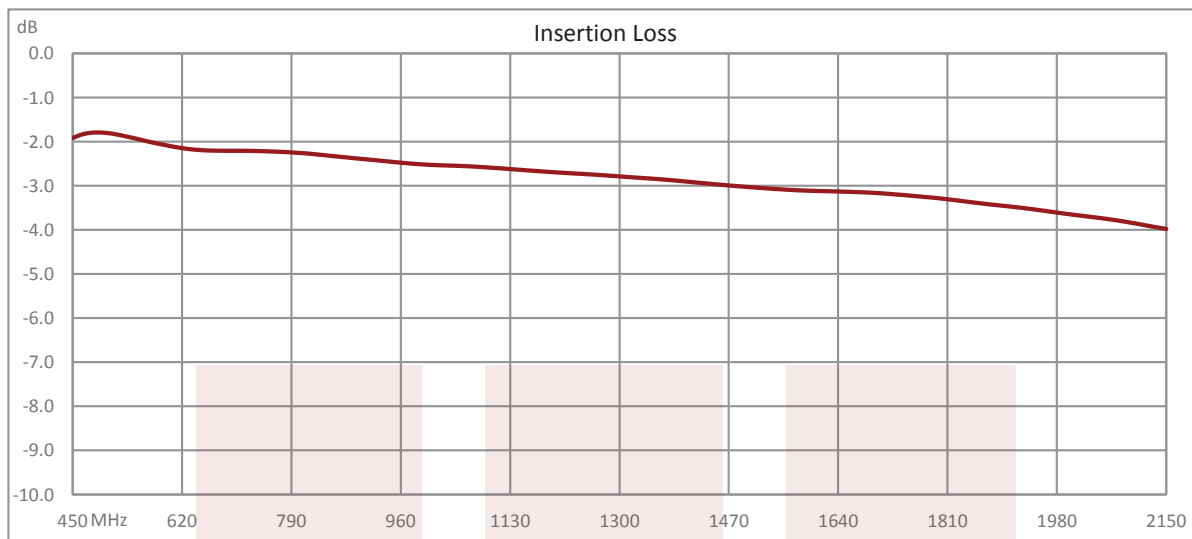
Applications:

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

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Typical Performance Data



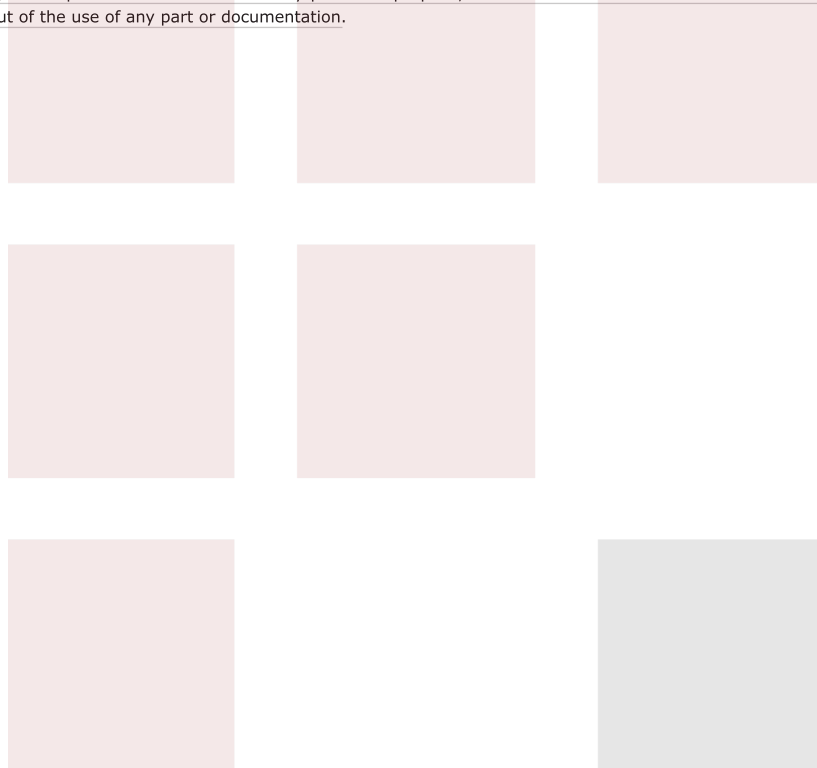


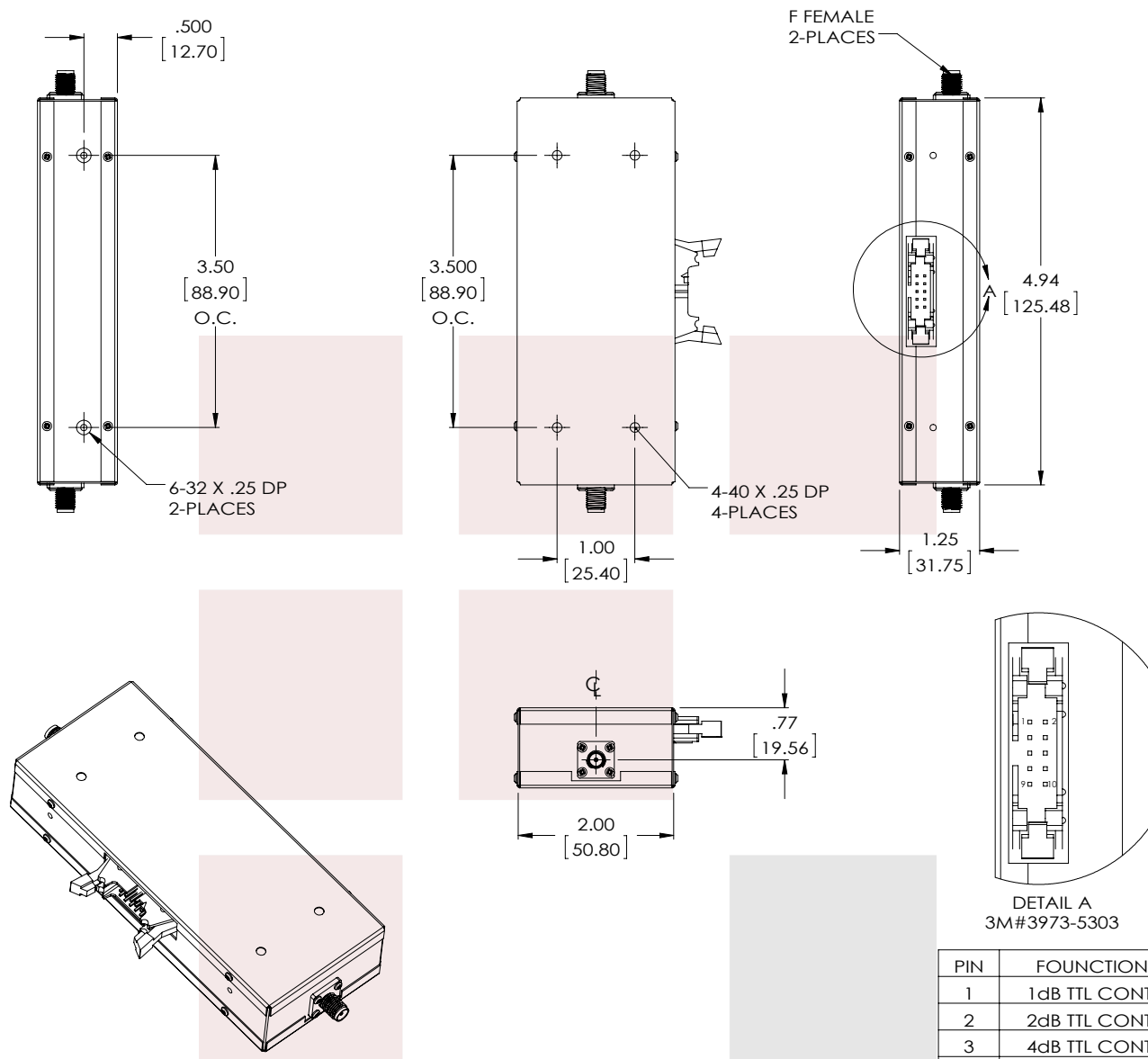
0 to 127 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step F Female to F Female from 450 MHz to 2.15 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [0 to 127 dB Programmable TTL Controlled Step Attenuator with a 1 dB Step F Female to F Female from 450 MHz to 2.15 GHz FMAT5011](https://www.fairviewmicrowave.com/127-db-ttl-controlled-step-attenuator-f-female-fmat5011-p.aspx)

URL: <https://www.fairviewmicrowave.com/127-db-ttl-controlled-step-attenuator-f-female-fmat5011-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.





DETAIL A
3M#3973-5303

PIN	FOUNCTION
1	1dB TTL CONT.
2	2dB TTL CONT.
3	4dB TTL CONT.
4	8dB TTL CONT.
5	16dB TTL CONT.
6	32dB TTL CONT.
7	64dB TTL CONT.
8	NO CONNECTION
9	+5Vdc
10	GROUND

STANDARD TOLERANCES

.XX	±0.010
.XXX	±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC.

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NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

TITLE

0 to 127 dB Programmable TTL Controlled Step
Attenuator with a 1 dB Step F Female to F Female
from 450 MHz to 2.15 GHz

DWG NO

FMAT5011

CAGE CODE

3FKR5

CAD FILE 041217

SHEET

SCALE N/A

SIZE A

CN_1408