ALARIS KUHNE
INSPIRING THE NEXT RF SOLUTION

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V 1.0

KU PA BB 010600 – 15 A

Manual

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A DIVISION OF ALARIS THE RF TECHNOLOGY GROUP

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Specification

Specifications (Ta = 25 °C):

Frequency range		100 ... 6000 MHz
Input power		
For P3dB		typ. 3 dBm, max. 5 dBm
Maximum		+ 17 dBm
Output power		
P1dB		min. 46 dBm (CW)
P3dB		typ. 47 dBm (CW)
Output power P_{sat}	0.1-1.0 GHz	15 W typ. @ 0-5 dBm input power
	1.0-3.0 GHz	10 W typ. @ 0-5 dBm input power
	3.0-6.0 GHz	8 W typ. @ 0-5 dBm input power
Duty cycle		Up to 100% without limitations
Gain		
Small signal gain		≥40 dB
Large signal gain		≥35 dB @ 0dBm Pin
Harmonics		
Harmonics 2nd		<-12 dBc @ nominal Pout (CW)
Harmonics 3rd		<-12 dBc @ nominal Pout (CW)
Linearity IM3		<-12 dBc @ 15 W PEP
Linearity IM2		<-6 dBc @ 15 W PEP
Non harmonic spurs		<-60 dB
Protection		
Output protection		isolator
Intermodulation distortions		
IM3 @ 45 dBm PEP 1)		typ. 35 dBc
Efficiency @ 46.5 dBm (CW)		typ. 30 %
Input return loss (S11)		typ. 10 dB
ON voltage		+3 ... 50 V DC
Current on ON pin		typ. 1 mA
Supply voltage		+16 V ... +28 V DC
Quiescent current @ 28 V DC		typ. 0.7 A
Current consumption @ P3dB @ 28 V DC		max. 8 A
Noise figure		
	0.1-0.2 GHz	<15 dB
	0.2-6 GHz	<12 dB
Monitor output		
Forward and Reverse detection		yes (true RMS-detector)
Limits		
Operating case temperature range		-20 ... +55 °C

Features:

- High bandwith
- Variety of analog monitor signals
- Very fast mute functionality
- High efficiency
- Low small and large signal gain ripple

Applications:

- Analog & digital transmission systems
- Measurement and laboratory equipment
- Communication systems
- Jammer applications

Accessories:

- Recommended power supply: SP 150 W 24
- Recommended heat sink: SK 200 - 160
- Recommended fan: FAN 80x80 24V

The KU PA BB 010600 – 15 A was specially developed for jammer applications. Due to the high bandwidth and, at the same time, low gain ripple, the power amplifier can interfere with all mobile radio bands and many wireless standards.

Amplifier should be mounted on heat sink!

CE Konformität / CE Conformity

EMC directive 2014/30/EU
Low voltage directive 2014/35/EU
RoHS directive 2011/65/EU

CE

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Specification

Mute (on/off)		<5 µs (50% TTL to 10/9% RF)
Switching rate of mute signal		10 kHz max.
Input VSWR	0.1-6 GHz	<1.45:1 min. @ -5 dBm Pin
Max. load VSWR		10:1, no damage
Supply voltage range		18-36 V
Current consumption	0.1-6 GHz	≤ 5.2 A @24 V
Quiescent current consumption		≤ 4.0 A @24 V
Current consumption at mute		≤0.7 A @24 V
Impedance		50 Ω
Analog BIT outputs		Over-temperature alarm, TTL, low=PA on, high=PA protected Forward power (0-4 V), logarithmic characteristic, 50m V/dB, negative slope Reverse power (0-4 V), logarithmic characteristic, 50m V/dB, negative slope Supply current (0-4 V), linear characteristic, 0.5 V/A, positive slope
RF mute input		TTL, low=PA on, high=PA off

Mechanics

Input connector / impedance	SMA-female, 50 ohms
Output connector / impedance	SMA-female, 50 ohms
Case	milled aluminium,nickel plated IP20
Dimensions (mm)	200 x 115 x 25
Weight	typ. 950 g

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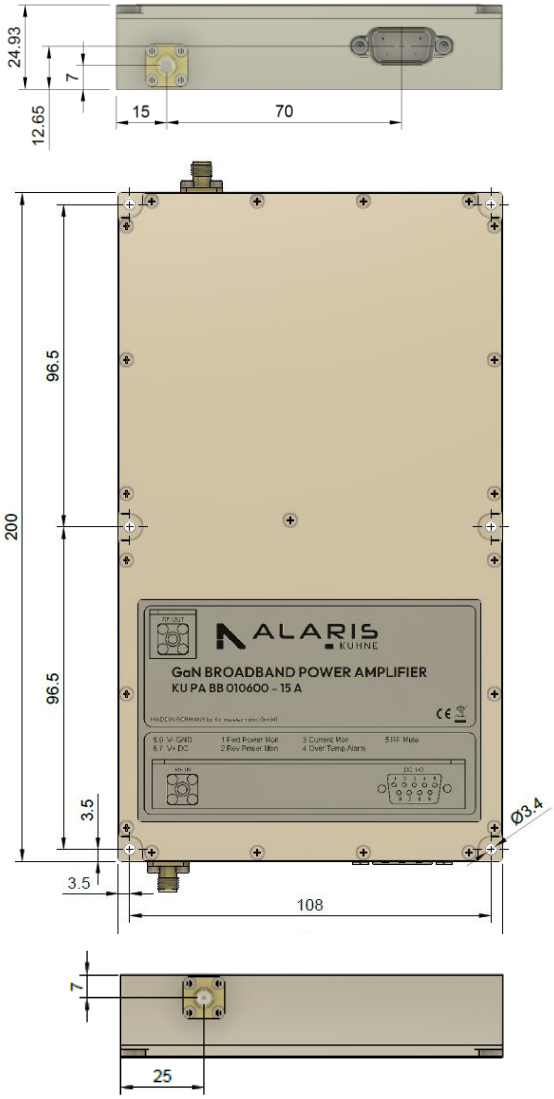
Dimensions / Mounting holes

(mm)



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Important Note on the Warranty

The amplifier does not contain an active protection circuit. It has to be installed and run by qualified technical personnel or radio amateurs.
Within the warranty period of three years, in case of a notification of defects, repairing is free of charge. This is NOT valid for the replacement of semiconductor devices like MOSFETs or GaAs FETs. Otherwise, repairing must be paid.

The amplifier must only be run within the specifications.

- The maximum input power must not be exceeded
- The amplifier must only be run within the specified frequency range
- While the amplifier is being run, the load VSWR has to be better than 1.8:1 (better than 10 dB) in case of no built-in isolator
- Depending on the application, the use of a sequence controller is recommended

Too high input power, even for a short time period, can lead to destruction or damage of transistors. Especially MOSFETs are very sensitive to overdrive! MOSFET amplifiers must never be driven into saturation!

All power amplifiers require good cooling. The case temperature must not exceed 55 °C. The amplifier must not be run with opened case!

Already the opening or destroying of the warranty seal has the exclusion of the warranty as result.

Notes: