

Wide Band Radio Frequency Amplifier WBA 20

Features:

- ✓ 20 Watts Output
30 Watts typical saturated output power
- ✓ 20MHz-300MHz
- ✓ 24 V Industrial supply input
- ✓ Mismatch tolerant
- ✓ Unconditional stable
- ✓ Gain adj. 20...45 dB
- ✓ Temperature compensation
- ✓ Thermal overload protection
- ✓ Over voltage and current protection
- ✓ Status monitoring



Application:

The amplifier series WBA has been designed with a special focus on acoustic-optical applications in the laser field. Examples are **Acousto-Optic-Modulators, deflectors and pulse pickers**. They can also be used for other application fields.

General:

The WBA 20 is a high linear **class "A"** RF amplifier, covering a wide frequency spectrum with up to **20 watts** of RF output power with low gain variation over the entire frequency band from **20 to 300 MHz**. Accurate settings in the test increase unit-to-unit accuracy and provide excellent RF power stability. This compact and lightweight amplifier is tuned to an excellent signal-to-noise ratio with high linearity and offers high **intermodulation** characteristics with high overdrive resistance to increasing the **Intercept 3 point**. The fine-adjustable and high amplification allows easy integration into existing systems or new developments. The amplification factor can be **adjusted** with a small screwdriver by means of a user-accessible internal potentiometer. All operating modes are **indicated by two LEDs** on the top cover.

Properties:

Gain variation	Sideband	Channel cross talk	Input	Intermodulation
Full span +/- 0.5dB	10 Watts -70dBc	1 st modulated - all others CW	VSWR	10Watts Output Power

Controls: Gain setting due user accessible potentiometer.
Options: An optional heat sink and fan are available upon request.
Accessories: RF-Cable and adaptors /power supply/power splitter/ multi-channel RF synthesizer.

Specification:

Electrical	MIN	Max	Unit
Output power (into 50Ω) @1 dB	na	20 @50Ω	W
Power supply	23.5	24.5	V
Input current	2.8	3.3 @20W-50Ω	A
Power loss	45	60	W
Maximum permissible VSWR for 10 W output		2.0	-
Frequency	20	300	MHz
Gain flatness	+/- 0.5	+/-0,75	dB
Gain set	20	45	dB
Noise figure	3,5 (@20dB gain)	6 (@45dBGain)	dB
Input impedance		50	Ω
RF Input power	-3	20	dBm
Input VSWR	-	1.2	-
Max input power no damage		23	dBm
Output impedance		50	Ω
Input connector SMA,SMB		Female	-
Output connector SMA ,SMB		Female	-
Dynamic response			
2 nd Harmonic @ P 1 dB	-35		dBc
3 rd Harmonic @ P 1 dB	-30		dBc
Third-order intercept point	58		dBm
Thermal			
Temperature drift	-	+/- 0,01	W/k
Time to achieve stability		300	s
Ambiance / Installation / Transport			
Cooling : Conductive - through base	5	+55	°C
Thermal shut down trip threshold		60	°C
Storage temperature	-20	+125	°C
Transport temperature (temporary)	-20	+150	°C
Relative humidity in storage		90	%
Ambient temperature	+5	+75	°C
Relative humidity during operation		75	%
Ambient conditions	Atmospheric, room air , max.3000m above sea level		
Body Dimensions L x W x H	-	150x80x26,5	mm
Weight		300	g

Dimension: (mm)

