Fairview Microwave
an INFINITE brand

FMAT6001
DATA SHEET

0 to 30 dB 10 Bit Programmable TTL Controlled Step Attenuator With a 0.03 dB Step 2.4mm Female To 2.4mm Female From 18 GHz To 40 GHz

FMAT6001 is 10 Bit Programmable 30 dB Pin Diode Attenuator with Step Resolution as Low as 0.03 dB over the Operating Frequency Range from 18 GHz to 40 GHz. The Attenuator is offered in a slim line housing measuring only 0.5" Height. The RF Input/ Output Connectors are 2.4mm Female. Along with a 15 Pin Micro-D Female Control Socket. The unit is shipped with a Micro-D Mating Connector. Fairview Microwave also offers a Digital TTL Control module capability in both single and dual formats (FMAT7000 and FMAT7001). This interface module gives Designers the capability to streamline the BIT command control the functions of the FMAT6001 programmable attenuator using a PC computer. Using GUI downloadable software, the module acts as a TTL programmable interface that sends command control BITs to the attenuator.

Features:

- 10 Bit Programmable 30 dB Attenuator
- 18 GHz to 40 GHz Frequency Range
- 30 dB Attenuation Range
- Step Resolution of 0.03 dB
- +10 dBm typ P1dB
- Insertion Loss 6 dB typ
- VSWR 2.5:1 Max
- RF Connectors are 2.4mm Female
- 15 Pin Micro-D Female Connector

Applications:

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

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

Description	Min	Typ	Max	Unit
Frequency Range	18		40	GHz
Impedance		50		Ohms
Mean Attenuation Range	0		30	dB
Input at 1 dB Compression Point		+10		dBm
Survival Power Average -65 to +25 deg C			+24	dBm
Attenuation Flatness @ 30 dB		±1.5		dB
Accuracy of Attenuation				dB
0 dB to 30 dB		±2		dB
Step Size	0.03			dB
Off Time			0.5	us
DC Power Supply		12		Volts

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.163 lbs [73.94 g]
Connector 1	2.4mm Female
Connector 2	2.4mm Female

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sales@fairviewmicrowave.com

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-65 to +125 deg C
Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycling	MIL-STD-202F, METHOD 107
Salt Spray	MIL-STD-202F, METHOD 105C COND. B

Compliance Certifications (see product page for current document)

Plotted and Other Data

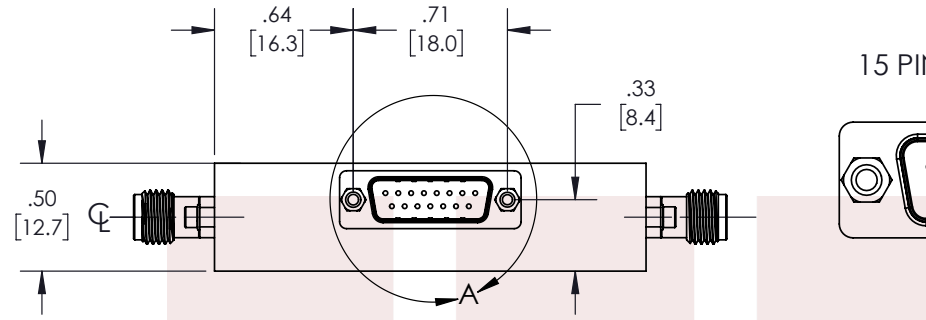
Notes:

0 to 30 dB 10 Bit Programmable TTL Controlled Step Attenuator With a 0.03 dB Step 2.4mm Female To 2.4mm Female From 18 GHz To 40 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.

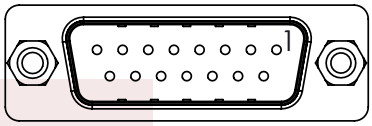
For additional information on this product, please click the following link: 0 to 30 dB 10 Bit Programmable TTL Controlled Step Attenuator With a 0.03 dB Step 2.4mm Female To 2.4mm Female From 18 GHz To 40 GHz FMAT6001

URL: https://www.fairviewmicrowave.com/30-db-ttl-controlled-step-attenuator-2.4mm-female-fmat6001-p.aspx

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	PCR FMAT6001 20220713	07/20/22	KGIFFORD

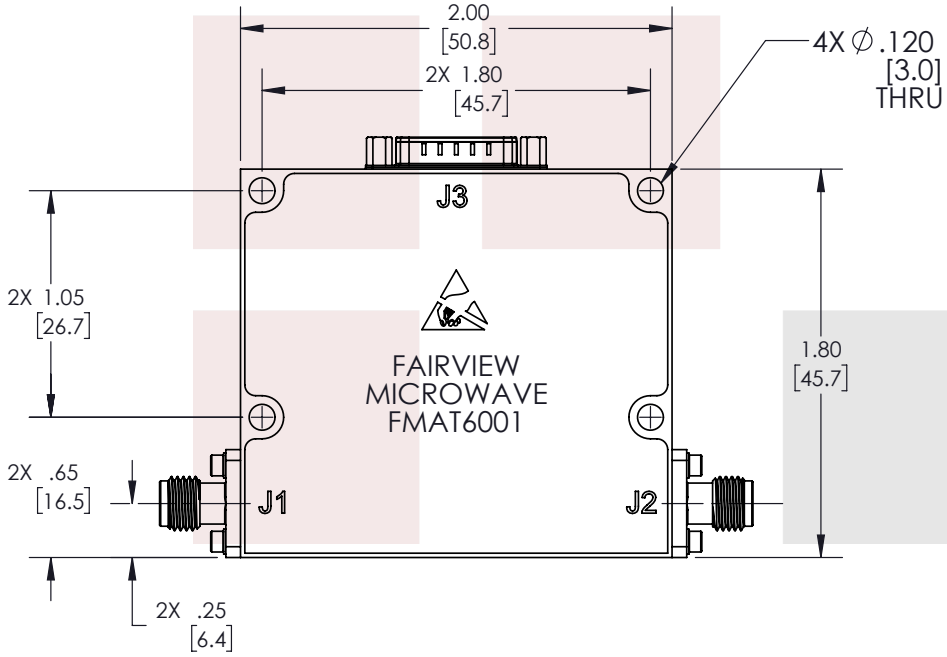


15 PIN MICRO-D FEMALE



VIEW A

PIN	DESCRIPTION
1	1dB
2	0.5dB
3	0.25dB
4	0.125dB
5	GND
6	0.06dB
7	0.03dB (LSB)
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+12 VDC
12	16dB (MSB)
13	8dB
14	4dB
15	2dB



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TITLE

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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS
.XX = ±.02 [.51] ± 1/32
.XXX = ±.005 [.13] ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
300 [7620] < L = +5%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

SHEET 1 OF 1

SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	3FKR5	BPUCHASKI	FMAT6001	B

T-Rev.D

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