

## A1020

### RF broadband power amplifier

10 kHz – 250 MHz / 75 W

100 kHz – 250 MHz / 25 W

100 kHz – 300 MHz / 75 W

100 kHz – 400 MHz / 75 W

1 MHz – 400 MHz / 180 W



## DATA SHEET

The RF broadband power amplifiers from the A1020 product range are robust class-A/-AB amplifiers for EMC testing and general laboratory applications.

Stability under all load conditions occurring in practice, a wide frequency range, low degree of distortion, and a fair purchase price are the main characteristics of these amplifiers.

Optimum cooling is ensured through implementation of a high-power heat sink with temperature-controlled fans. Sophisticated protection equipment ensures hardware integrity, even at extreme load conditions.

The devices are optionally available for rack assembly.

## Features

- Universally applicable RF amplifier with 50  $\Omega$  input/output
- Ultra-broadband frequency response through several decades
- High degree of linearity ensures nearly true signal reproduction with all types of modulations
- Low degree of distortion for clear test signals
- High amplification stability over the temperature range
- Optimum cooling concept ensures lowest-possible noise generation at a very low weight
- Highly efficient power supply with a performance factor of almost 1 and universal long-range input
- Monitor output parallel with the amplifier output for monitoring of the test signal
- Interlock connection for safe test designs

## Applications

- General applications for research, development and testing
- EMC testing (e.g. with CDN, coupling probes, antennas)
- Radio engineering
- Material testing
- Medical engineering
- Component tests
- Laser technology
- Plasma technology

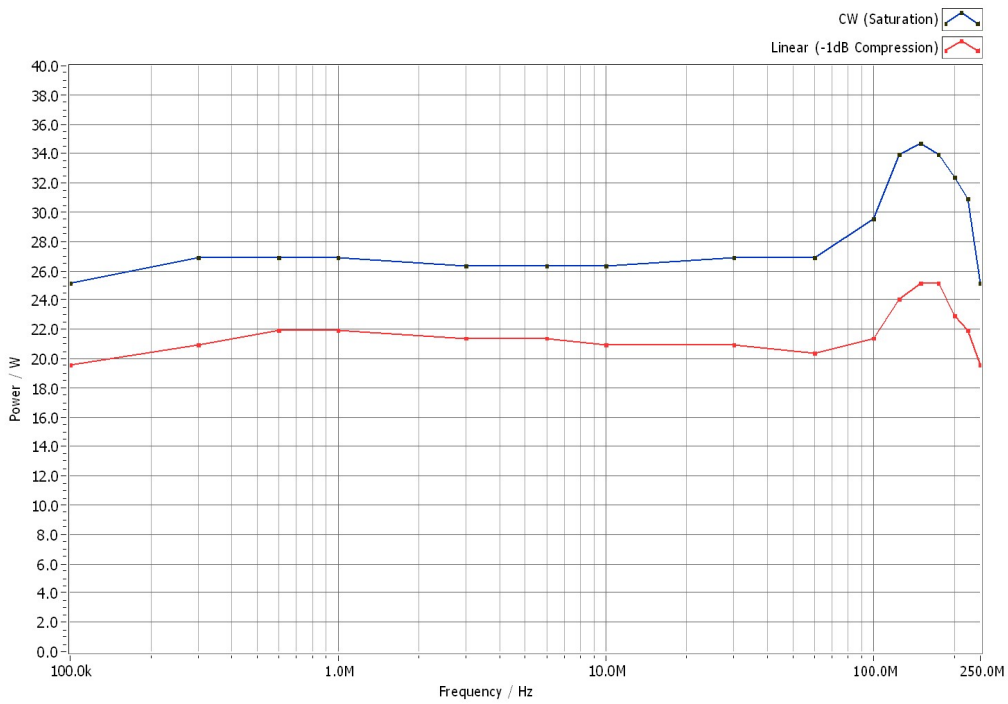
## Rear of the amplifier



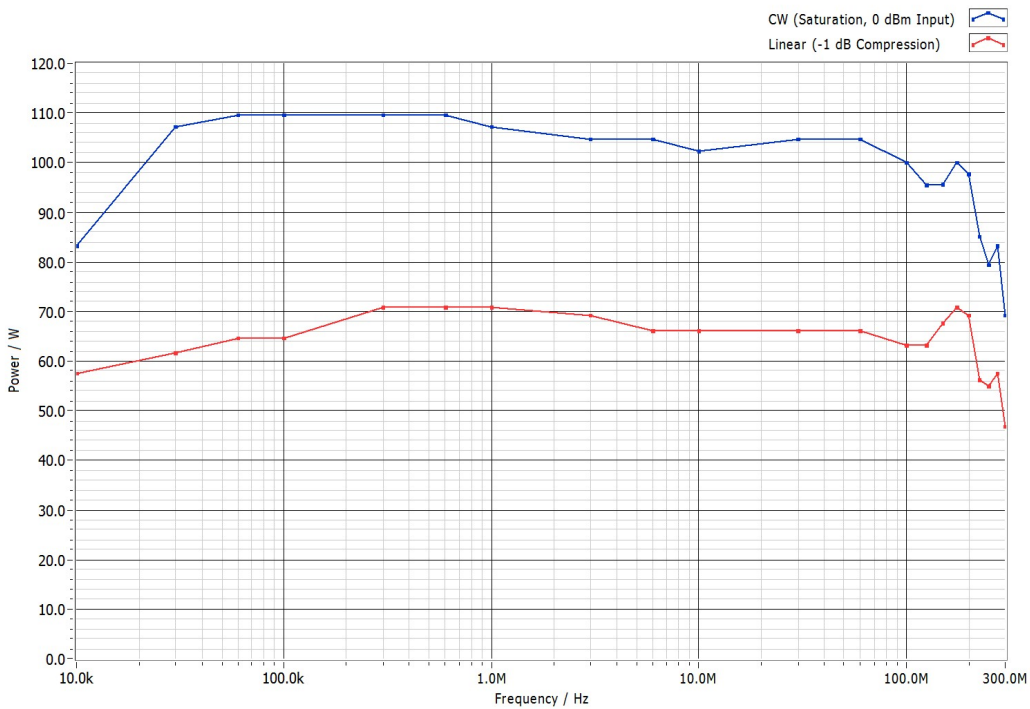
## Specifications

Parameters	Models				
	A1020-25-250	A1020-75-250	A1020-75-300	A1020-75-400	A1020-180-400
Operating Mode	Class A/AB				
Frequency Range	100 kHz – 250 MHz	10 kHz – 250 MHz	100 kHz – 300 MHz	100 kHz – 400 MHz	1 MHz – 400 MHz
Output Power					
Nominal	25 W	75 W	75 W	75 W	180 W
Linear @ 1 dB compression	20 W	50 W	50 W	50 W	100 W
Monitor Output	50 $\Omega$ monitor output. Level is -40 dB lower than amplifier output level.				
Gain	46 dB nominal	51 dB nominal	51 dB nominal	51 dB nominal	56 dB nominal
Flatness	$\pm 1.5$ dB maximum				
Input Power For Rated Output	1 mW / 0 dBm				
Input / Output Impedance	50 $\Omega$				
Input VSWR	1.5 : 1 max.				
Harmonic Distortion	< -20 dBc @ 20 W	< -20 dBc @ 50 W	< -20 dBc @ 50 W	< -20 dBc @ 50 W	< -20 dBc @ 100 W
Noise Figure	typ. 5 dB	typ. 7 dB	typ. 7 dB	typ. 7 dB	tbd
Spurious Output	< -75 dBc bei 10 W				
Protection	RF INPUT: Unit will withstand an input signal of +13 dBm or 1 Vrms max. RF OUTPUT: Fully protected against output load VSWR & out-of-band operation THERMAL: auto-reset				
RF Connector	N, female				
Physical Characteristics					
AC Power	88 - 264 VAC / 47 – 63 Hz				
Operating Temperature	10 °C to 55 °C				
Humidity	80% or less at 40 °C / non-condensing				
Cooling	Forced air				
Dimensions (WxHxD)	449 x 133 x 435.5 mm				
Weight	Approx. 10 kg				Approx. 15 kg

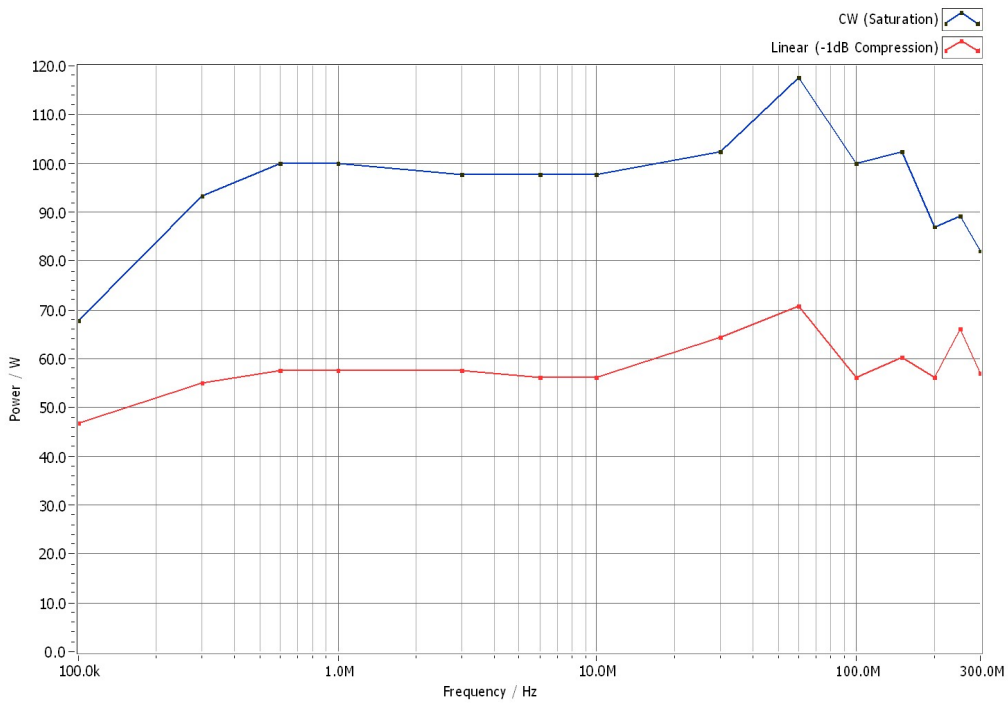
### Output power A1020-25-250



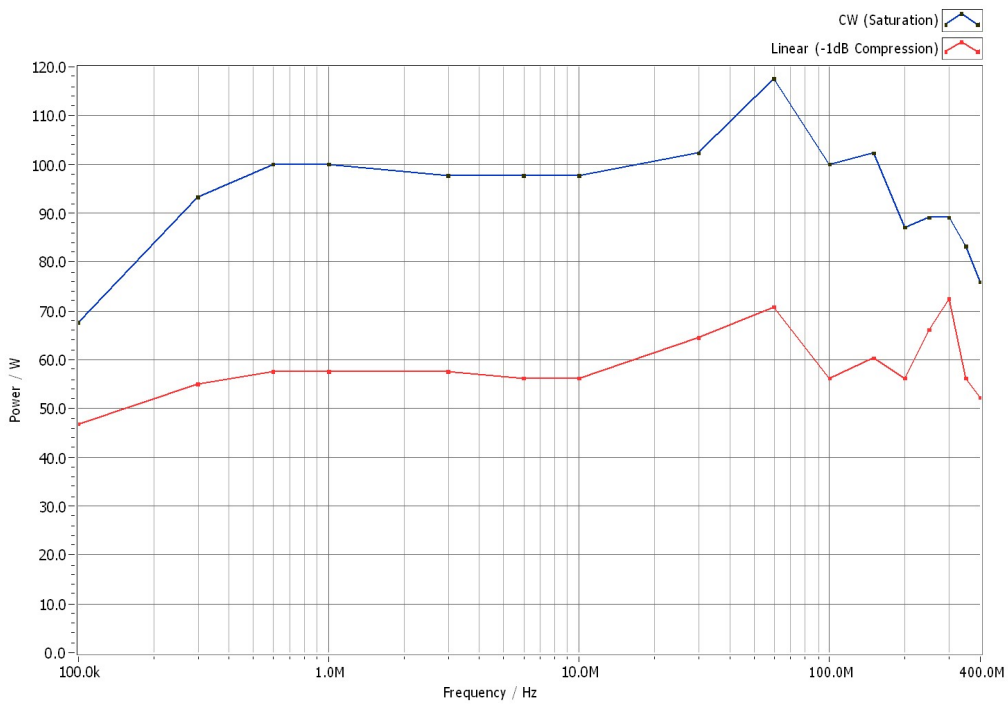
### Output power A1020-75-250



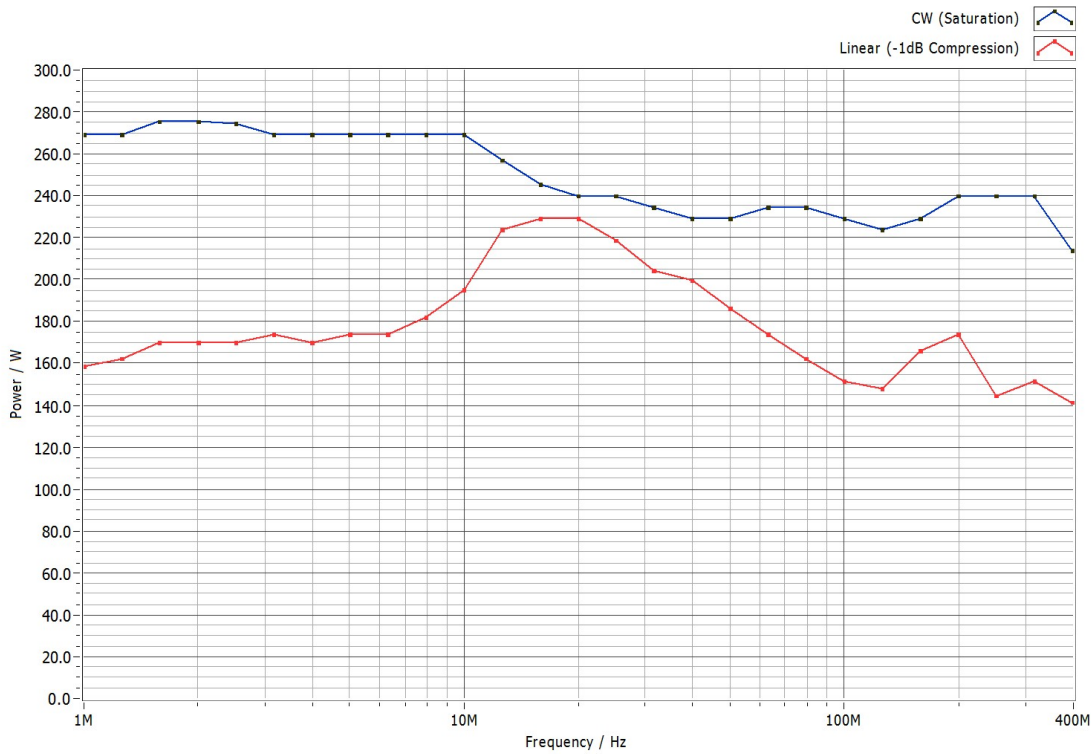
### Output power A1020-75-300



### Output power A1020-75-400



## Output power A1020-180-400



## Ordering information

10200010	A1020-25-250; RF power amplifier 100 kHz - 250 MHz, 25 W
10200020	A1020-75-300; RF power amplifier 100 kHz - 300 MHz, 75 W
10200030	A1020-75-400; RF power amplifier 100 kHz - 400 MHz, 75 W
10200040	A1020-75-250; RF power amplifier 10 kHz - 250 MHz, 75 W
10200050	A1020-180-400; RF power amplifier 1 MHz - 400 MHz, 180 W