

WR-22 Waveguide Voltage Variable Attenuator, Q Band, 33 GHz to 50 GHz, 0 to 30 dB Attenuation, 2.7 dB Loss, UG-383/U Flange

The FMWGA3211 is a WR-22 Waveguide Voltage Variable Attenuator, operating across the Q Band from 33 GHz to 50 GHz. This 50 Ohm design has 2.7 dB typ insertion loss with a maximum (CW) input power handling of +23 dBm. The control voltage is 0 Vdc to +5 Vdc to adjust the attenuation level from 0 dB to 30 dB typ across the full frequency band. The rugged and small size aluminum package design is gold plated and supports a UG-383/U waveguide flange pattern at the RF input and output ports. Solder pins are used for DC voltage control and ground. The module operates across a wide temperature range from -40°C to +80°C.



Electrical Specifications*

Description	Min	Typ	Max	Units
Frequency Range	33		50	GHz
Typical Attenuation Value	0		30	dB
Insertion Loss	2.4	2.7	2.9	dB
Maximum Pin (CW)			23	dBm
Control Voltage	0		5	Vdc

Electrical Notes:

- 1.) Open and short-circuit loads are not recommended at the attenuator output.
- 2.) Ensure proper 50 Ohm load before turning the attenuator "ON".
- 3.) Do not put any foreign objects inside the waveguide. Warranty will be voided.

Values at 25°C, sea level

Biasing Up and Power Down Procedure

Biasing Up Procedure		Power Down Procedure	
Step 1	Connect Ground Pin	Step 1	Turn OFF RF input
Step 2	Apply DC Supply Voltage	Step 2	Turn OFF DC Supply Voltage
Step 3	Turn ON RF input	Step 3	Remove Ground

Mechanical Specifications

Flange 1

Interface UG-383/U

Waveguide

Interface WR-22
Material Aluminum
Plating Gold

Flange 2

Interface UG-383/U

Temperature

Operating Range -40 to +80 deg C
Storage Range -40 to +100 deg C

Size

Length 1.5 in [38.1 mm]

Features:

- WR-22 Waveguide Voltage Variable Attenuator
- 33 GHz to 50 GHz
- Q Band
- Insertion Loss: 2.7 dB typ
- Attenuation Range: 0 dB to 30 dB typ
- DC Control Voltage: 0 Vdc to +5 Vdc
- Max RF Input Power (CW) +23 dBm
- 50 Ohm Design
- RF Input and Output Waveguide Flange UG-383/U
- Solder Pins for DC Control Voltage and Ground
- Operational Temperature Range -40°C to +80°C
- Rugged and Compact Aluminum Gold Plated Package Design

Applications:

Test & Measurement
Military and Commercial Communications
Military Electronic Systems
Research & Development

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Width 1.5 in [38.1 mm]
 Height 1.2 in [30.48 mm]
 Weight 0.241 lbs [109.32 g]

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

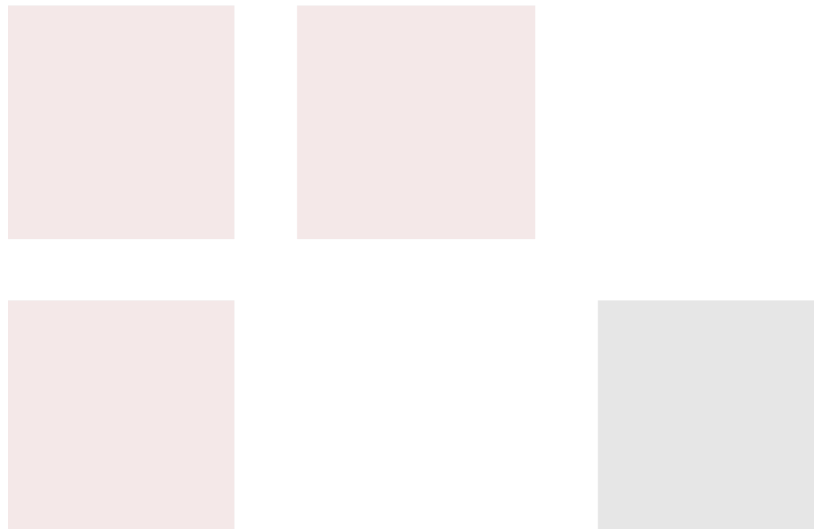
Plotted and Other Data

Notes:

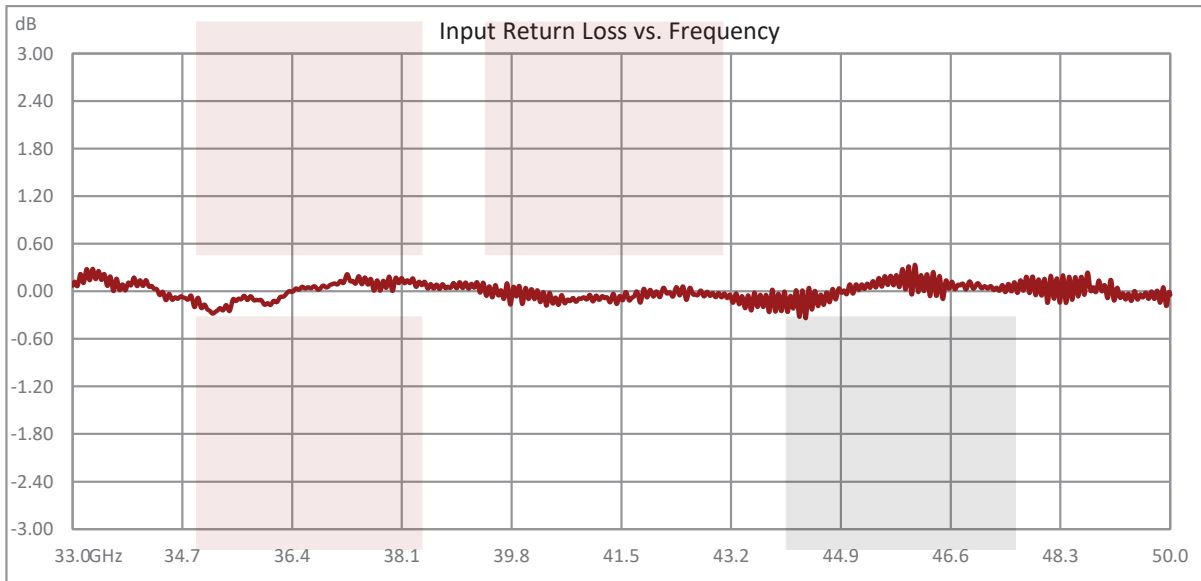
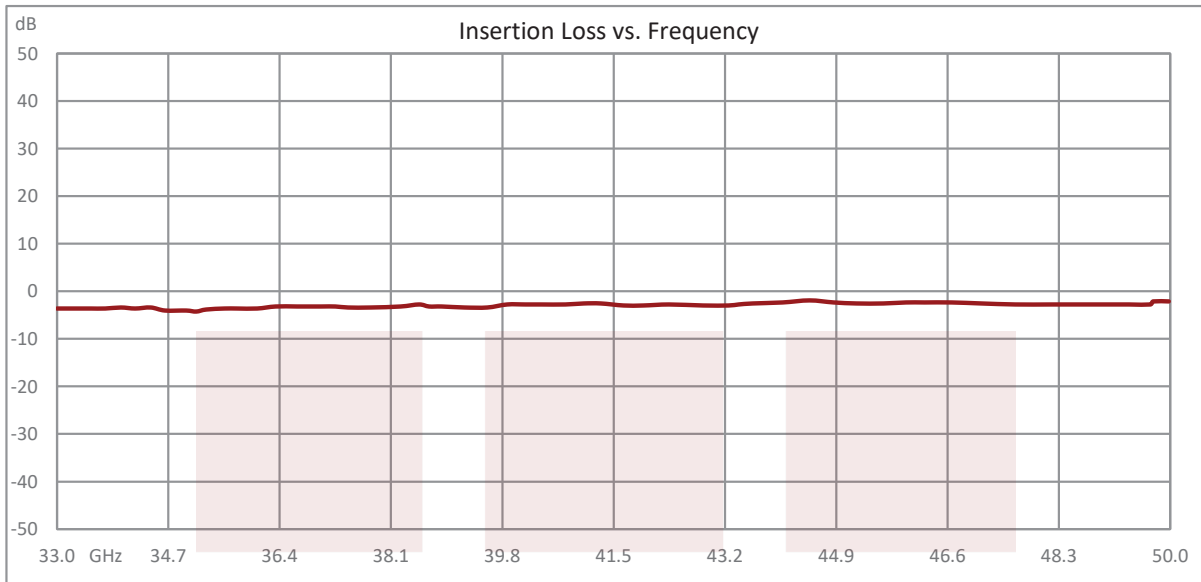
- Values at 25 °C, sea level

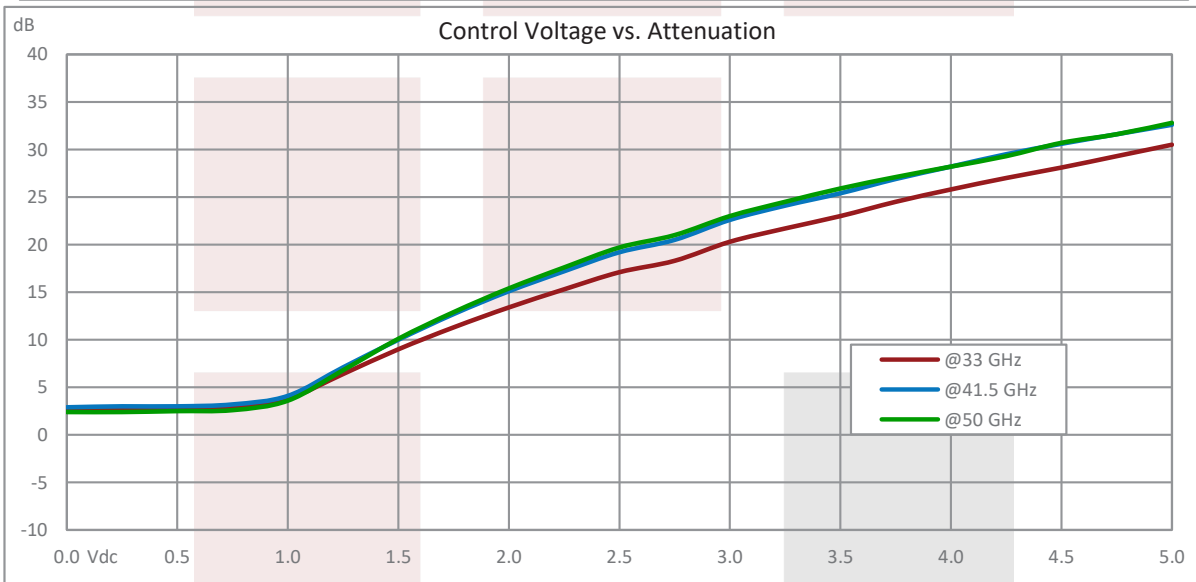
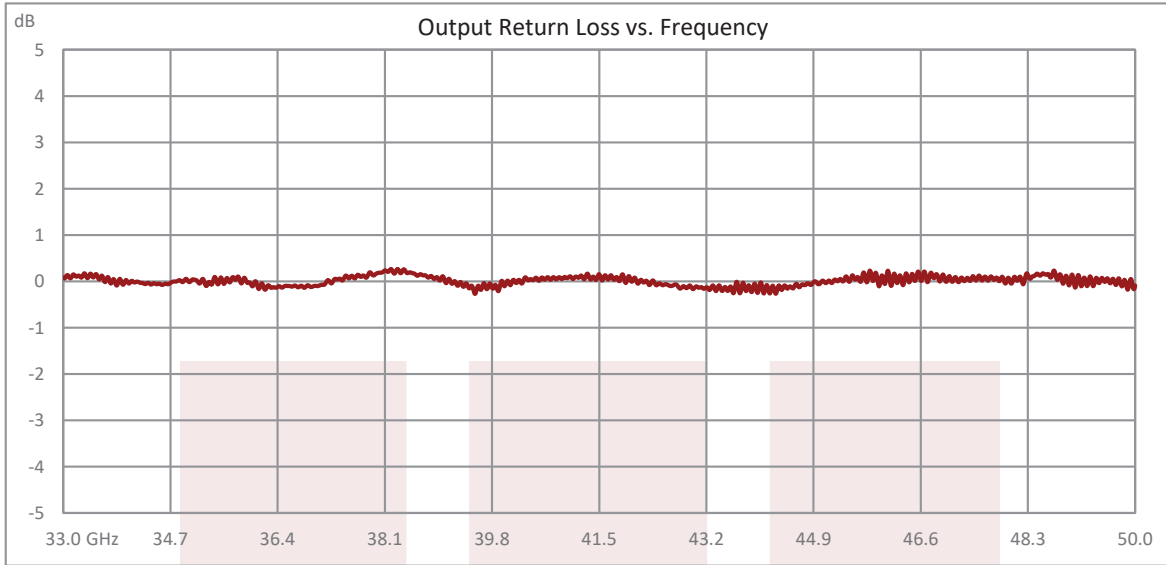
Absolute Maximum Rating

Parameter	Rating
Operating Temperature	-40°C to +80°C
Storage Temperature	-40°C to +100°C
Total Power Dissipation	0.1W
Power Handling (CW)	+23dBm
Control Voltage	+10V



Typical Performance Data





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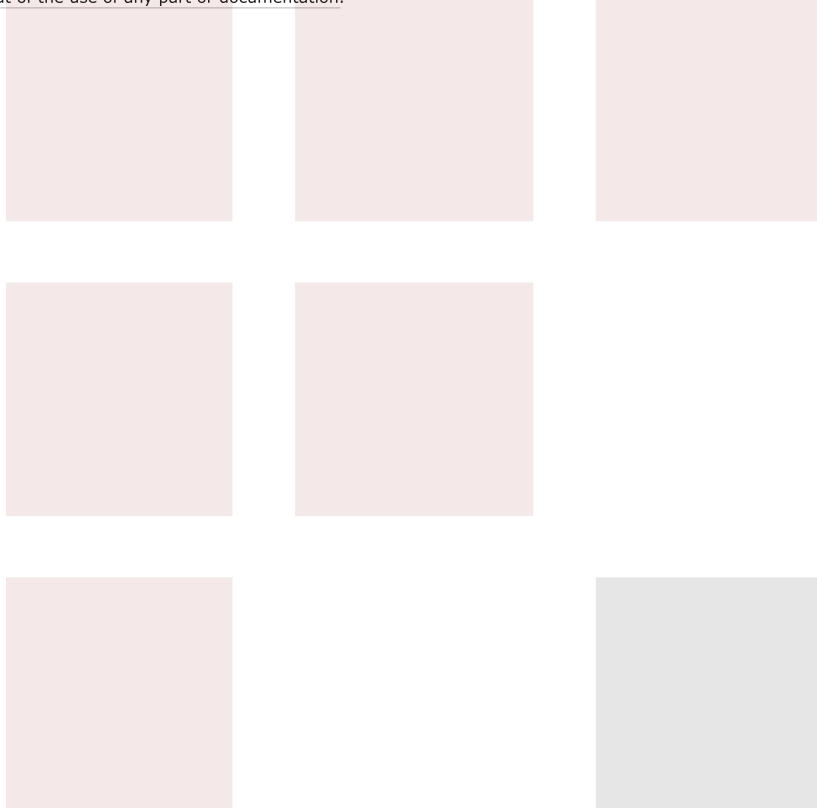
WR-22 Waveguide Voltage Variable Attenuator, Q Band, 33 GHz to 50 GHz, 0 to 30 dB Attenuation, 2.7 dB Loss, UG-383/U Flange from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-de-

mand.

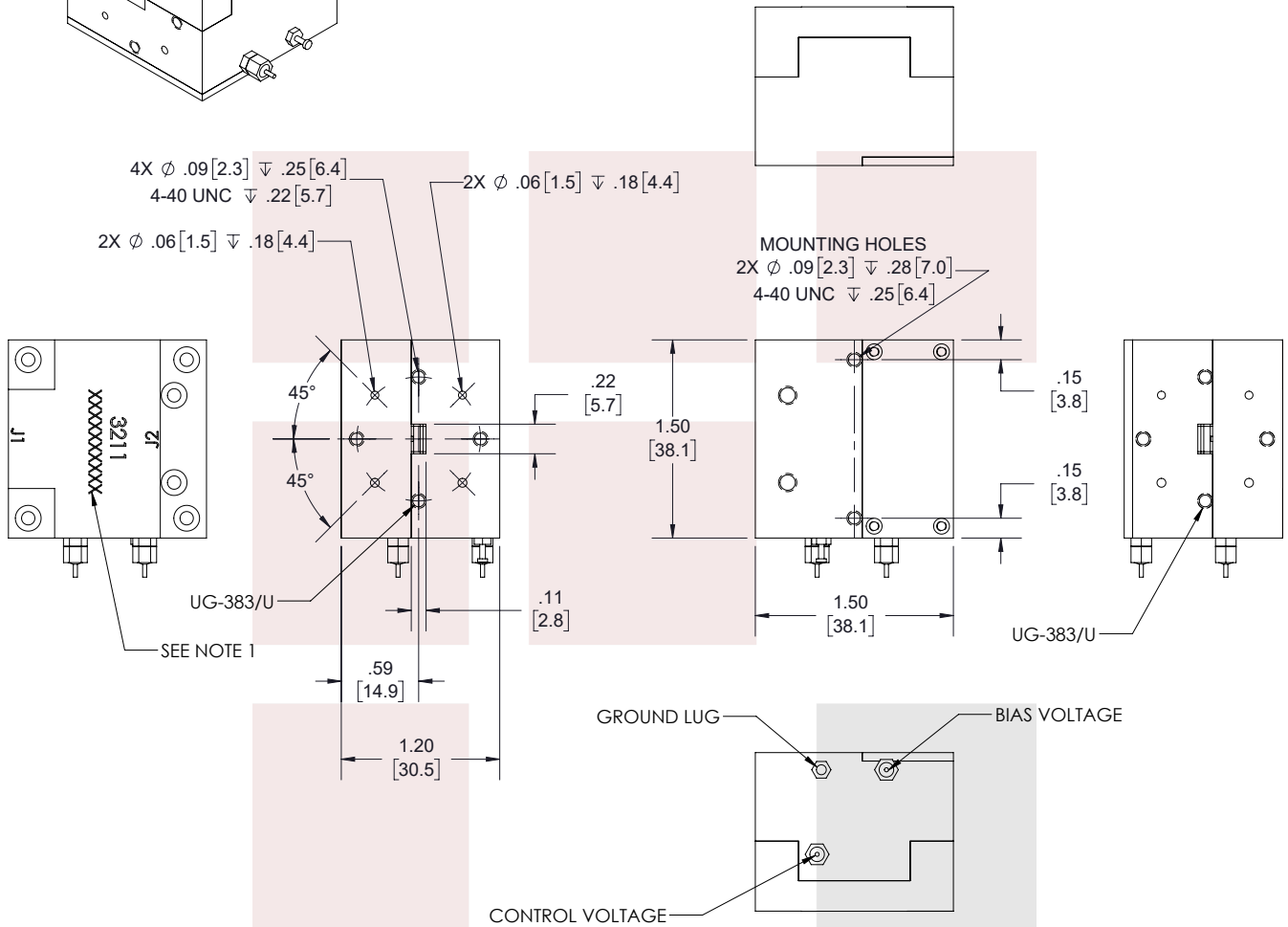
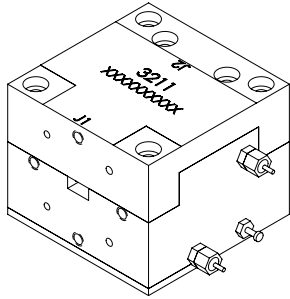
For additional information on this product, please click the following link: [WR-22 Waveguide Voltage Variable Attenuator, Q Band, 33 GHz to 50 GHz, 0 to 30 dB Attenuation, 2.7 dB Loss, UG-383/U Flange FMWGA3211](#)

URL: <https://www.fairviewmicrowave.com/undefined-url-for-pn-fmwga3211-fmwga3211-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	04/18/2022	TGALLA



NOTES:

- SERIAL NUMBER AND DATE CODE ARE COMBINED. EX: 202008280001.

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TITLE

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

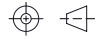
TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ± 1/32
.XX = ±.02 [.51] 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

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 VTHANGARAJ	ITEM NO. FMWGA3211	REV A
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T-Rev.D