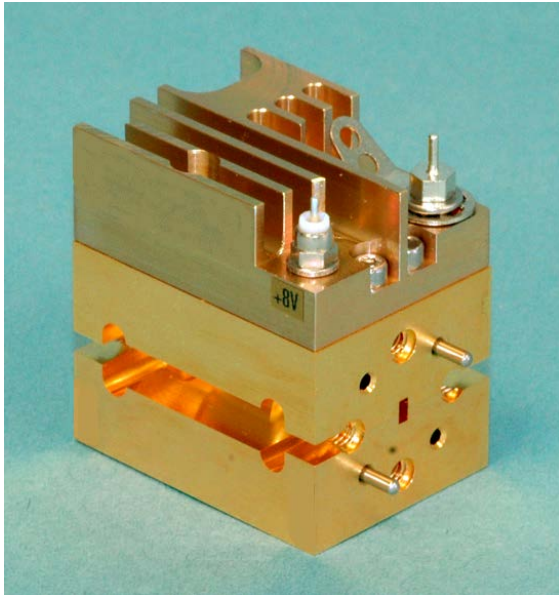


MILLIMETER-WAVE GAN POWER AMPLIFIERS



DESCRIPTION

Millitech's Gallium Nitride (GaN) based power amplifiers represent a quantum leap in output power at E-Band and W-Band with up to 2.5 Watts of output power and up to 20% PAE available in standard models. These new AMP models from Millitech offer catered performance over specific allocated bands or wideband power covering 75 GHz to 102 GHz.

The E-Band (WR-12) models cover the commercially allocated 71-76GHz and 81-86 GHz bands. The W-band models cover 75-102 GHz

Each amplifier has internal bias circuitry that generates gate control voltages, provides proper voltage sequencing and incorporates reverse

FEATURES:

- Revolutionary E-Band and W-Band Power
- Standard models up to **2.5 Watts P_{SAT}**
- Compact Modular In-Line Design
- High Efficiency
- Power combined versions for even Higher Output Power
- Standard Waveguide interfaces
- Internal voltage regulation and bias-sequencing circuitry

APPLICATIONS:

- E-Band Radio
- High Power Sources
- Test and Measurement
- Radar front-ends
- Communication subsystems
- Remote Sensing

voltage protection from a single positive external bias.

Single device models are available with nearly 1W of saturated output power. Standard models also include 2-way and 4-way Solid State Power Amplifiers (SSPAs) with up to 2.5 Watts of saturated output Power. Higher powers are available. Contact Millitech for specific details.

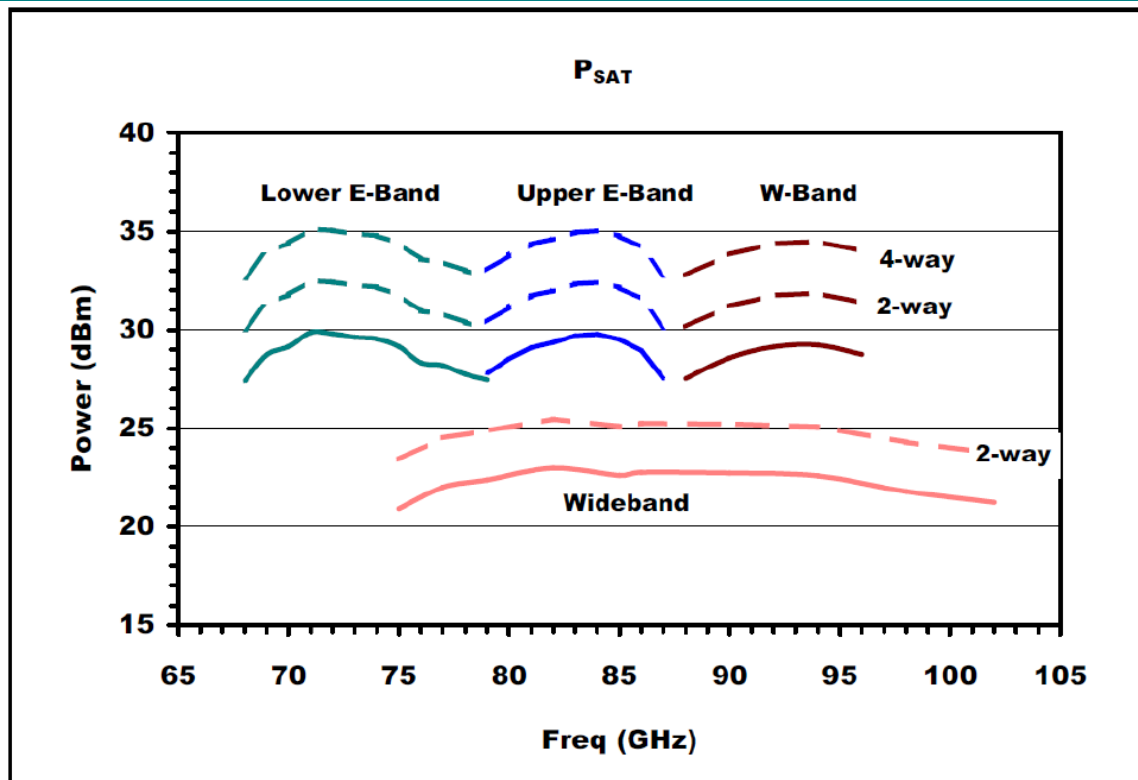
See our complete line of amplifiers (series AMP) and low noise amplifiers (series LNA) for models covering 10-130GHz. When combined with our full band active multiplier chains (series AMC), these amplifiers make excellent high power frequency extenders for conventional microwave signal sources.

SPECIFICATIONS

GaN Amplifiers

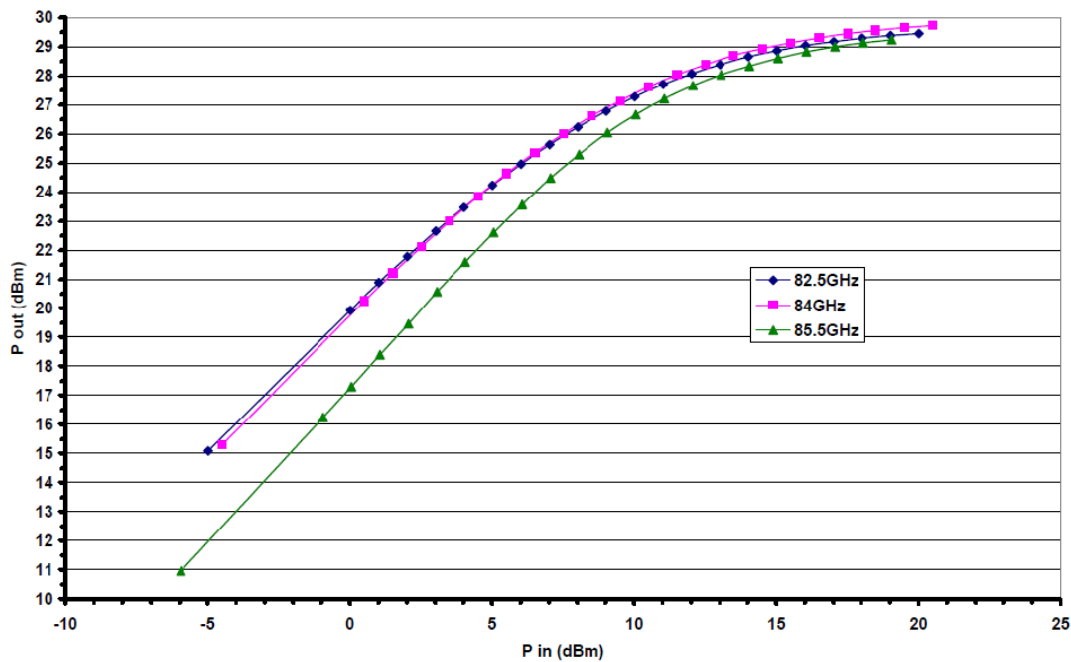
Model Number	F _{Low}	F _{High}	Gain (typ.) (dB)	1dBCP (typ.) (dBm)	Psat (typ.) (dBm)	Connector	Current (A) (typ. at Psat)	Input Voltage (V) (min-max)
AMP-12-10010	71	76	17.5@71GHz, 15.5@74GHz, 14.8@76GHz	26.0	28.5	WR-12	0.36	14-18
AMP-12-20010	71	76	17.0@71GHz, 15.0@74GHz, 14.3@76GHz	28.6	31.1	WR-12	0.71	14-18
AMP-12-41010	71	76	33.0@71GHz, 29.0@74GHz, 27.6@76GHz	31.3	33.8	WR-12	1.78	14-18
AMP-12-10020	81	86	18.0@82.5GHz, 18.5@84GHz, 17.0@85.5GHz	25.4	29.0	WR-12	0.39	14-18
AMP-12-20020	81	86	17.0@82.5GHz, 17.5@84GHz, 16.0@85.5GHz	28.0	31.6	WR-12	0.77	14-18
AMP-12-41020	81	86	33.0@82.5GHz, 34.0@84GHz, 31.0@85.5GHz	30.7	34.3	WR-12	1.93	14-18
AMP-10-10030	90	96	15.0@90GHz, 15.0@93GHz, 13.0@96GHz	24.7	29.0	WR-10	0.35	14-18
AMP-10-20030	90	96	14.0@90GHz, 14.0@93GHz, 12.0@96GHz	27.3	31.6	WR-10	0.70	14-18
AMP-10-41030	90	96	27.0@90GHz, 27.0@93GHz, 23.0@96GHz	30.0	34.3	WR-10	1.75	14-18
AMP-10-10040	75	102	15.0@75GHz, 13.5@90GHz, 14.0@102GHz	18.0	23.0	WR-10	0.21	14-18
AMP-10-20040	75	102	14.0@75GHz, 12.5@90GHz, 13.0@102GHz	20.5	25.5	WR-10	0.42	14-18

*Contact Millitech for details.

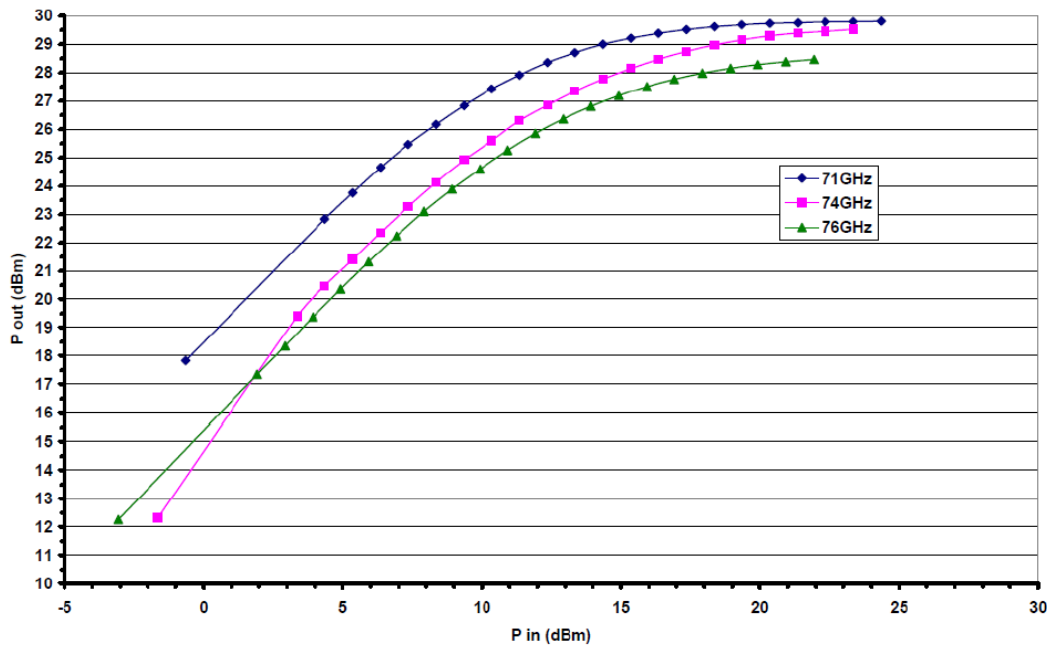


Preliminary Data

AMP-12-10020

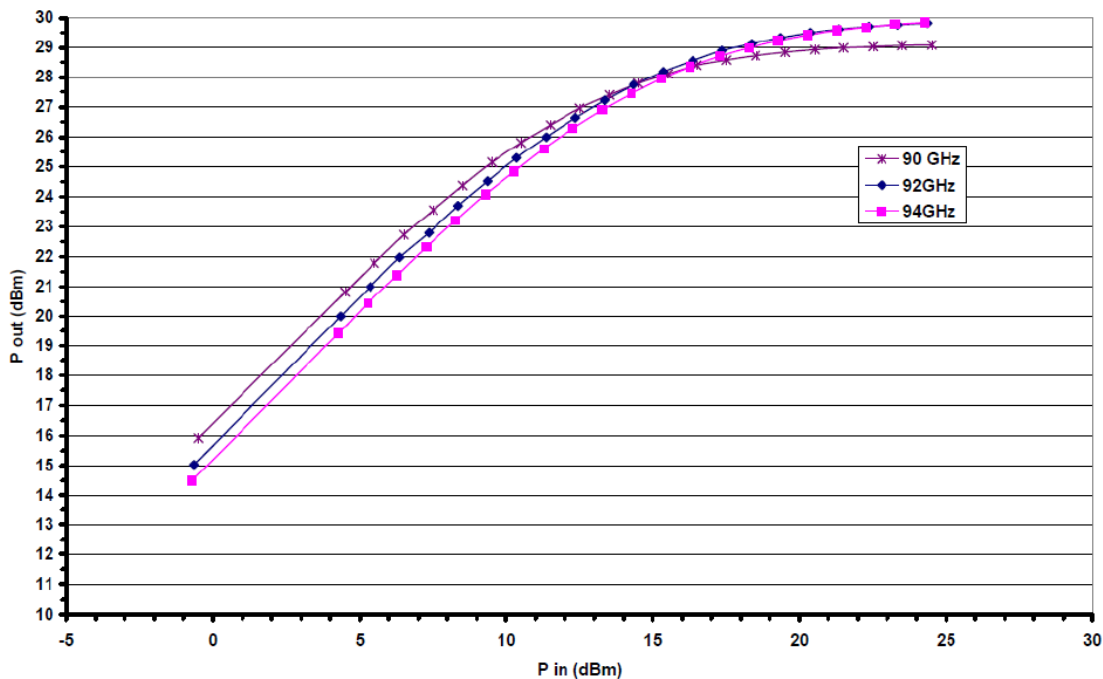


AMP-12-10010

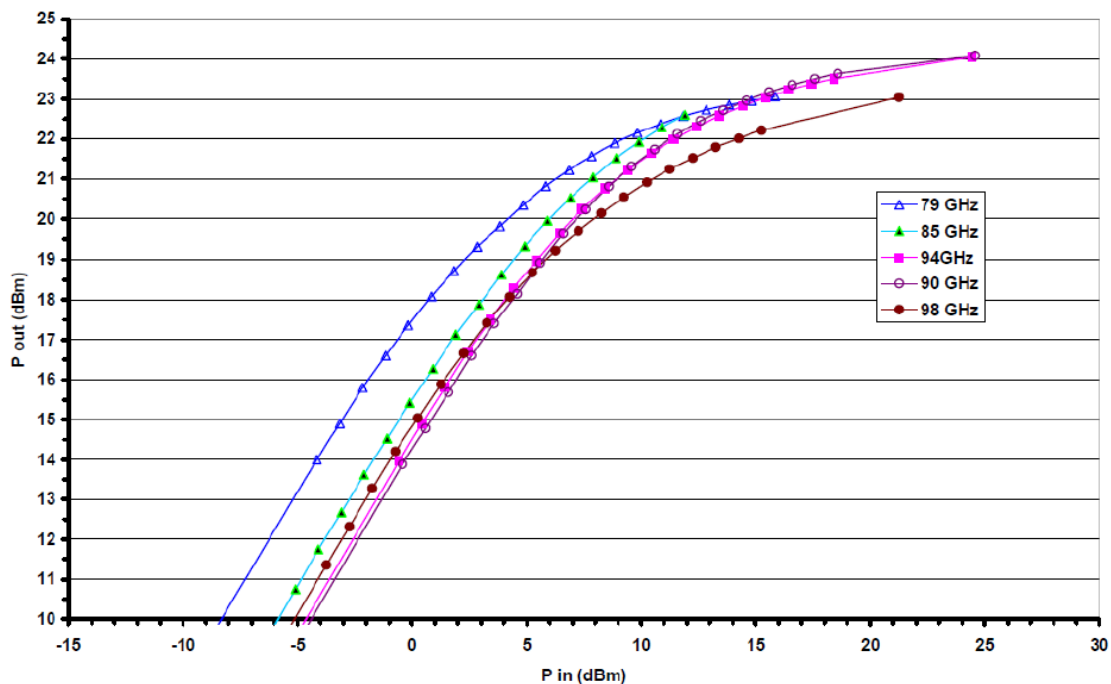


Preliminary Data

AMP-10-10030



AMP-10-10040



HOW TO ORDER

Specify Model Number AMP-XX-AAAAA
XX = Standard Connector KK – 2.92 mm connector QQ – 2.4 mm connector VV – 1.85 mm connector 42 – WR-42 waveguide 28 – WR-28 waveguide 22 – WR-22 waveguide 19 – WR-19 waveguide 15 – WR-15 waveguide 12 – WR-12 waveguide 10 – WR-10 waveguide 08 – WR-08 waveguide
AAAAA = Standard Model Number Choose a standard model number from our product list above. If none of these products meet your requirements, please feel free to contact Millitech for a special order.
Please specify frequency range for all narrowband units.

For outline drawings and more information, see <http://www.millitech.com/pdfs/specsheets/IS000034-AMP.pdf>