bkt Elektromechanik Entwicklungs- und Produktions GmbH

Wide Band Radio Frequency Amplifier
WBA 10

Features:

- ✓ 10 Watts Output
- ✓ 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
- ✓ Option: Serial interface

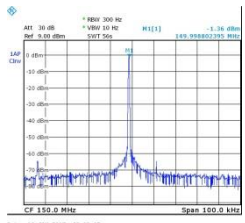
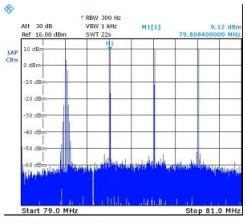
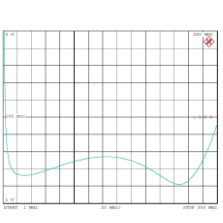
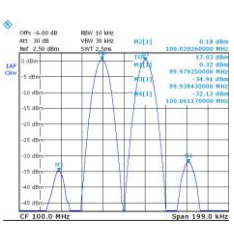
Application:

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:

WBA10 is a linear **class "A" RF broadband** amplifier which covers a wide frequency spectrum with up to **10 watts RF** output power and **flat gain variation** over the entire frequency band from **20 up to 300MHz**. The highly reproducible unit-to-unit settings on test rig ensure excellent **gain stability** over the whole operating temperature range. This compact and lightweight amplifier is perfectly designed for a high signal-to-noise ratio, good linearity and special inter-modulation characteristics to achieve **a high 3rd order Intercept Point**. The **fine tuneable** and **high gain** allows an **easy integration** into existing systems or new developments. The gain can be adjusted by an **internal user-accessible potentiometer**. The operating **status is indicated** by two LEDs.

Properties:

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

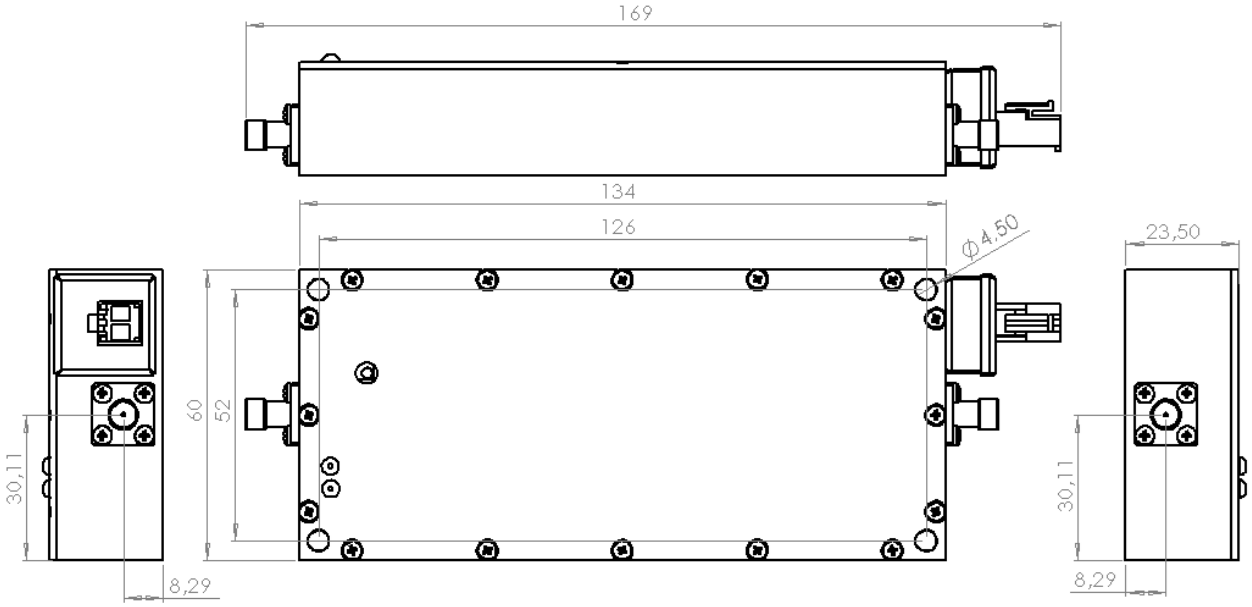
bkt Elektromechanik
Entwicklungs- und Produktions GmbH
Egenrieder Str. 5 D-82390 Eberfing/Germany

Phone: +49 (0)8802 /9134-0
Fax: +49 (0)8802 /9134-99
mail@bkt-online.de www.bkt-online.de

Specification:

Electrical	MIN	Max	Unit
Output power (into 50Ω) @1 dB	na	10 @50Ω	W
Power supply	23.5	24.5	V
Input current	1,8	2,6@10W-50Ω	A
Power loss	44	51	W
Maximum permissible VSWR for 10 W output		2.0	-
Frequency	20	300	MHz
Gain flatness	+/- 0.5	+/-0,75	dB
Gain adjustment	20	45	dB
Noise figure	3,5 @20dB gain)	6 (@45dBGain)	dB
Input impedance	50		Ω
RF Input Power	-5	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			
2nd Harmonic @ P 1 dB	-35		dBc
3rd Harmonic @ P 1 dB	-30		dBc
Third-order intercept point	53		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 , max3000m above sea level		
Body dimensions L x W x H	-	134x60x23,5	mm
Weight		180	g

Dimension: (mm)



bkt Elektromechanik
Entwicklungs- und Produktions GmbH
Egenrieder Str. 5 D-82390 Eberfing/Germany
Phone: +49 (0)8802 /9134-0
Fax: +49 (0)8802 /9134-99
mail@bkt-online.de www.bkt-online.de