

V1.0

KU PA 510590 - 10 A



Manual

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ALARIS
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Specification

Specifications (Ta = 25 °C):

Type	KU PA 510590 – 10 A
Frequency range	5100 ... 5900 MHz
Input power For P1dB Maximum	typ. +7 dBm +10 dBm
Output power P1dB (CW)	min. 39.5 dBm; typ. 40 dBm min. 9 W; typ. 10 W
COFDM (Single carrier; 64 QAM; 8MSPS; EVM=2%)	min. 33 dBm; typ. 34.7 dBm min. 2 W; typ. 3 W
Efficiency @ 39.5 dBm (CW)	min. 14 %; typ. 18 %
Gain Small signal Flatness (small signal)	min. 35 dB typ. +/-1 dB
Harmonics Harmonic rejection @ 40 dBm	min. 50 dB; typ. 60 dB min. 40 dB @ 5100 MHz
Protection Output protection Overtemperature protection	Isolator yes
Intermodulation distortions IM3 @ 33 dBm PEP (Two tone test; Δf=1MHz) IM3 @ 36 dBm PEP (Two tone test; Δf=1MHz)	typ. 40 dBc typ. 38 dBc
ON voltage Supply voltage Quiescent current Current consumption	+5 ... 14 V DC +12 ... 14 V DC max. 5.3 A; typ. 4 A max. 5.5 A; typ. 4.5 A
Monitor output Forward detection Reverse detection	yes (Diode-Detector) yes (Diode-Detector)
Limits Operating case temperature range	-20 ... +55 °C
Mechanics Input connector / impedance Output connector / impedance Case Dimensions (mm) Weight	SMA-female, 50 ohms SMA-female, 50 ohms milled aluminium 158 x 60 x 20 typ. 320 g

Features

- GaAs technology
- High linearity
- Isolator for protection against high VSWR
- Adjustable ALC (automatic level control)
- Reverse polarity protection
- Over temperature protection
- Monitor outputs for forward and reverse power detection (DC voltage)
- Logic ON/OFF controll (ON at +5 ... 14 V DC)

Applications

- Digital transmission & broadcast systems (DVB, WiMAX)
- COFDM systems using QPSK, QAM
- Analog transmission systems

Amplifier should be mounted on heat sink!

Accessoires

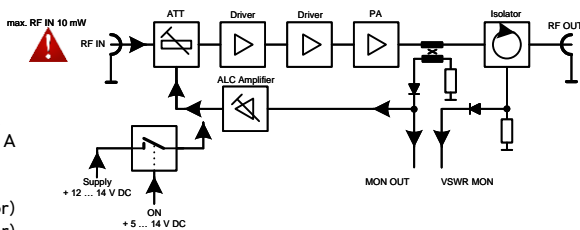
- Power supply RSP 150 W 12
- Heat sink SK 200 – 80
- Fan 80 x 80, 12 V
- Thermal cut-out thermostat TS-65/10



CE Konformität / CE Conformity

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

Block diagram



- ON supply DC voltage to „ON“ to switch power amplifier „ON“ (active)
- MON OUT Output which monitors forward power (DC voltage), not calibrated
- VSWR MON Output which monitors reverse power (DC voltage), not calibrated

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