

V1.1

# KU PA 190250 - 30 A



## Manual

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**ALARIS**  
THE RF TECHNOLOGY GROUP



## Specification

### Specifications (Ta = 25 °C):

Frequency range	1900 ... 2500 MHz
<b>Input power</b>	
For P3dB	typ. 8 dBm, max. 9 dBm
Maximum	+ 11 dBm

<b>Output power</b>	
P1dB	min. 46 dBm (CW)
P3dB	typ. 47 dBm (CW)
Psat	min. 47 dBm (CW)
COFDM 2)	typ. 41 dBm
Automatic level control (ALC)	yes (adjustable ALC)

<b>Gain</b>	
Small signal	typ. 45 dB
Flatness (small signal)	typ. +/-2.5 dB

<b>Harmonics</b>	
Harmonic rejection @ 45 dBm	typ. 40 dB

<b>Protection</b>	
Output protection	isolator

<b>Intermodulation distortions</b>	
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

<b>Monitor output</b>	
Forward detection	yes (true RMS-detector)
Reverse detection	yes (diode detector)

<b>Limits</b>	
Operating case temperature range	-20 ... +55 °C

<b>Mechanics</b>	
Input connector / impedance	SMA-female, 50 ohms
Output connector / impedance	SMA-female, 50 ohms
Case	milled aluminium, IP20

Dimensions (mm)	178 x 58.5 x 21
Weight	typ. 300 g

### Features:

- LDMOS technology
- Reverse polarity protection
- Logic ON / OFF controll
- Adjustable ALC (automatic level control)
- Over temperature protection (@ 55°C case temperature)
- Isolator for protection against high VSWR
- Monitor output for forward and reverse power detection (DC voltage)

### Applications:

- Analog transmission system
- Digital broadcast systems (DVB-T, DVB-S)
- COFDM systems using modulation types (QPSK, QAM)
- Multichannel Multiport Distribution Service (MMDS)

### Accessories:

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

### Amplifier should be mounted on heat sink!

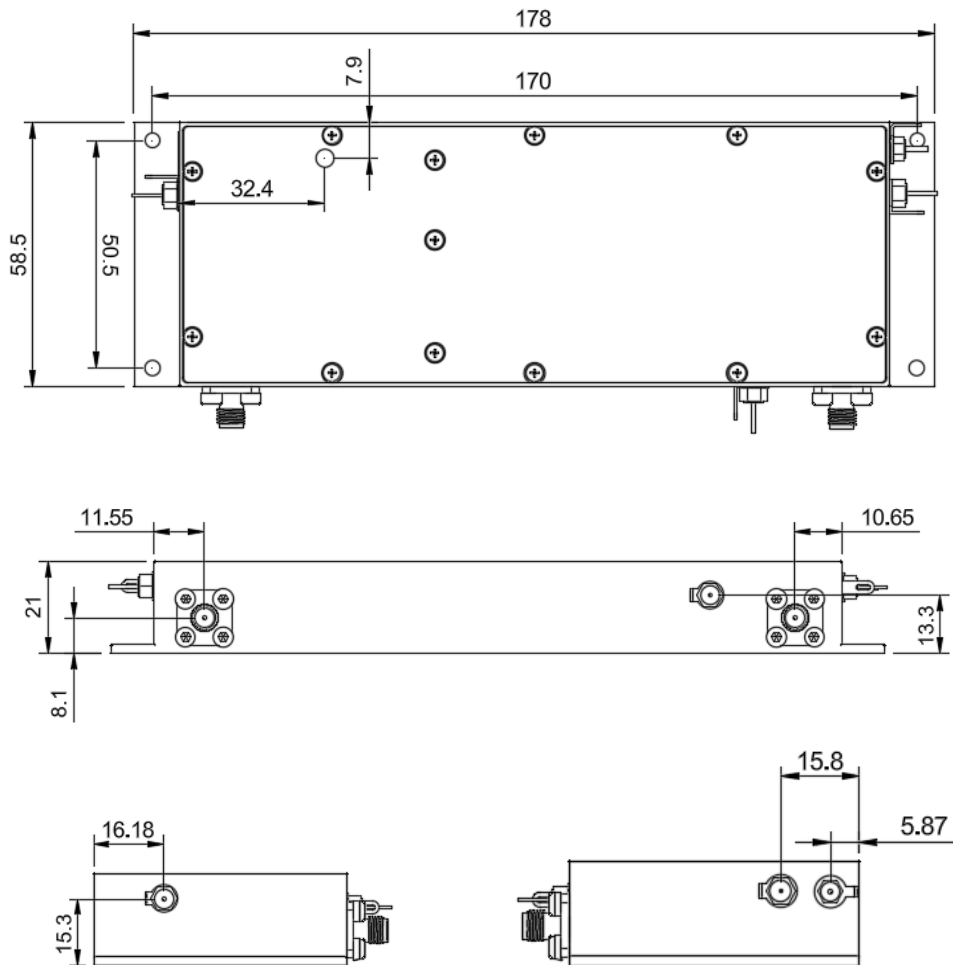
- 1) Two tone test;  $\Delta f=1\text{MHz}$
- 2) Single carrier, 64 QAM; 8 Msps; EVM = 2%

### CE Konformität / CE Conformity

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



## Dimensions / Mounting holes (mm)



### 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: