
BROADBAND POWER AMPLIFIER

(BBA-120-2-6G)



www.amcad-mw.com

DESCRIPTION :

120W Wideband Amplifier with a 2GHz-6GHz Frequency range. Output power is 50dBm typical, with 49dB gain at PSat with +/- 1.5dB flatness, 53dB small signal Gain.

TYPICAL APPLICATIONS :

- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- Research and Development
- Cellular Base Stations

MAIN FEATURES :

- 53dB small signal gain
- 50dBm Psat
- Overvoltage Protection
- Overcurrent Protection
- Remote control
- Remote infos (T°, Power, Current...)



Specifications Table

Parameter	Min	Typ	Max	Units
Frequency Range	2		6	GHz
Output Power		120		W
Small Signal Gain		53		dB
Small Signal Gain Flatness		+/- 3.5		dB
Power Gain Flatness @P _{sat}		+/- 1.5		dB
Input Power @P _{sat}		2	3	dBm
2nd Harmonic @P _{sat}		-20	-12	dBc
3rd Harmonic @P _{sat}			-30	dBc
Spurious Signal @P _{out} = 27W		-65		dBc
VSWR Input			1.75:1	
VSWR Output			3:1	
C/I3 3dB Backoff 100KHz/600MHz		-33	-30	dBc
Operating AC Voltage	100		240	VAC
Power Consumption @P _{out} = 100W			500	W

Environmental specifications

Parameter	Description
Operating Temperature	10°C to +60°C
Storage Temperature	-25°C to +80°C

Absolute maximum ratings

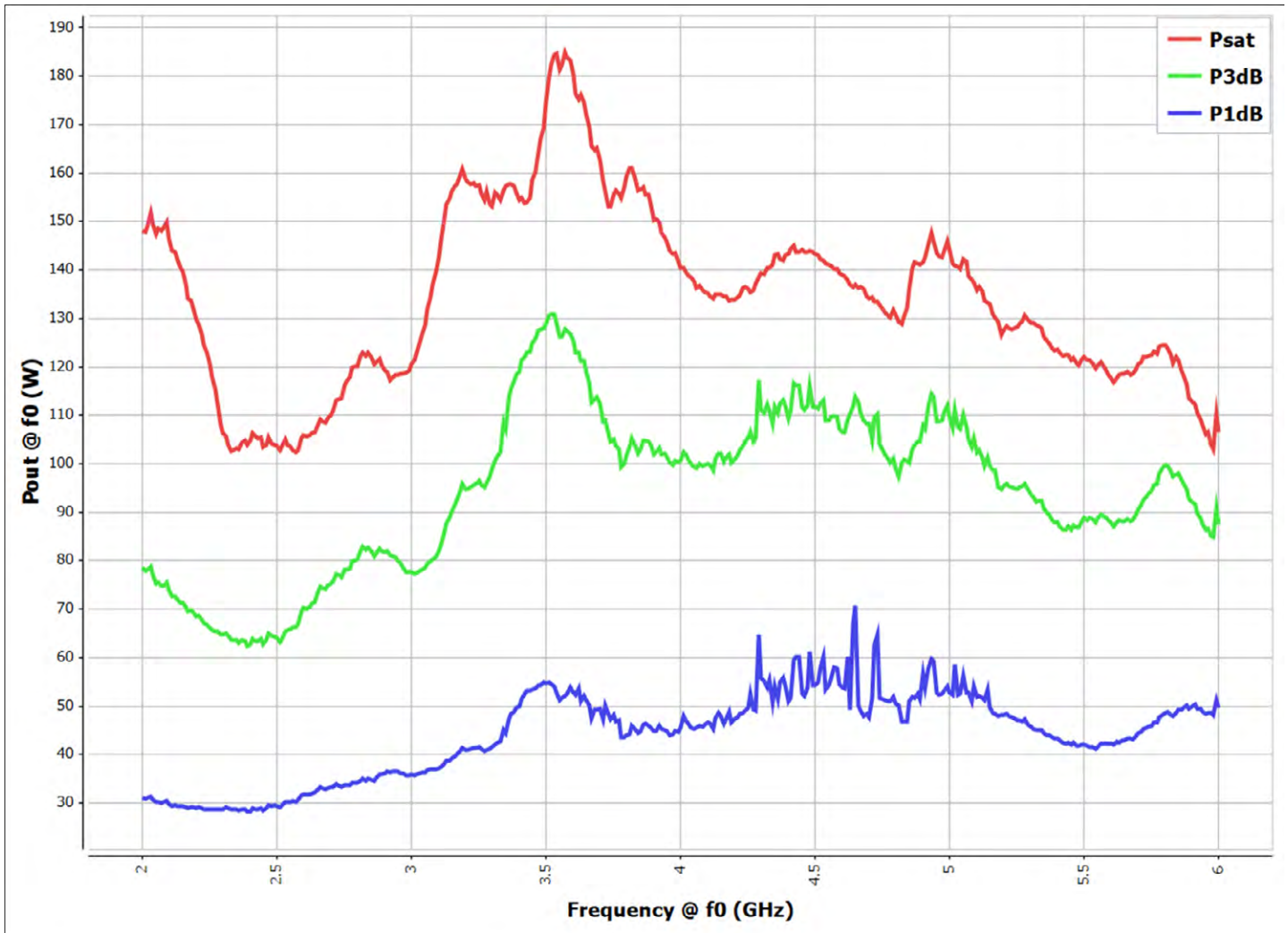
Parameter	Rating
Supply Voltage	85 - 265 VAC
Max Power	500 W
Input RF Power	+10dBm

Mechanical specifications

Specification	Details
Dimensions	Chassis 19" with handles
Height	3U
Weight	20Kg
Input / Output Connectors	SMA / N Type

Typical Measurements Plots (CW)

Output Power:



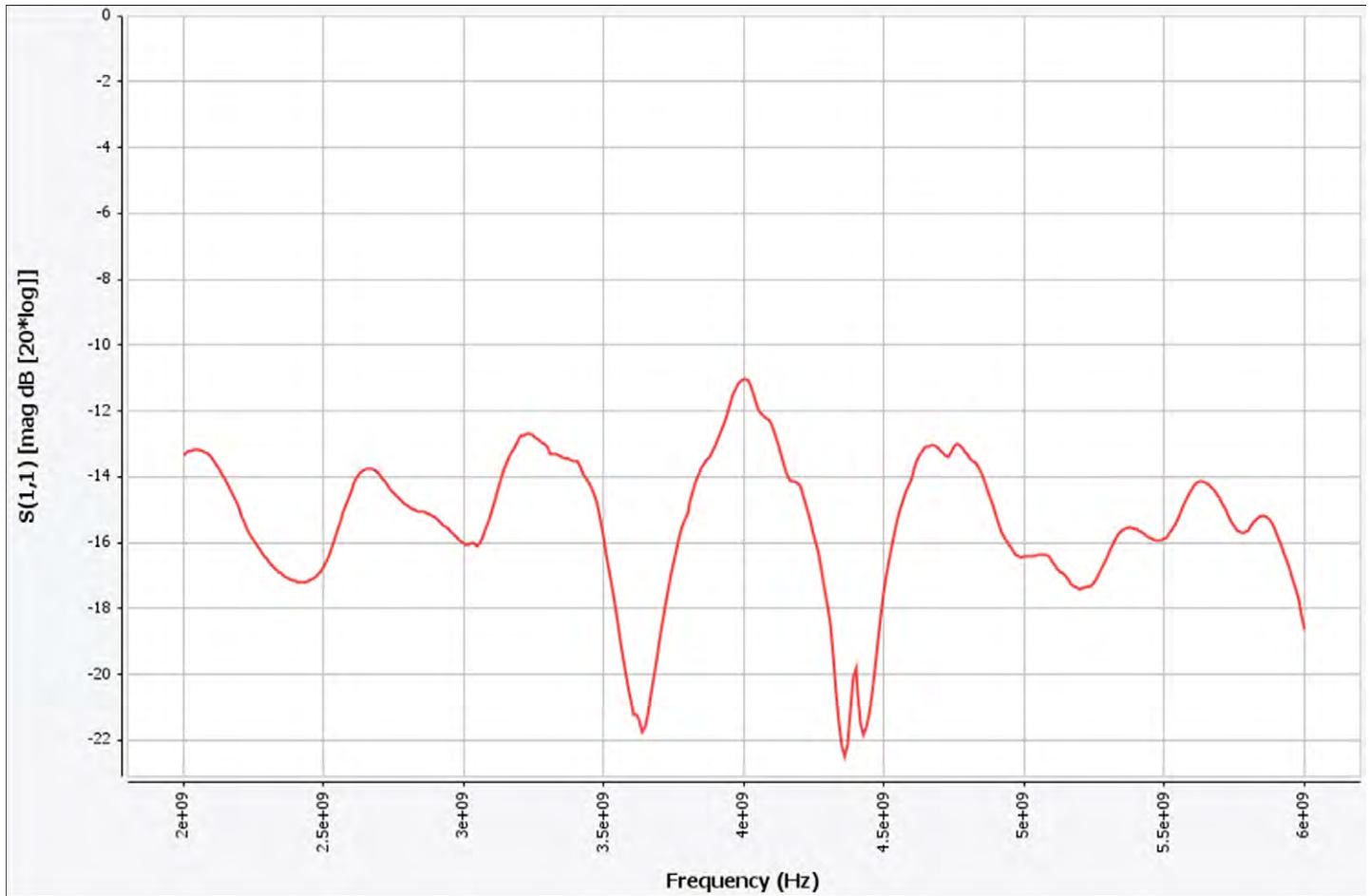
Typical Measurements Plots (CW)

Gain :



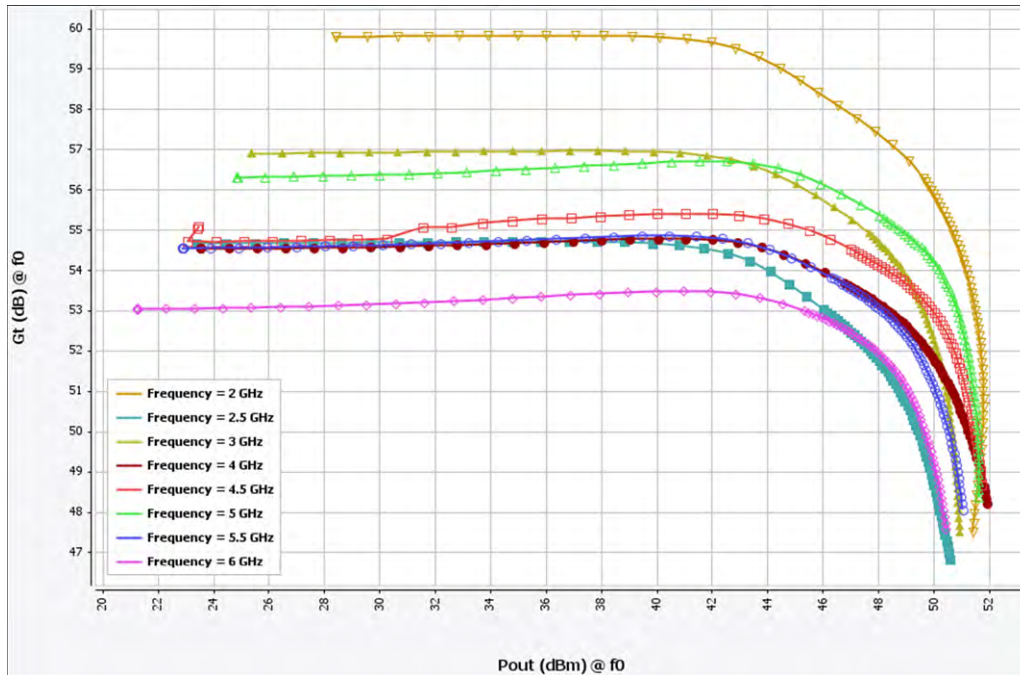
Typical Measurements Plots (CW)

Input Return Loss @PSat :

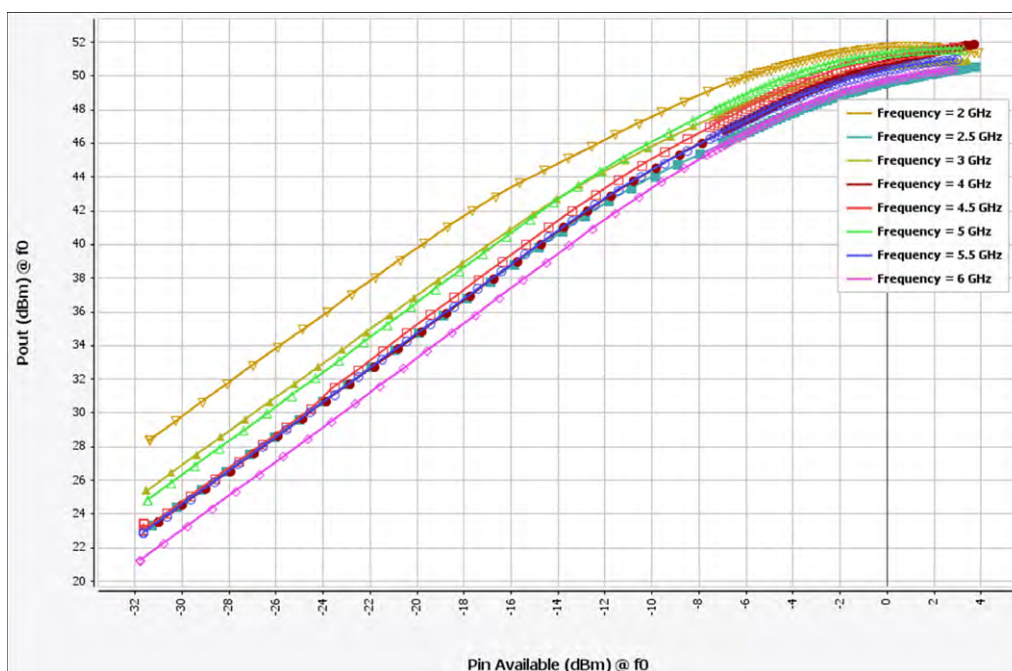


Typical Measurements Plots (CW)

Gain vs Output Power :

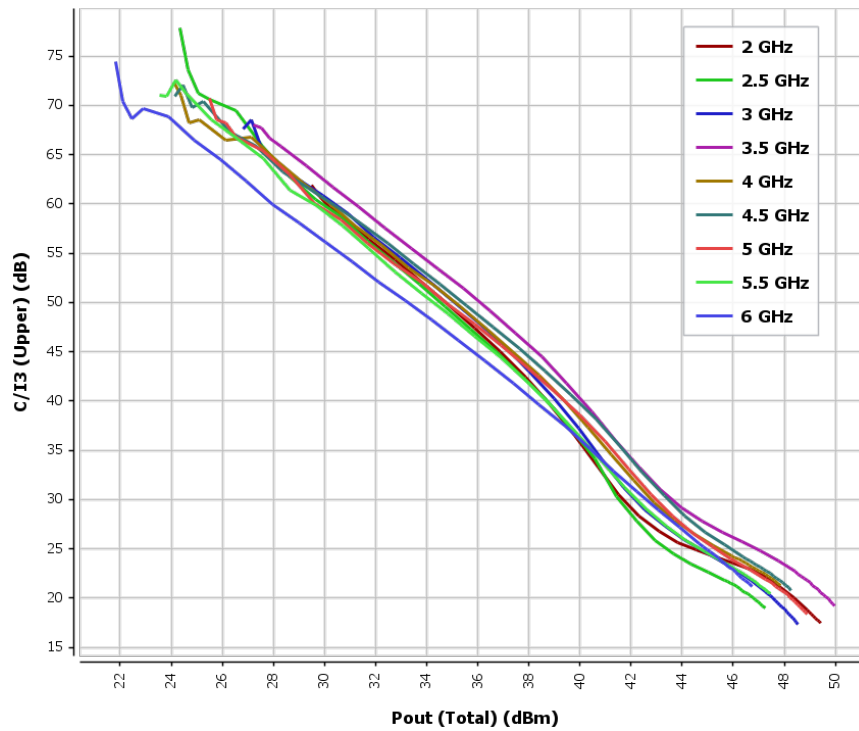


P_{in}/P_{out} :

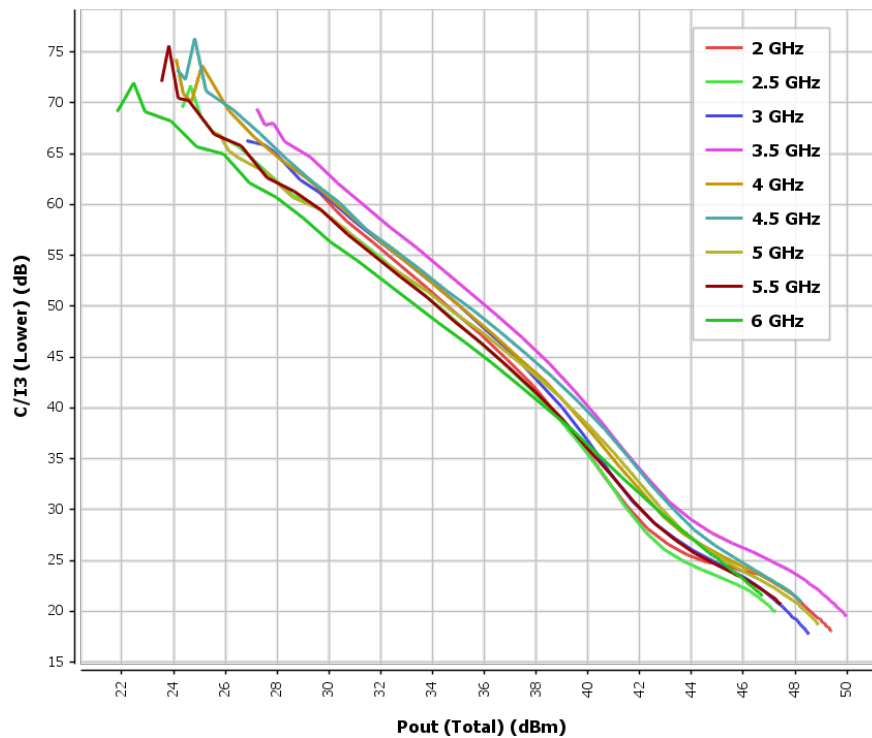


Typical Measurements Plots (CW)

Left C/I3 5MHz Delta :



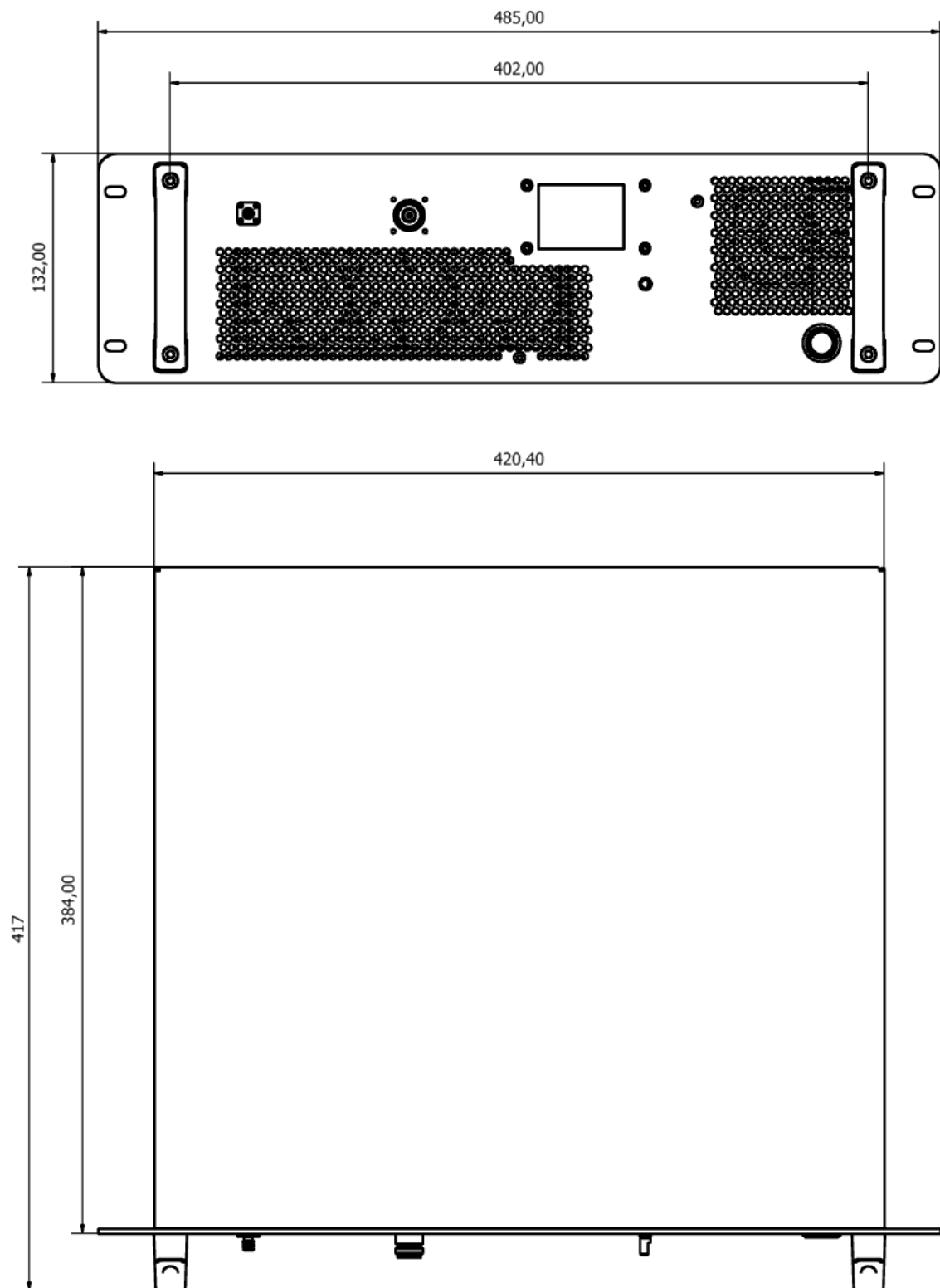
Right C/I3 5MHz Delta :



Outline Drawing

All dimension are in millimeters

Tolerances +/- 2 mm unless otherwise specified



OTHER PRODUCTS

Solid-state Class AB Broadband design Based on GaN transistor Technology

Ultra Broadband	RF Bandwidth	Gain / Psat
UBBA-2-1-26G	1-26,5 GHZ	40dB / 2W
UBBA-20-2-20G	2-20 GHZ	48dB / 20W

Broadband	RF Bandwidth	Gain / Psat
BBA-120-07-3G	0,7-3 GHZ	50dB / 120W
BBA-200-1-2G	1-2 GHZ	53dB / 200W
BBA-50-1-6G	1-6 GHZ	46dB / 50W
BBA-120-2-6G	2-6 GHZ	50dB / 120W
BBA-80-2-8G	2-8 GHZ	49dB / 80W
BBA-40-6-18G	6-18 GHZ	57dB / 40W
BBA-20-26-40G	26,5-40 GHZ	40dB / 20W
BBA-25-05-6G	0.5-6 GHZ	55 dB / 25W

➤ **The brochures for these products are available on request. Please feel free to contact us at sales@amcad-mw.com**

Warranty

Any AMCAD product comes with a two-year parts and labor warranty, when returned to our workshops. A phone support service is also available for the same period.

At the end of the initial two-year period, a further contract can be subscribed, including:

- a preventive functional check and calibration of the modules (onsite or in our workshop)
- a further two-year warranty period

Quality Regulations & Environment

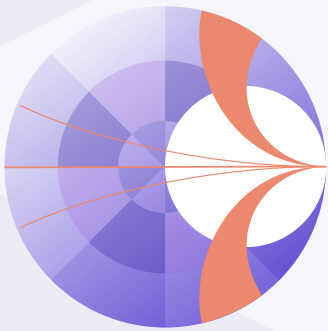
AMCAD Systems and all modules are compliant to the applicable European directive and hold the CE mark.

- Products are assembled in France.
- Serial number-based lifecycle management
- All products are 100% tested (test reports provided)
- AMCAD only uses RoHS compliant components and does not use substances banned by the COSHH regulation.
- AMCAD complies with the relevant national

regulations related to the safety and health of its employees against hazardous substances.

- As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice.

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