

**WR-15 Waveguide Voltage Variable Attenuator, V Band, 50 GHz to 75 GHz, 0 dB to 30 dB Attenuation, 2.5 dB Loss, UG-385/U Flange**

The FMWGA3213 is a WR-15 Waveguide Voltage Variable Attenuator, operating across the V Band from 50 GHz to 70 GHz. This 50 Ohm design has 2.5 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-385/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	50		75	GHz
Typical Attenuation Value	0		30	dB
Insertion Loss	2.3	2.5	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-385/U

**Waveguide**

Interface WR-15  
Material Aluminum  
Plating Gold

**Flange 2**

Interface UG-385/U

**Temperature**

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

**Size**

Length 1.75 in [44.45 mm]

**Features:**

- WR-15 Waveguide Voltage Variable Attenuator
- 50 GHz to 70 GHz
- V Band
- Insertion Loss: 2.5 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-385/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 & Commercial Communications  
Military Electronic Systems  
Research & Development

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Width 1.5 in [38.1 mm]  
 Height 0.975 in [24.77 mm]  
 Weight 0.241 lbs [109.32 g]

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

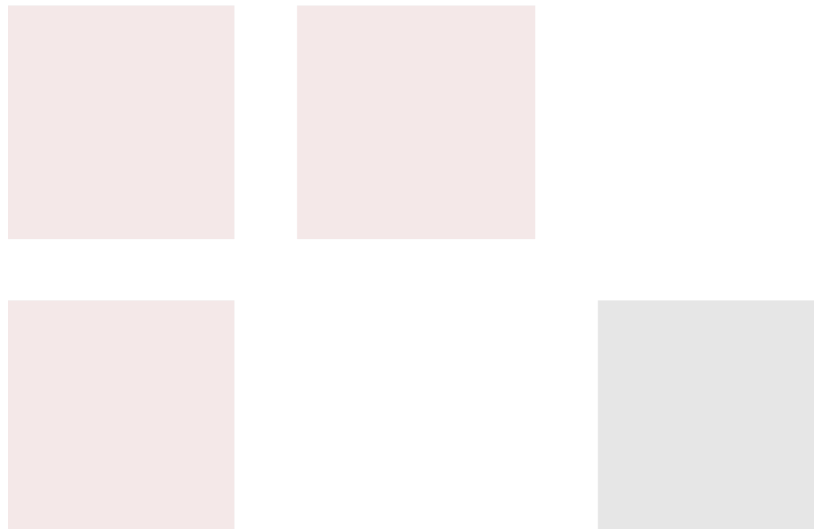
**Plotted and Other Data**

Notes:

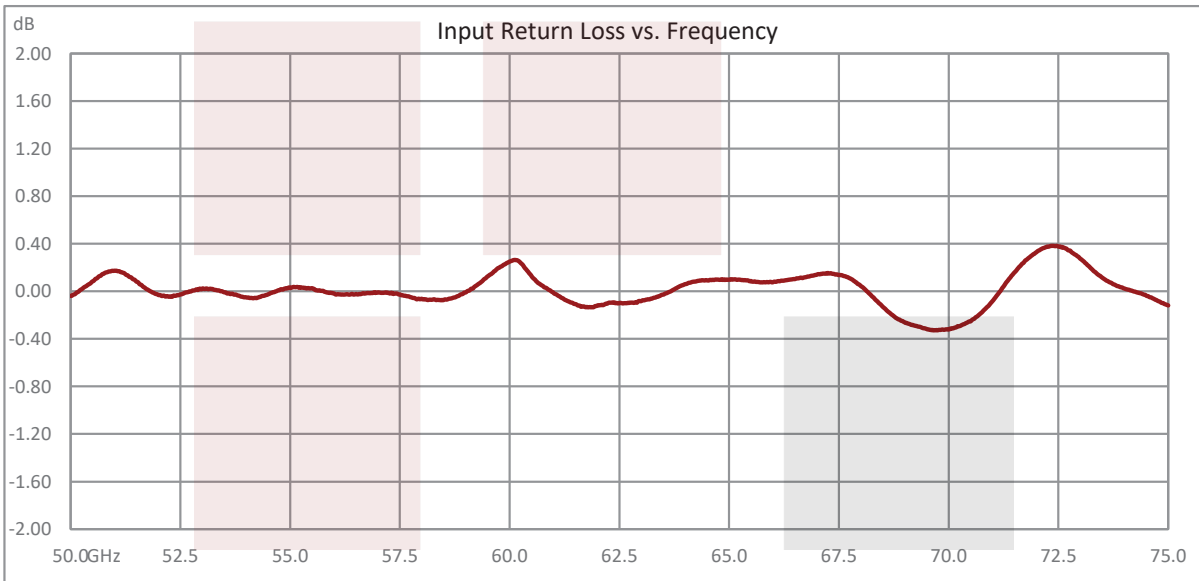
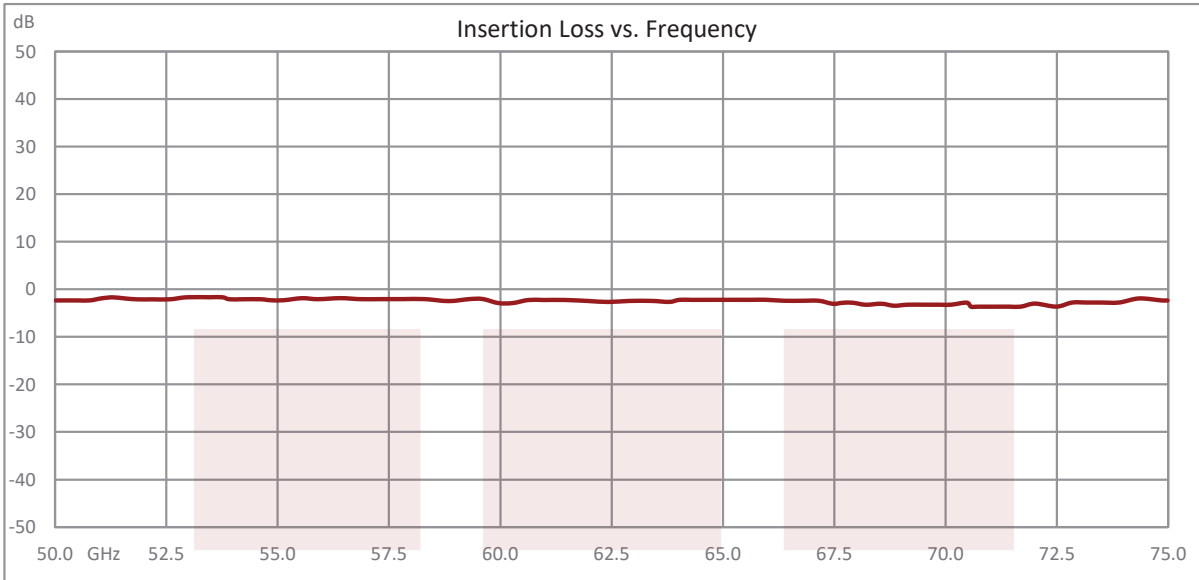
- Values at 25 °C, sea level

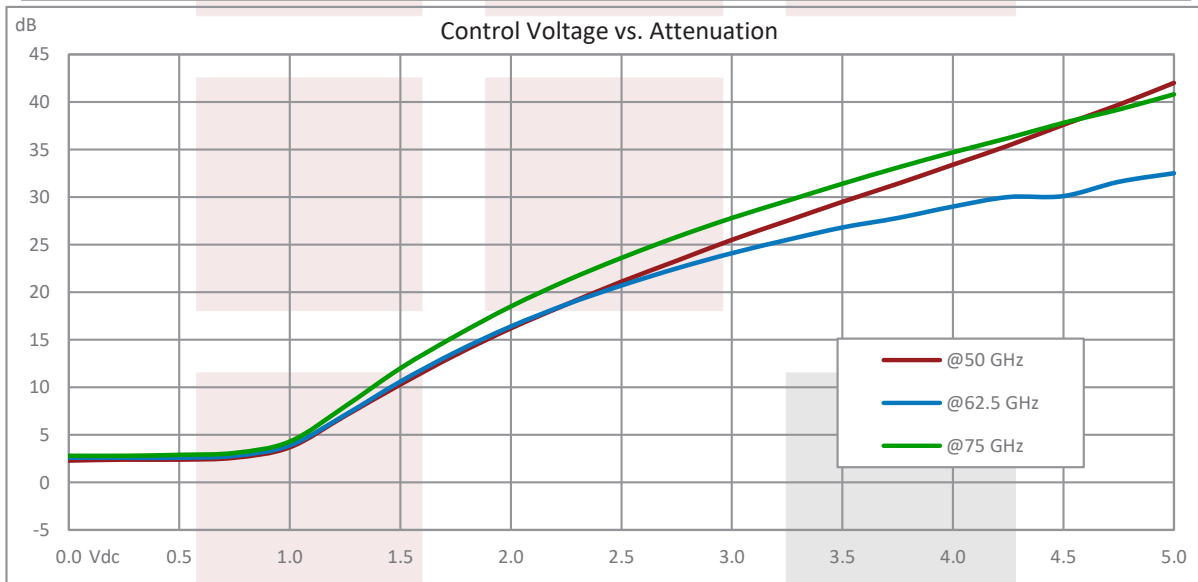
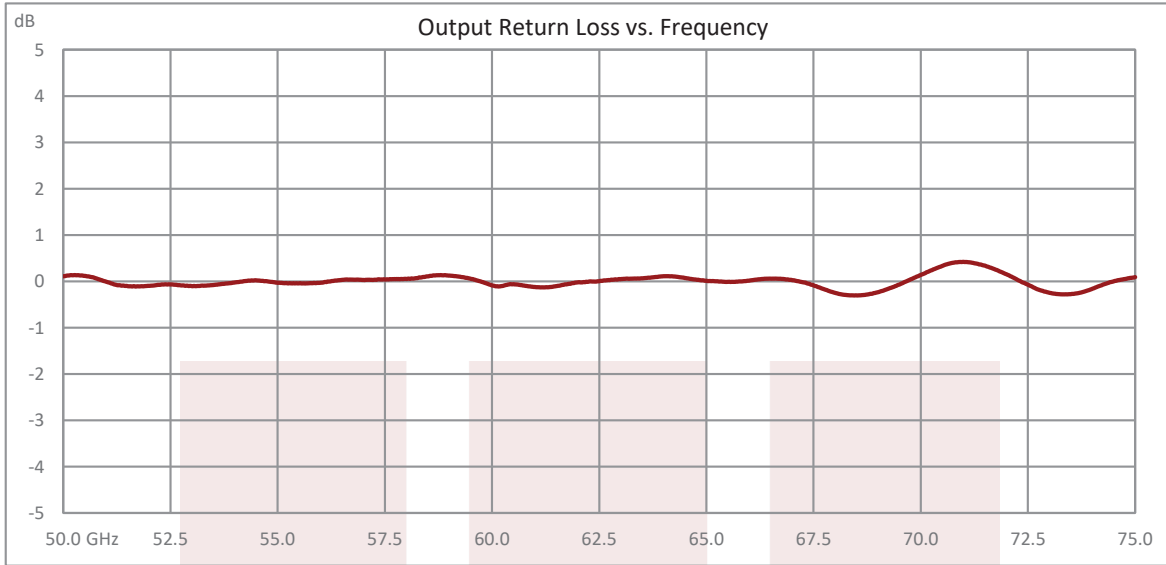
**Absolute Maximum Rating**

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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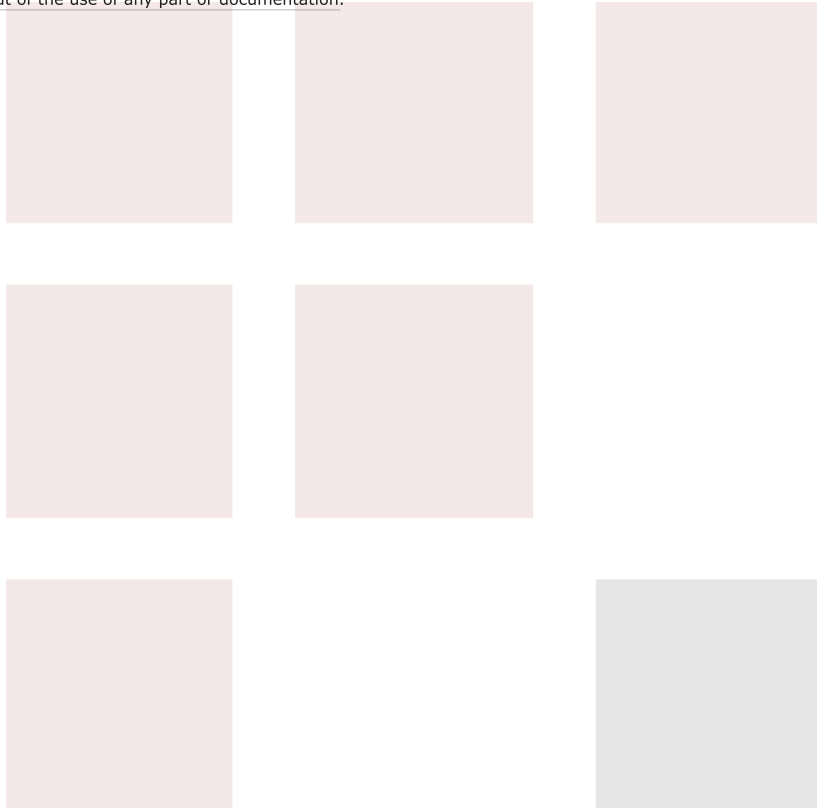
WR-15 Waveguide Voltage Variable Attenuator, V Band, 50 GHz to 75 GHz, 0 dB to 30 dB Attenuation, 2.5 dB Loss, UG-385/U Flange from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-de-

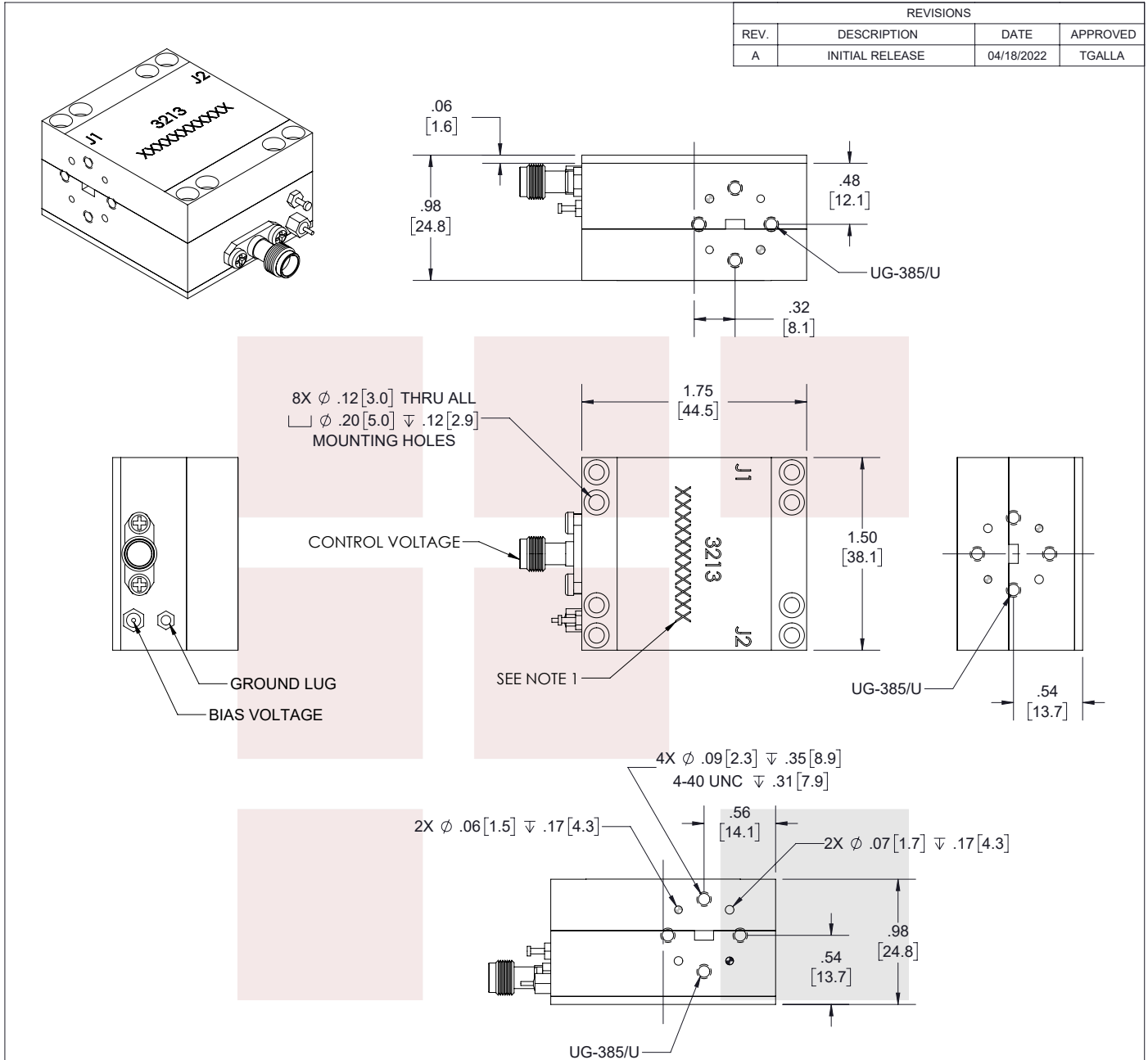
mand.

For additional information on this product, please click the following link: [WR-15 Waveguide Volage Variable Attenuator, V Band, 50 GHz to 75 GHz, 0 dB to 30 dB Attenuation, 2.5 dB Loss, UG-385/U Flange FMWGA3213](#)

URL: <https://www.fairviewmicrowave.com/undefined-url-for-pn-fmwga3213-fmwga3213-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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	TOLERANCES:		
TITLE WR-15 Waveguide Voltage Variable Attenuator, V Band, 50 GHz to 75 GHz, 0 dB to 30 dB Attenuation, 2.5 dB Loss, UG-385/U Flange	.X = ±.2 [5.08] FRACTIONS .XX = ±.02 [.51] ± 1/32 .XXX = ±.005 [.13] ANGLES ± 1°	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	SHEET 1 OF 1 SCALE N/A
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.			REV A
SIZE A	CAGE CODE 3FKR5	DRAWN BY VTHANGARAJ	ITEM NO. FMWGA3213

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