



WR-19 Waveguide Power Amplifier, U Band, 40 GHz to 60 GHz, 40 dB Gain, 24 dBm Psat, UG-383/U-M Flange

Waveguide Power Amplifiers - PEWGA3218

Features

- WR-19 Waveguide Power Amplifier
- 40 GHz to 60 GHz
- U Band
- Small Signal Gain 40 dB typ
- Output P1dB: +23 dBm typ
- Output Psat: +24 dBm typ
- VSWR 2.2:1 typ
- DC Bias +6V @ 450 mA typ
- Max RF Input Power (CW) +5 dBm
- 50 Ohm Design
- RF Input and Output Waveguide Flange UG-383/U-M
- Solder Pins for DC Bias Voltage and Ground
- Operational Temperature Range -10°C to +45°C
- Rugged and Compact Gold Plated Aluminum Package Design with an Integrated Heatsink
- RoHS Compliant

Applications

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

Description

The PEWGA3218 is a WR-19 Waveguide Power Amplifier, operating across the U Band from 40 GHz to 60 GHz. This 50 Ohm design exhibits impressive typical performance which includes 40 dB gain, +23 dBm P1dB, and +24 dBm Psat. Maximum RF input power (CW) is +5 dBm, and DC bias is +6 Vdc at 450 mA typ. The rugged and small size aluminum package design is gold plated with an integrated heatsink to ensure highly reliable operation. The RF input and output ports support a UG-383/U-M waveguide flange pattern. Solder pins are used for DC bias voltage and ground. The Power amplifier design is RoHS compliant and operates across a wide temperature range from -10°C to +45°C.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency	40		60	GHz
Small Signal Gain		40		dB
Saturated Output Power		24		dBm
Output at 1dB Compression Point		23		dBm
Input VSWR		2.6:1		
Output VSWR		1.9:1		
Operating DC Voltage	5	6	10	Volts
Operating DC Current		450		mA
Input Power (CW)			5	dBm
Operating Temperature Range	-10		45	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-19 Waveguide Power Amplifier, U Band, 40 GHz to 60 GHz, 40 dB Gain, 24 dBm Psat, UG-383/U-M Flange PEWGA3218](#)



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Electrical Specification Notes:

- 1.) DC Supply must be able to source at least 9A DC at startup.
- 2.) Open and short-circuit loads are not recommended at the amplifier output.
- 3.) Ensure proper 50 ohm load before turning the amplifier "ON".
- 4.) Reverse biasing will destroy the amplifier.
- 5.) Do not put any foreign objects inside the waveguide. Warranty will be voided.

Absolute Maximum Rating

Parameter	Rating
Operating Temperature	-10°C to +45°C
Storage Temperature	-40°C to +100°C
Total Power Dissipation	3W
Input Power (CW)	+5dBm
DC Operating Voltage	+12V

Mechanical Specifications

Length	1.5 in [38.1 mm]
Width	1.5 in [38.1 mm]
Height	1.9 in [48.26 mm]
Weight	0.05 lbs [22.68 g]
Body Material and Plating	Aluminum, Gold
Design	
DC Bias Connector	Solder Pin

Description	Input Port	Output Port
Type	WR-19	WR-19
Flange	UG-383/U-M	UG-383/U-M

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Environmental Specifications

Biasing Up Procedure

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Apply DC Supply Voltage
Step 3	Turn ON RF input

Power Down Procedure

Step 1	Turn OFF RF input
Step 2	Turn OFF DC Supply Voltage
Step 3	Remove Ground

Temperature

Operating Range
Storage Range

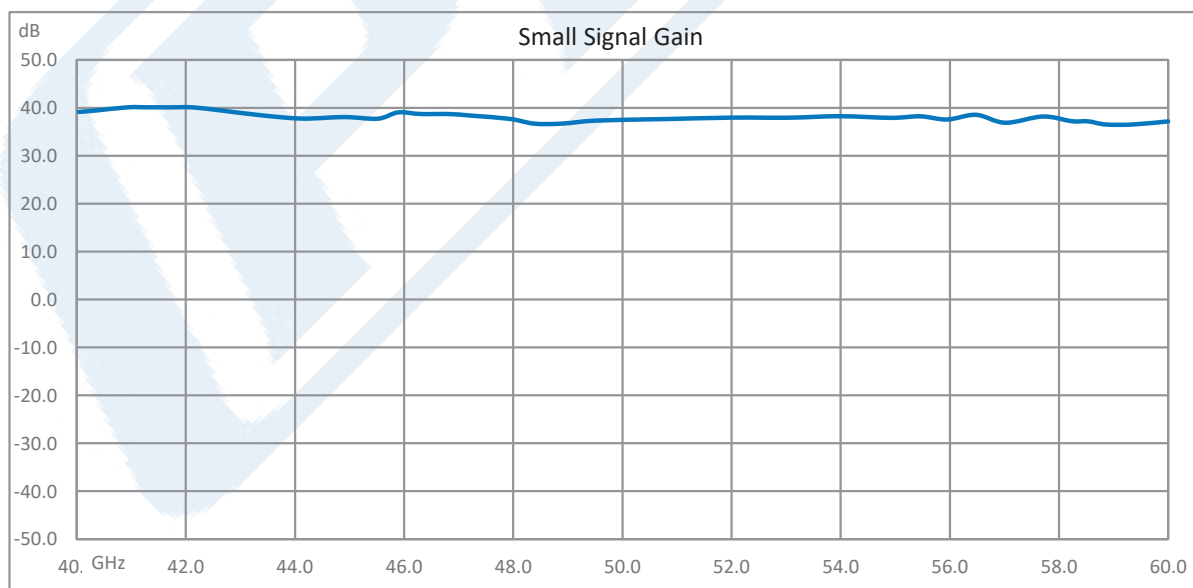
-10 to 45 deg C
-40 to 100 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data

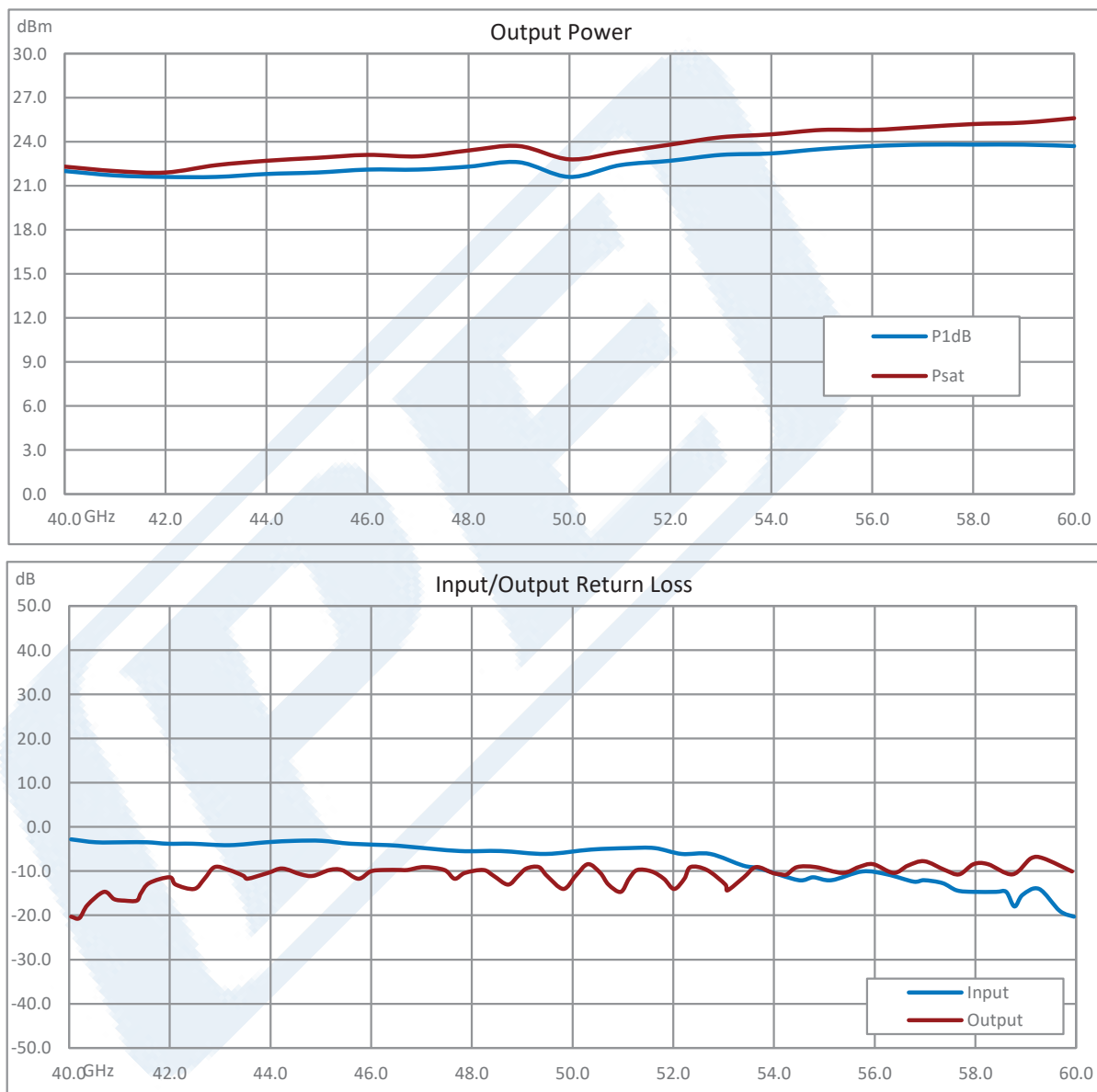


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WR-19 Waveguide Power Amplifier, U Band, 40 GHz to 60 GHz, 40 dB Gain, 24 dBm Psat, UG-383/U-M Flange from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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PEWGA3218 CAD Drawing

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