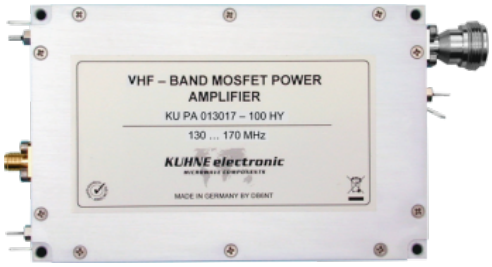
KU PA 013017-100 HY, RF Power Amplifier

130 ... 170 MHz • 100 W



Features

- Built-in low pass filter for good harmonic rejection
- Reverse polarity protection
- Monitor output for forward power detection

Applications

- Analog transmission systems

Important notes

Please notice the following:
- All technical data specified at a supply voltage of +14 V DC at room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	130..170 MHz
Input power for P3dB	typ. +15 dBm
Maximum input power	+20 dBm
Output power P1dB	typ. 47 dBm, min. 44.8 dBm (CW)
	typ. 50 W, min. 30 W (CW)
Output power P3dB	typ. 50 dBm (CW)
	typ. 100 W (CW)
Gain (small signal)	typ. 40 dB, min. 35 dB
Gain flatness (small signal)	typ. +/- 3 dB
Harmonic rejection	typ. 60 dB @ 50 dBm
IM3 (1)	typ. 27 dBc @ 46 dBm PEP
Efficiency	typ. 44 % @ 50 dBm (CW)
Input return loss (S11)	min. 20 dB
ON voltage	+12 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current @ Vcc (max)	typ. 8 A
Current consumption @ P3dB	max. 20 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	124 x 80 x 22

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Weight	400 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 014018-50 HY, RF Power Amplifier

140 ... 180 MHz • 50 W

Features

- Built-in low pass filter for good harmonic rejection
- Reverse polarity protection
- Monitor outputs for forward and reverse power detection

Applications

- Analog transmission systems

Important notes

Please notice the following:
- All technical data specified at a supply voltage of 14
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site. V DC at room temperature

Technical specifications:

Frequency range	140..180 MHz
Input power for P3dB	min. +12 dBm
Maximum input power	+17 dBm
Output power P3dB	typ. 47 dBm, min. 46.5 dBm
	typ. 50 W, min. 45 W
Gain (small signal)	typ. 36 dB, min. 34 dB
Gain flatness (small signal)	typ. +/- 3 dB
Harmonic rejection	typ. 50 dB @ 47 dBm
IM3 (1)	min. 20 dBc @ 43 dBm PEP
Efficiency	min. 30 % @ 47 dBm (CW)
Input return loss (S11)	typ. 10 dB
ON voltage	+12 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 4 A
Current consumption @ P3dB	max. 12 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	270 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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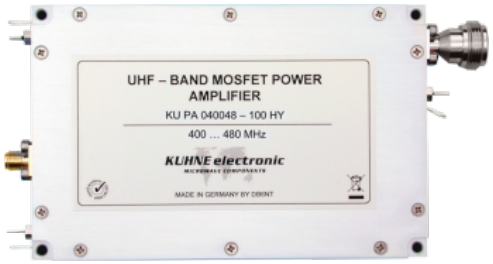
KU PA 040048-100 HY, UHF power amplifier



Features

- Built-in low pass filter for good harmonic rejection
- Reverse polarity protection
- Monitor outputs for forward power detection

Applications

- Analog transmission systems

Important notes

Please notice the following:
- All technical data specified at a supply voltage of +14 V DC at room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	400..480 MHz
Input power for P3dB	min. +20 dBm
Maximum input power	+23 dBm
Output power P1dB	min. 44.7 dBm (CW)
	min. 30 W (CW)
Output power P3dB	typ. 50.4 dBm, min. 49.5 dBm (CW)
	typ. 110 W, min. 90 W (CW)
Gain (small signal)	min. 34 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	min. 60 dB @ 50 dBm
IM3 (1)	typ. 27 dBc @ 49 dBm PEP
Efficiency	typ. 40 % @ 50 dBm (CW)
Input return loss (S11)	typ. 20 dB, min. 15 dB
ON voltage	+12 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current @ Vcc (max)	typ. 8 A
Current consumption	max. 28 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	124 x 80 x 22
Weight	400 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 040048-60 HY, UHF MOSFET-Power Amplifier

400 ... 480 MHz • 60 W

Features

- Built-in low pass filter for good harmonic rejection
- Reverse polarity protection
- Monitor output for forward power detection

Applications

- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	400..480 MHz
Input power for P3dB	typ. 17 dBm
Maximum input power	+20 dBm
Output power P1dB	min. 43 dBm (CW)
	min. 20 W (CW)
Output power P3dB	min. 47.7 dBm (CW)
	min. 60 W (CW)
Gain (small signal)	min. 34 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	min. 55 dB @ 47 dBm
IM3 (1)	typ. 27 dBc @ 43 dBm PEP
Efficiency	min. 30 % @ 47 dBm (CW)
Input return loss (S11)	typ. 10 dB
ON voltage	+12 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 4 A
Current consumption @ P1dB	typ. 8 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	270 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 070080-20 A, RF Power Amplifier

770 ... 880 MHz • 20 W

The power amplifier is developed both for digital and analog transmission systems. It's frequency range is chosen to cover the new UHF frequencies for the cellular phone network completely. By the use of LD-MOSFET-technology high efficiency and low current consumption are reached at the same time.

Features

- LD-MOSFET-technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case

Applications

- Mobile communication
- COFDM – systems with modulation QPSK, QAM
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	770..880 MHz
Input power for P1dB	typ. 14 dBm
Maximum input power	+20 dBm
Output power P1dB	min. 43 dBm (CW)
	min. 20 W (CW)
Saturation power	min. 30 W
Output power COFDM (1)	min. 37 dBm
	min. 5 W
Gain (small signal)	min. 30 dB
Gain flatness (small signal)	max. 6 dB
Harmonic rejection	min. 30 dB @ 43 dBm
IM3 (2)	typ. 42 dBc, min. 39 dBc @ 40 dBm PEP
Efficiency	min. 40 % @ 44.7 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+9 ... 14 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 400 mA
Current consumption	max. 3.5 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1

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Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	235 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 080090-08 A, GaAs-FET Power Amplifier

800 ... 900 MHz

Features

- High linearity
- Reverse polarity protection
- Milled aluminium case
- Small mechanical dimensions

Applications

- Low power applications
- Driver amplifier
- Analog and digital transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	800..900 MHz
Input power for P1dB	min. 14 dBm
Maximum input power	+17 dBm
Output power P1dB	typ. 29 dBm (CW)
	typ. 800 mW (CW)
Output power P3dB	typ. 30 dBm (CW)
	typ. 1 W (CW)
Output power COFDM (1)	min. 23 dBm
	min. 200 mW
Gain (small signal)	min. 15 dB
Gain flatness (small signal)	+/-0.5 dB (typ.)
Harmonic rejection	min. 28 dB @ 28.7 dBm
IM3 (2)	min. 46 dBc @ 24.7 dBm PEP
Efficiency	min. 20 % @ 29 dBm (CW)
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 0.35 A
Current consumption	typ. 0.35 A
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	N-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	50 x 30 x 22
Weight	90 g (typ.)

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(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 10001045-8 A, GaAs-Fet Power Amplifier

10000 ... 10450 MHz • 8 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Detector output (DC voltage) for monitoring forward output power
- Reverse polarity protection
- Small mechanical dimensions

Applications

- Analog and digital transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	10000..10450 MHz
Input power for P1dB	typ. 21 dBm
Maximum input power	+24.7 dBm
Output power P1dB	min. 39 dBm (CW)
	min. 8 W (CW)
Output power P3dB	min. 40 dBm (CW)
	min. 10 W (CW)
Output power COFDM (1)	min. 33 dBm
	min. 2 W
Gain (small signal)	typ. 19 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	min. 60 dB @ 39 dBm
IM3 (2)	typ. 38 dBc, min. 33 dBc @ 37 dBm PEP
Efficiency	typ. 14 % @ 39 dBm (CW)
Input return loss (S11)	typ. 10 dB, min. 6 dB
Supply voltage	+12 ... 14 V DC
Current consumption @ P1dB	typ. 4.5 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	250 g (typ.)

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(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 12701540-2 A, RF Power Amplifier

12700 ... 15400 MHz • 2 W

Features

- GaAs FET technology
- High linearity
- High bandwith
- Reverse polarity protection
- Monitor output for forward power detection
- Small mechanical dimensions

Applications

- Digital broadcast systems (DVB-S, DVB-T)
- COFDM systems using modulation types QPSK, QAM
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	12700..15400 MHz
Input power for P1dB	typ. 4 ... 12 dBm
Maximum input power	+20 dBm
Output power P1dB	min. 33 dBm
	min. 2 W
Output power P3dB	typ. 34 dBm
	typ. 2.5 W
Output power COFDM (1)	typ. 26 dBm, min. 24.7 dBm
	typ. 400 mW, min. 300 mW
Gain (small signal)	min. 22 dB
Gain flatness (small signal)	typ. +/-4 dB
Harmonic rejection	min. 40 dB @ 33 dBm
IM3 (2)	typ. 27 dBc @ 30 dBm PEP
Efficiency	min. 10 % @ 33 dBm
Input return loss (S11)	typ. 10 dB, min. 7 dB
Supply voltage	+12 ... 14 V DC
Current consumption @ P1dB	typ. 1,5 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium

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Dimensions (mm)	50 x 30 x 18
Weight	45 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 140150-150 A, LD-MOS RF Power Amplifier

1400 ... 1500 MHz • 150 W

Nur noch 1 Stück verfügbar!

Features

- LD MOSFET technology
- High linearity
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- ON / OFF control with DC voltage

Applications

- Digital broadcast systems (DAB, DVB)
- COFDM systems using modulation types QPSK, QAM
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	1400..1500 MHz
Input power for P1dB	typ. 36 dBm
Maximum input power	39.5 dBm
Output power P1dB	typ. 51.7 dBm, min. 51.4 dBm (CW)
	typ. 150 W, min. 140 W (CW)
Output power P3dB	min. 52 dBm
	min. 160 W
Output power COFDM (1)	typ. 45,4 dBm, min. 44,7 dBm
	typ. 35 W, min. 30 W
Gain (small signal)	min. 14 dB
Gain flatness (small signal)	typ. +/-0.7 dB
Harmonic rejection	typ. 35 dB, min. 33 dB @ 50.5 dBm
IM3 (2)	min. 37 dBc @ 48.4 dBm PEP
Efficiency	typ. 48 % @ P1dB
Input return loss (S11)	typ. 10 dB, min. 6 dB
ON voltage	+9 ... 14 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 1.5 A
Current consumption @ P1dB	typ. 10 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C

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VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	260 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 170220-30 A, RF Power Amplifer

1700 ... 2200 MHz • 30 W

The power amplifier is developed both for digital and analog transmission systems. By the use of LD-MOSFET technology high efficiency and low current consumption are reached at the same time.

Features

- LD-MOSFET-technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case

Applications

- WIMAX radio systems
- COFDM – systems with modulation QPSK, QAM
- Analog transmission systems
- Measurement and laboratory equipment

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	1700..2200 MHz
Input power for P1dB	typ. 17 dBm, min. 14 dBm
Maximum input power	+23 dBm
Output power P1dB	min. 44.7 dBm (CW)
	min. 30 W (CW)
Output power P3dB	min. 46 dBm
	min. 40 W
Output power COFDM (1)	min. 40 dBm
	min. 10 W
Gain (small signal)	typ. 30 dB, min. 28 dB
Gain flatness (small signal)	typ. +/- 1.5 dB
Harmonic rejection	typ. 30 dB, min. 25 dB @ 44.7 dBm
IM3 (2)	typ. 40 dBc @ 41.7 dBm PEP
	typ. 25 dBc @ 44.7 dBm PEP
Efficiency	typ. 35 %, min. 30 % @ 46 dBm
Supply voltage	+28 V DC
Quiescent current	typ. 0.5 A
Current consumption @ P3dB	typ. 4.5 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C

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Power Amplifiers

Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
Weight	140 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 200250-18A, RF Power amplifier

2000 ... 2500 MHz • 18 W

analog & digital transmission systems **ISM band** **jamming**

Description

With the KU PA 200250-18 A Kuhne electronic puts a S-BAND power amplifier for the frequency range 2000...2500 MHz on the market. This power amplifier is developed for digital applications and can be supplied with a huge voltage range of 16...26 V.
Another highlight to comparable power amplifiers is the TRUE-RMS monitor output for observing the output power. With this feature it is possible to assign the monitor voltage to a defined output power regardless of the type of modulation.
With the integrated ALC (automatic level control) it is possible to adjust the output power to a desired power level. This level is kept constant over the whole frequency range.
Through the use of LDMOS-technique a high efficiency is reached. This results in lower current consumption and longer running time of battery powered systems.
Furthermore an isolator for protecting the power amplifier in case of bad VSWR and a monitor output for controlling the reflected power is implemented, as well as a protective function against polarity reversal and voltage spikes.

Features

- LDMOS technology
- Isolator for protection against high VSWR
- Reverse polarity protection
- Adjustable ALC (automatic level control)
- True-RMS Detector output for forward detection (DC voltage)
- Monitor output for forward and reverse power detection (DC voltage)
- Logic ON / OFF control (ON at 5 ... 14 V)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2000..2500 MHz
Input power for P1dB	typ. 0 dBm, max. 5 dBm
Maximum input power	+7 dBm

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Power Amplifiers

Output power P1dB	min. 42.5 dBm (CW)
	min. 18 W (CW)
Output power P3dB	typ. 44.7 dBm, min. 44 dBm (CW)
	typ. 30 W, min 25 W (CW)
Output power COFDM (1)	typ. 39 dBm, min. 36 dBm
	typ. 8 W, min. 4 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	min. 40 dB
Gain flatness (small signal)	typ. +/- 2.5 dB
Harmonic rejection	typ. 50 dB, min. 45 dB @ 42.5 dBm
VSWR protection	Isolator
IM3 (2)	min. 35 dBc @ 40 dBm PEP
Efficiency	min. 20 % @ 42.5 dBm
Input return loss (S11)	min. 10 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+16 ... 26 V DC
Quiescent current @ Vcc (min)	850 mA
Quiescent current @ Vcc (max)	550 mA
Power consumption @ P1dB	typ. 110 W
Forward detection	yes (True RMS detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	178 x 60 x 21
Weight	300 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 230250-20 A, GaAs-FET Power Amplifier

2300 ... 2500 MHz • 20 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Reverse polarity protection
- Monitor outputs for forward and reverse power detection (DC voltage)
- Adjustable ALC (automatic level control)
- ON / OFF control with DC voltage (ON at 5 ... 14 V)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2300..2500 MHz
Input power for P1dB	typ. -9 dBm
Maximum input power	-5 dBm
Output power P1dB	typ. 43.8 dBm, min. 43 dBm (CW)
	typ. 24 W, min. 20 W (CW)
Output power P3dB	min. 44 dBm (CW)
	min. 25 W (CW)
Output power COFDM (1)	min. 38.4 dBm (1)
	min. 7 W
Gain (small signal)	typ. 54 dB, min. 53 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 60 dB, min. 55 dB @ 43 dBm
IM3 (2)	min. 40 dBc @ 40 dBm PEP (2)
Efficiency	min. 20 % @ 43 dBm (CW)
Input return loss (S11)	min. 15 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+11 ... 14 V DC
Current consumption @ P1dB	typ. 8 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)

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Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	212 x 64 x 22
Weight	500 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 230270-18 A, RF Power Amplifier

2300 ... 2700 MHz • 18 W

analog & digital transmission systems **ISM band** **jamming**

Description

With the KU PA 230270-18 A Kuhne electronic puts a S-BAND power amplifier for the frequency range 2300...2700 MHz on the market. This power amplifier is developed for digital applications and can be supplied with a huge voltage range of 11...26 V.
Another highlight to comparable power amplifiers is the TRUE-RMS monitor output for observing the output power. With this feature it is possible to assign the monitor voltage to a defined output power regardless of the type of modulation.
With the integrated ALC (automatic level control) it is possible to adjust the output power to a desired power level. This level is kept constant over the whole frequency range.
Through the use of LDMOS-technique a high efficiency is reached. This results in lower current consumption and longer running time of battery powered systems.
Furthermore an isolator for protecting the power amplifier in case of bad VSWR and a monitor output for controlling the reflected power is implemented, as well as a protective function against polarity reversal and voltage spikes.

Features

- LDMOS technology
- Isolator for protection against high VSWR
- Reverse polarity protection
- Adjustable ALC (automatic level control)
- True-RMS Detector output for forward detection (DC voltage)
- Monitor output for forward and reverse power detection (DC voltage)
- Logic ON / OFF control (ON at 5 ... 14 V)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2300..2700 MHz
Input power for P1dB	typ. 1.2 dBm, max. 5 dBm
Maximum input power	+7 dBm

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Power Amplifiers

Output power P1dB	typ. 42.5 dBm, min. 41.7 dBm (CW)
	typ. 18 W, min. 15 W (CW)
Output power P3dB	min. 44 dBm (CW)
	min. 25 W (CW)
Output power COFDM (1)	min. 37 dBm
	min. 5 W
Gain (small signal)	min. 44 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	typ. 50 dB, min. 48 dB @ 42.5 dBm
IM3 (2)	typ. 43 dBc, min. 40 dBc @ 37 dBm PEP
Efficiency	min. 25 % @ 42.5 dBm (CW)
Input return loss (S11)	min. 12 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+11 ... 26 V DC
Quiescent current @ Vcc (min)	1.1 A
Quiescent current @ Vcc (max)	0.54 A
Power consumption	typ. 40 W @ 37 dBm
Forward detection	yes (True RMS detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	178 x 60 x 21
Weight	300 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 250270-20 A, GaAs-FET Power Amplifier

2500 ... 2700 MHz • 20 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Reverse polarity protection
- Monitor outputs for forward and reverse power detection (DC voltage)
- Adjustable ALC (automatic level control)
- ON / OFF control with DC voltage (ON at 5 ... 14 V)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2500..2700 MHz
Input power for P1dB	typ. -8 dBm
Maximum input power	-6 dBm
Output power P1dB	typ. 44 dBm, min. 43 dBm (CW)
	typ. 25 W, min. 20 W (CW)
Output power P3dB	min. 44 dBm (CW)
	min. 25 W (CW)
Output power COFDM (1)	min. 38.4 dBm (1)
	min. 7 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	typ. 53 dB, min. 50 dB
Gain flatness (small signal)	typ. +/- 1.5 dB (ALC not aktive)
Harmonic rejection	typ. 60 dB, min. 55 dB @ 43 dBm
IM3 (2)	min. 40 dBc @ 40 dBm PEP (2)
Efficiency	min. 20 % @ 43 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+11 ... 14 V DC
Quiescent current	typ. 7.5 A
Current consumption	typ. 8 A

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Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	212 x 64 x 22
Weight	500 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 330360-16 A, MOSFET-Power Amplifier

3300 ... 3600 MHz • 16 W

The power amplifier is developed both for digital and analog transmission systems. The wide frequency range covers as well the WIMAX-band as the amateur radio band equally. The power amplifier is developed with latest 28 V - LDMOS - technology.

Features

- LD-MOSFET-technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case

Applications

- WIMAX radio systems
- COFDM – systems with modulation QPSK, QAM
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	3300..3600 MHz
Input power for P1dB	typ. 20 dBm
Maximum input power	27 dBm
Output power P1dB	min. 42 dBm
	min. 16 W
Output power P3dB	min. 44.1 dBm (CW)
	min. 26 W
Output power COFDM (1)	typ. 39 dBm, min. 37.7 dBm
	typ. 8 W, min. 6 W
Gain (small signal)	typ. 27 dB, min. 24 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 32 dB, min. 28 dB @ 41.7 dBm
IM3 (2)	typ. 30 dBc @ 40 dBm PEP
Efficiency	typ. 30 % @ 43 dBm (CW)
Input return loss (S11)	typ. 11 dB, min. 8 dB
ON voltage	+9 ... 14 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 380 mA
Current consumption @ P1dB	typ. 2.5 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C

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Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
Weight	140 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 340360-13 A, power amplifier

3400 ... 3600 MHz • 13 W

This power amplifier provides high linearity. An isolator at the output protects the semiconductor devices from reverse power. Very good harmonic rejection is achieved. Two detector outputs allow permanent monitoring of forward and reverse power. Typical applications of this amplifier are digital broadcast and communication systems like Digital Video Broadcast (DVB) or Digital Multimedia Broadcast (DMB). The amplifier contains an automatic level control (ALC). The desired output power can be adjusted continuously, from nearly zero to the maximum output power.

Features

- GaAs FET technology
- High linearity (class A operation)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Reverse polarity protection
- Monitor outputs for foward and reverse power detection (DC voltage)
- Adjustable ALC (automatic level control)
- ON / OFF control with DC voltage (ON at 5 ... 14 V DC)

Applications

- Digital broadcast systems (DVB, DMB)
- COFDM systems using modulation types QPSK, QAM
- Analog transmission systems
- With reduced power suitable for DATV (digital amateur television)

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	3400..3600 MHz
Input power for P1dB	typ. -13 dBm
Maximum input power	0 dBm
Output power P1dB	typ. 41.1 dBm, min. 40.8 dBm
	typ. 13 W, min. 12 W
Output power P3dB	min. 42.3 dBm
Output power COFDM (1)	typ. 34.7 dBm, min. 34 dBm
	typ. 3 W, min. 2.5 W
Gain (small signal)	typ. 55 dB, min. 53 dB
Gain flatness (small signal)	+/-0.5 dB (typ.)
Harmonic rejection	min. 45 dB @ 41.7 dBm (CW)
IM3 (2)	min. 35 dBc @ 37 dBm PEP
Efficiency	min. 24 % @ 41.7 dBm (CW)
Input return loss (S11)	min. 13 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC

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Quiescent current	typ. 4.3 A
Current consumption @ P1dB	typ. 5 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 60 x 20
Weight	320 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 510590-10 A, RF Power Amplifier

5100 ... 5900 MHz • 10 W

analog & digital transmission systems **ISM band** **jamming**

Features

- GaAs FET technology
- High linearity
- Low EVM
- 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 control (ON at +5 ... 14 V DC)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	5100..5900 MHz
Input power for P1dB	typ. +7 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 40 dBm, min. 39.5 dBm (CW)
	typ. 10 W, min. 9 W (CW)
Output power COFDM (1)	typ. 34.7 dBm, min. 34 dBm
	typ. 3 W, min. 2 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	min. 35 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 60 dB, min. 50 dB @ 39.5 dBm
	min. 40 dB @ 5100 MHz
VSWR protection	Isolator
Over temperature protection	yes
IM3 (2)	typ. 40 dBc @ 33 dBm PEP
	typ. 38 dBc @ 36 dBm PEP
Efficiency	typ. 18 %, min. 14 % @ 39.5 dBm (CW)
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC

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Quiescent current	typ. 4 A, max. 5.3 A
Current consumption	typ. 4.5 A, max. 5.5 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 60 x 20
Weight	320 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 600770-2 A, RF Power Amplifier

6000 ... 7700 MHz • 2 W

Features

- GaAs-FET-technology
- High linearity (class A operation)
- High bandwidth
- Monitor output for forward power detection (DC voltage)
- Reverse polarity protection
- Small mechanical dimensions

Applications

- Low power applications
- Measurement and laboratory equipment
- Analog and digital transmission systems
- Amateur radio

Technical specifications:

Frequency range	6000..7700 MHz
Input power for P1dB	max. 10 dBm
Maximum input power	+15 dBm
Output power P1dB	typ. 33 dBm, min. 32.5 dBm (CW)
	typ. 2 W, min. 1.8 W (CW)
Output power P3dB	typ. 34.8 dBm, min. 34 dBm (CW)
	typ. 3 W, min. 2.5 (CW)
Output power COFDM (1)	typ. 26 dBm, min. 24 dBm
	typ. 400 mW, min. 250 mW
Gain (small signal)	typ. 28 dB, min. 26 dB
Gain flatness (small signal)	typ. +/- 1.5 dB
Harmonic rejection	min. 25 dB @ 31.7 dBm
IM3 (2)	min. 25 dBc @ 30 dBm PEP
Efficiency	typ. 10 % @ 33 dBm PEP
Input return loss (S11)	typ. 10 dB
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 1.2 A
Current consumption	max. 1.7 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	50 x 30 x 18
Weight	45 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 640720-10 A - RF Power Amplifier

6400 ... 7200 MHz • 10 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- ON / OFF control with DC voltage (ON at 5 ... 14 V)

Applications

- Measurement and laboratory equipment

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	6400..7200 MHz
Input power for P1dB	typ. 3 dBm, max, 7 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 40 dBm, min. 39 dBm (CW)
	typ. 10 W, min. 8 W (CW)
Output power COFDM (1)	typ. 30 ... 34.7 dBm
	typ. 1 ... 3 W
Gain (small signal)	typ. 39 dB, min. 36 dB
Gain flatness (small signal)	typ. +/- 2 dB
Noise figure @ 18 °C	typ. 5 dB NF
Harmonic rejection	min. 35 dB @ 39 dBm
IM3 (2)	typ. 30 dBc @ 37 dBm PEP
	typ. 20 dBc @ 40 dBm PEP
Efficiency	typ. 18 %, min. 13 % @ 39 dBm (CW)
Input return loss (S11)	typ. 10 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 4.5 A
Current consumption @ P1dB	typ. 4.5 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium

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Dimensions (mm)	130 x 60 x 20
Weight	270 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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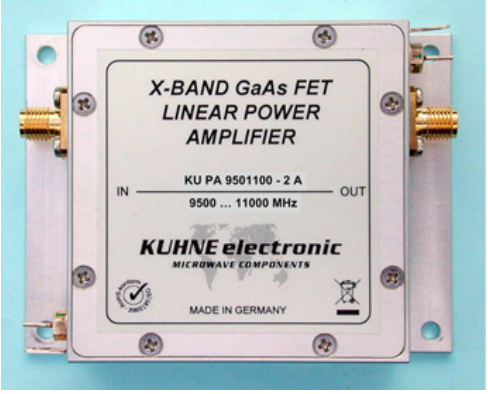
KU PA 9501100-2 A, GaAs-FET Power Amplifier

9500 ... 11000 MHz • 2 W



Features

- GaAs FET technology
- High linearity
- Good harmonic rejection
- High bandwidth
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Small mechanical dimensions

Applications

- Digital broadcast systems (DVB-T, DVB-S)
- COFDM systems using modulation types QPSK, QAM
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	9500..11000 MHz
Input power for P1dB	typ. 10 dBm
Maximum input power	+15 dBm
Output power P1dB	typ. 32.3dBm, min. 31.1dBm (CW) (9500...10500MHz)
	min. 30.8 dBm (CW) (10500...11000MHz)
Output power P1dB	typ. 1.7 W, min. 1.3 W (CW) (9500...10500MHz)
	min. 1.2 W (CW) (10500...11000MHz)
Output power P3dB	typ. 33 dBm, min. 32.5 dBm (CW)
	typ. 2 W, min. 1.8 W (CW)
Output power COFDM (1)	typ. 27.8 dBm, min. 26 dBm
	typ. 0.6 W, min. 0.4 W
Gain (small signal)	typ. 25 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	min. 50 dB @ 31.7 dBm
IM3 (2)	min. 40 dBc @ 27.8 dBm PEP
Efficiency	typ. 8 %, min. 7 % @ 33 dBm
Supply voltage	+12 ... 14 V DC
Current consumption @ P1dB	typ. 2 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms

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Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
Weight	150 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA BB 005090-6 A - RF Power Amplifier

50 ... 900 MHz • 6 W

Features

- LD MOSFET technology
- Reverse polarity protection
- Milled aluminium case
- Small mechanical dimensions

Applications

- Analog transmission systems
- Measurement and laboratory equipment
- Driver amplifier

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	50..900 MHz
Input power for P1dB	typ. +3 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 37.8 dBm, min. 37 dBm (CW) (50 ... 500 MHz)
	typ. 36 dBm, min. 34.7 dBm (CW) (500 ... 900 MHz)
Output power P1dB	typ. 6 W, min. 5 W (CW) (50 ... 500 MHz)
	typ. 4 W, min. 3 W (CW) (500 ... 900 MHz)
Output power P3dB	typ. 39 dBm, min. 38.4 dBm (CW) (50 ... 500 MHz)
	typ. 37.8 dBm, min. 37 dBm (CW) (500 ... 900 MHz)
Output power P3dB	typ. 8 W, min. 7 W (CW) (50 ... 500 MHz)
	typ. 6 W, min. 5 W (CW) (500 ... 900 MHz)
Output power COFDM (1)	min. 30 dBm
	min. 1 W
Gain (small signal)	min. 31.5 dB
Gain flatness (small signal)	typ. +/- 2.5 dB
Harmonic rejection	typ. 20 dB, min. 18 dB @ 37 dBm
IM3 (2)	typ. 30 dBc, min. 23 dBc @ 37 dBm PEP
Efficiency	min. 20 % @ 37 dBm (CW)
Input return loss (S11)	min. 13 dB
ON voltage	+9 ... 14 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 0.5 A
Current consumption	max. 1.1 A
Operating case temp. range	-20 ... +55 °C

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VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
Weight	135 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA BB 005250-2 A, RF Broadband Amplifier

50 ... 2500 MHz • 2 W

analog & digital transmission systems **EMC**

Features

- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)

Applications

- Test amplifier for high dynamic range applications
- Power amplifier for EMC measurment
- Power amplifier to increase the output level of standard signal generators or sweep signal generators

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	50..2500 MHz
Input power for P1dB	typ. +3 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 33 dBm, min. 32.5 dBm (CW)
	typ. 2 W, min. 1.8 W (CW)
Output power P3dB	typ. 34.7 dBm, min. 33.4 dBm (CW)
	typ. 3 W, min. 2.2 W (CW)
Gain (small signal)	typ. 33 dB, min. 31 dB
Gain flatness (small signal)	typ. +/- 1 dB
Noise figure @ 18 °C	typ. 4 dB
Harmonic rejection	typ. 30 dB, min. 25 dB @ 31.7 dBm
IM3 (1)	min. 35 dBc @ 30 dBm PEP
Efficiency	typ. 10 % @ 33 dBm PEP
Input return loss (S11)	min. 10 dB
Supply voltage	+24 ... 26 V DC
Current consumption	typ. 750 mA
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20

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Weight	140 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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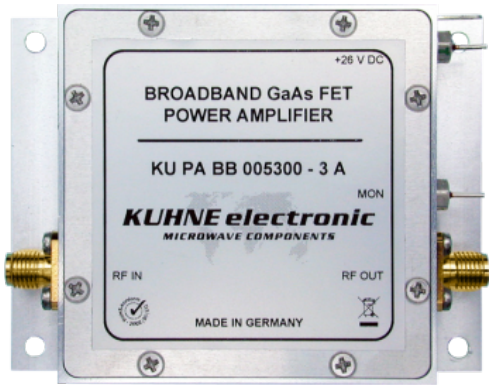
KU PA BB 005300-3 A, RF Broadband Power Amplifier

50 ... 3000 MHz • 3 W

analog & digital transmission systems **EMC**



Features

- GaAs FET technology
- Large bandwidth
- High gain
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case
- Small mechanical dimensions

Applications

- EMC measurement
- Additional power for standard signal generators
- Measurement and laboratory equipment
- Driver amplifier

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	50..3000 MHz
Input power for P1dB	min. +5 dBm
Maximum input power	+10 dBm
Output power P1dB	min. 34.7 dBm CW (50 ... 2000 MHz)
	min. 33 dBm CW (2000 ... 3000 MHz)
Output power P1dB	min. 3 W CW (50 ... 2000 MHz)
	min. 2 W CW (2000 ... 3000 MHz)
Output power COFDM (1)	min. 30 dBm (50 ... 2500 MHz)
	min. 27 dBm (2500 ... 3000 MHz)
Output power COFDM (1)	min. 1 W (50 ... 2500 MHz)
	min. 0.5 W (2500 ... 3000 MHz)
Gain (small signal)	min. 30 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	min. 20 dB @ 33 dBm
IM3 (2)	min. 35 dBc @ 30 dBm PEP
Efficiency	typ. 12 % @ 34.7 dBm (CW)
Input return loss (S11)	typ. 10 dB
Supply voltage	+24 ... 26 V DC
Current consumption	max. 1.0 A

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Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
Weight	140 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 10301050-55 A, RF Power Amplifier

Linear Power Amplifier for 10 GHz
10300 ... 10500 MHz • 55 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Detector output (DC voltage) for monitoring forward output power
- Reverse polarity protection
- ON / OFF control with DC voltage
- Small mechanical dimensions
- Over temperature protection

Applications

- Analog and digital transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site

Technical specifications:

Frequency range	10300..10500 MHz
Input power for P1dB	typ. 8 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 47.4 dBm, min. 47 dBm (CW) typ. 55 W, min. 50 W (CW)
Gain (small signal)	typ. 44 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 40 dB @ 47 dBm
Over temperature protection	yes
IM3 (1)	typ. 25 dBm @ 44.7 dBm PEP
Efficiency	typ. 15 % @ 47 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 12 A
Current consumption @ P1dB	typ. 26 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 64 x 22

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Weight	400 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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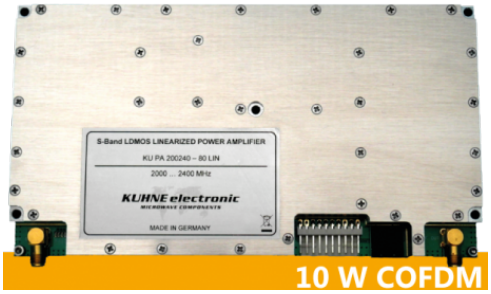
KU PA 200240-80 LIN, LDMOS Power Amplifier

2000 ... 2400 MHz • 8 W COFDM
Linear S-Band Power Amplifier

- Digital predistortion (DPD)
- Remote control via serial interface



Description

Find a detailed description under downloads.

Features

- LDMOS technology
- High linearity (build-in linearizer)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Adjustable ALC (automatic level control)
- True-RMS Detector output for forward and reverse power detection (DC voltage)
- Logic ON / OFF control (ON at 3 ... 14 V)
- serial interface

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2000..2400 MHz
Input power	+5 ... 10 dBm
Maximum input power	+10 dBm
Output power COFDM (1)	typ. 10 W, min. 8 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 60 dB @ 40 dBm
VSWR protection	Isolator
ON voltage	+3 ... 14 V DC
Supply voltage	+28 ... 32 V DC
Quiescent current	typ. 1.1 A
Current consumption	typ. 2.8 A
Forward detection	yes (True RMS detector)
Reflected power detection	yes (True RMS detector)

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Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	184 x 100 x 20
Weight	550 g (typ.)

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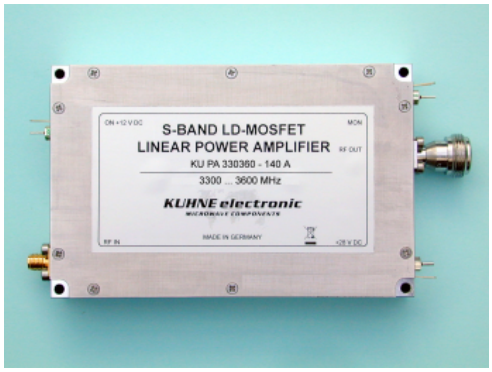
KU PA 330360-140 A, MOSFET Power Amplifier

3300 ... 3600 MHz • 140 W



Features

- LDMOS technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- ON / OFF control (ON at +12 V)
- Built-in over temperature protection

Applications

- Analog transmission systems
- Laboratory equipment

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	3300..3600 MHz
Input power for P1dB	typ. 42 dBm
Maximum input power	43.4 dBm
Output power P1dB	min. 51.4 dBm
	min. 140 W
Gain (small signal)	typ. 11 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 30 dB, min. 25 dB @ 51.7 dBm
Over temperature protection	yes
IM3 (1)	typ. 30 dBc @ 50 dBm PEP
Efficiency	min. 35 % @ 51.7 dBm (CW)
Input return loss (S11)	min. 12 dB
ON voltage	+12 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 2 A
Current consumption @ P1dB	typ. 15 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms
Case	milled aluminium
Dimensions (mm)	125x80x20 mm
Weight	440 g (typ.)

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(1) Measured 2-tone, frequency spacing: 1 MHz

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KU PA 10301050-55 A WG, RF Power Amplifier

Linear Power Amplifier for 10 GHz
10300 ... 10500 MHz • 55 W

Features

- GaAs FET technology
- High linearity (class A operation)
- Detector output (DC voltage) for monitoring forward output power
- Reverse polarity protection
- ON / OFF control with DC voltage
- Small mechanical dimensions
- Over temperature protection

Applications

- Analog and digital transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site

Technical specifications:

Frequency range	10300..10500 MHz
Input power for P1dB	typ. 8 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 47.4 dBm, min. 47 dBm (CW) typ. 55 W, min. 50 W (CW)
Gain (small signal)	typ. 44 dB
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 40 dB @ 47 dBm
Over temperature protection	yes
IM3 (1)	typ. 25 dBm @ 44.7 dBm PEP
Efficiency	typ. 15 % @ 47 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 12 A
Current consumption @ P1dB	typ. 26 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	waveguide R100 / WG16 / WG90
Case	milled aluminium
Dimensions (mm)	207 x 64 x 22 mm

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Weight	400 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 230270-18 RACK

Power Amplifier in rackmount case

Technical specifications:

Case	
Output power (CW)	typ. 20 W
Frequency range (IF)	597 ... 797 MHz
	662 ... 682 MHz
Frequency range (RF)	2300 ... 2700 MHz

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KU PA 026026-500 RACK

Power Amplifier in rackmount case

Technical specifications:

Frequency range	260..260 MHz
Output power P1dB	min. 850 W (CW)
Dimensions (mm)	3 HE, 350 mm depth
	5 HE, 450 mm deep

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KU PA 900-200 RACK

Power Amplifier in rackmount case

Technical specifications:

Frequency range	895..925 MHz
Output power (CW)	180 W (min.)
Case	
Dimensions (mm)	482,6 x 133 x 350 mm

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KU PA 330360-40 LIN, LDMOS Power Amplifier

3300 ... 3600 MHz • 4 ... 5 W COFDM
Linear S-Band Power Amplifier

- Digital predistortion (DPD)
- Remote control via serial interface

Description

Find a detailed description under downloads.

Features

- LDMOS technology
- High linearity (build-in linearizer)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Adjustable ALC (automatic level control)
- True-RMS Detector output for forward and reverse power detection (DC voltage)
- Logic ON / OFF control (ON at 3 ... 14 V)
- serial interface

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	3300..3600 MHz
Input power	+5 ... 10 dBm
Maximum input power	+10 dBm
Output power COFDM (1)	typ. 5 W, min. 4 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain flatness (small signal)	typ. +/- 1 dB
Harmonic rejection	typ. 50 dB @ 37 dBm
VSWR protection	Isolator
ON voltage	+3 ... 14 V DC
Supply voltage	+28 ... 32 V DC
Quiescent current	typ. 0.8 dB
Current consumption	typ. 2.0 A @ 5 W
Forward detection	yes (True RMS detector)
Reflected power detection	yes (True RMS detector)

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Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	184 x 100 x 20
Weight	550 g (typ.)

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KU BDA 240250-25A, Bi-Directional Amplifier

2400 ... 2500 MHz • 37 dBm COFDM

Mesh-Networks WLAN IEEE802.11 COFDM DVB-T & DVB-S

- No external switching signal necessary
- High operating safety
- Easy monitoring of the operating condition

Description

The KU BDA 240250–25 A bi-directional amplifier is designed to support various analog and digital modulation types and signal waveforms in the 2.4 GHz ISM band. The transmitter features LDMOS technology and delivers more than 20 W P1dB power. Switching between transmit and receive path is done automatically depending on the input power level. The receiver's built-in LNA provides a very low noise figure and additional power gain, which enhances the sensitivity of your receiver.

Features

- LDMOS technology
- RX/TX switching depending on input power level
- Circulator for protection against high VSWR
- Status LED for RX/TX indication
- Remote power supply via "Radio" terminal
- Additional pin for direct connection of supply voltage

Applications

- Digital broadcast systems (DVB-T, DVB-S)
- COFDM systems using modulation types QPSK, QAM
- WLAN applications according to IEEE 802.11b/g
- Analog & digital transmission systems

For operating high frequency modules legal instructions in the respective country must be followed. For this product especially the maximum allowed radiated power (EIRP) has to be considered.

Technical specifications:

Frequency range	2400..2500 MHz
Switching time RX/TX	typ. 600 ns, max. 1 us
Output power P1dB	typ. 44 dBm, min. 43 dBm
Input power for P1dB	typ. 20 dBm
Current consumption @ P1dB	typ. 2.4 A
Maximum input power (TX)	max. 25 dBm
Output power P3dB	min. 44 dBm
Output power COFDM (1)	min. 37 dBm
TX gain (small signal)	typ. 25 dB
Flatness TX (small signal)	typ. +/- 1.5 dB
Input return loss (TX)	typ. 15 dB
Noise figure @ 18°C	typ. 1.7 dB, max. 2 dB
RX gain (small signal)	typ. 18 dB, min. 17 dB
Flatness RX (small signal)	typ. +/-1 dB
Output IP3 (2)	typ. 20 dBm

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Input return loss (RX)	typ. 15 dB
Supply voltage	+27 ... 30 V DC
Quiescent current RX/TX	typ. 50 mA / typ. 390 mA
Operating case temperatur range	-20 ... +55 °C
Radio connector / impedance	N-female / 50 ohms
Antenna connector / impedance	N-female / 50 ohms
Case	milled aluminium
Dimensions	81.8 x 63.6 x 22
Weight	typ. 250 g
Remote power supply	via radio connector
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 125145-30 A, RF Power Amplifier

1250 ... 1450 MHz • 30 W
RF Power Amplifier for 1.3 GHz
suitable for Video transmission

analog & digital transmission systems **jamming**

Features

- LD-MOSFET technology
- Good linearity
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)

Applications

- Digital broadcast systems (DAB, DVB)
- COFDM systems using modulation types QAM, QPSK
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.
- Attention: The recommended fans need a supply voltage of 24 ... 28 V DC.

Technical specifications:

Frequency range	1250..1450 MHz
Input power for P1dB	typ. 25 dBm
Maximum input power	29 dBm
Output power P1dB	typ. 44 dBm, min. 44.7 dBm
	typ. 30 W, min. 25 W
Output power P3dB	min. 46 dBm
	typ. 40 W (CW)
Output power COFDM (1)	typ. 40 dBm, min. 39 dBm
	typ. 10 W, min. 8 W
Gain (small signal)	min. 21 dB
Gain flatness (small signal)	typ. +/- 0.5 dB, max. +/- 1 dB
Harmonic rejection	min. 18 dB @ 44.7 dBm (2. Harm.)
IM3 (2)	typ. 35 dBc, min. 30 dBc @ 43 dBm PEP
Efficiency	typ. 50 %, min. 46 % @ 44.7 dBm (CW)
Supply voltage	+28 V DC
Quiescent current	typ. 0.35 A
Current consumption	max. 3.5 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C

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VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 040050-7 HY, MOSFET Power Amplifier

400 ... 500 MHz • 7 W

Features

- Built-in low pass filter for good harmonic rejection
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)

Applications

- Analog transmission systems
- Radio amateur applications SSB, CW

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	400..500 MHz
Input power for P3dB	typ. 18 dBm
Maximum input power	+21 dBm
Output power P3dB	min. 38.4 dBm (CW)
	min. 7 W (CW)
Gain (small signal)	min. 23 dB
Gain flatness (small signal)	max. 5 dB
Harmonic rejection	min. 60 dB @ 38.4 dBm
IM3 (1)	min. 30 dBc @ 34.7 dBm PEP
Efficiency	typ. 40 %, min. 30 % @ 38.4 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+10 ... 13 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 1 A
Current consumption @ P3dB	typ. 1.4 A, max. 2 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	130 x 60 x 20
Weight	240 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 155160-25 A, Power Amplifier

1550 ... 1600 MHz • 25 W

Features

- LD-MOSFET technology
- Good linearity
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)

Applications

- GPS Jammer

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	1550..1600 MHz
Input power for P1dB	typ. 23 dBm
Maximum input power	29 dBm
Output power P1dB	min. 44 dBm (CW)
	min. 25 W (CW)
Saturation power	min. 45,4 dBm
	min. 35 W
Output power COFDM (1)	min. 37 dBm
	min. 5 W
Gain (small signal)	min. 21 dB
Gain flatness (small signal)	+/- 0,5 dB, max. +/- 1dB (ALC not active)
Harmonic rejection	typ. 20 dB @ 25 W
IM3 (2)	min. 35 dBc @ 40 dBm PEP
Efficiency	min. 46 % @ 30 W (CW)
Supply voltage	+28 V DC
Quiescent current	typ. 300 mA
Current consumption	max. 3.5 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
(1)	Measured with QAM 64, single carrier, EVM: 2%

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(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 135155-25 A, Power Amplifier

1350 ... 1550 MHz • 25 W
RF Power Amplifier for 1.3 GHz
suitable for Video transmission

analog & digital transmission systems

Features

- LD-MOSFET technology
- Good linearity
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)

Applications

- Digital broadcast systems (DAB, DVB)
- COFDM systems using modulation types QAM, QPSK
- Analog transmission systems

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.
- Attention: The recommended fans need a supply voltage of 24 ... 28 V DC.

Technical specifications:

Frequency range	1350..1550 MHz
Input power for P1dB	typ. 23 dBm
Maximum input power	29 dBm
Output power P1dB	min. 44 dBm (CW)
	min. 25 W (CW)
Saturation power	min. 45,4 dBm
	min. 35 W
Output power COFDM (1)	typ. 37.7 dBm
	min. 5 W
Gain (small signal)	min. 21 dB
Gain flatness (small signal)	typ. +/- 1.5 dB
Harmonic rejection	typ. 20 dB @ 25 W
IM3 (2)	min. 35 dBc @ 40 dBm PEP
Efficiency	min. 46 % @ 30 W (CW)
Supply voltage	+28 V DC
Quiescent current	typ. 300 mA
Current consumption	max. 3.5 A

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Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU BDA 230250-25 A, Bi-Directional Amplifier

2300 ... 2500 MHz • 37 dBm COFDM

Mesh-Networks WLAN IEEE802.11 COFDM DVB-T & DVB-S

- No external switching signal necessary
- High operating safety
- Easy monitoring of the operating condition

Description

The KU BDA 230250–25 A bi-directional amplifier is designed to support various analog and digital modulation types and signal waveforms. The transmitter features LDMOS technology and delivers more than 20 W P1dB power. Switching between transmit and receive path is done automatically depending on the input power level. The receiver's built-in LNA provides a very low noise figure and additional power gain, which enhances the sensitivity of your receiver.

Features

- LDMOS technology
- RX/TX switching depending on input power level
- Circulator for protection against high VSWR
- Status LED for RX/TX indication
- Remote power supply via "Radio" terminal
- Additional pin for direct connection of supply voltage

Application

- Digital broadcast systems (DVB-T, DVB-S)
- COFDM systems using modulation types QPSK, QAM
- WLAN applications according to IEEE 802.11b/g
- Analog & digital transmission systems

For operating high frequency modules legal instructions in the respective country must be followed. For this product especially the maximum allowed radiated power (EIRP) has to be considered.

Technical specifications:

Frequency range	2300..2500 MHz
Switching time RX/TX	typ. 600 ns, max. 1 us
Output power P1dB	typ. 44 dBm, min. 43 dBm
Input power for P1dB	typ. 20 dBm
Current consumption @ P1dB	typ. 2.4 A
Maximum input power (TX)	max. 25 dBm
Output power P3dB	min. 44 dBm
Output power COFDM (1)	min. 37 dBm
TX gain (small signal)	typ. 25 dB
Flatness TX (small signal)	typ. +/- 1.5 dB
Input return loss (TX)	typ. 10 dB
Noise figure @ 18°C	typ. 1.7 dB, max. 2 dB
RX gain (small signal)	typ. 18 dB, min. 17 dB
Flatness RX (small signal)	typ. +/-1 dB
Output IP3 (2)	typ. 20 dBm
Input return loss (RX)	typ. 15 dB

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Power Amplifiers

Supply voltage	+27 ... 30 V DC
Quiescent current RX/TX	typ. 50 mA / typ. 390 mA
Operating case temperatur range	-20 ... +55 °C
Radio connector / impedance	N-female / 50 ohms
Antenna connector / impedance	N-female / 50 ohms
Case	milled aluminium
Dimensions	81.8 x 63.6 x 22
Weight	typ. 250 g
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 200270-10 A, GaN-HEMT Power Amplifier

Based on GaN HEMT technology, the amplifier module achieves energy efficiencies greater than 40% over the entire 2000-2700MHz bandwidth at 10W output power.

Description

Based on GaN HEMT technology, the amplifier module achieves energy efficiencies greater than 40% over the entire 2000-2700MHz bandwidth at 10W output power. The amplifier is temperature compensated and, despite its high gain (47dB), features a very low gain ripple of typically +/- 0.5dB across the full bandwidth.
The high efficiency in combination with an extended operating temperature range of -20 ... + 80°C allows the use of the amplifier module even under suboptimal cooling conditions. An overtemperature shutdown at +80°C (with automatic restart) protects the module from overheating.
The RF output tolerates arbitrary mismatch without causing instability or damage.
In addition to the standard version with + 28V operating voltage (version A), the amplifier module is also available with wide-range supply voltage input (version B, +10 ... + 50V operating voltage).
The module provides low-impedance monitoring outputs for measurement and monitoring of forward and backward power as well as operating temperature. Power supply, control and monitoring signals are provided via a robust I/O interface (9-pin Sub-D connector) with protection against reverse polarity, overvoltage and EMI.

Features

- High efficiency and bandwidth
- Very low ripple, noise figure and good harmonic rejection over the entire bandwidth
- Robust I/O interface via Sub-D connector with monitoring outputs for forward and backward power as well as temperature
- Extended operating temperature range -20 ... + 80 ° C
- Available with wide-range supply voltage input +10 ... 50V (version B)

Applications

- Plasma generation and microwave heating in process engineering and scientific applications
- RF Measurement setups, EMC testing
- Radar
- Jammer
- Analog & Digital Transmission Systems

Technical specifications:

Frequency range	2000..2700 MHz
Maximum input power	+30 dBm
Output power P3dB	40 dBm (min.) (CW)
	10 W (min.) (CW)
Gain (small signal)	47.5 dB (typ.)
Gain flatness (small signal)	+/-0.75 dB (typ.)
Noise figure @ 18 °C	1.5 dB (typ.)
Harmonic rejection	40 dB (typ.)
Over temperature protection	yes

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IM3 (2)	30 dBc (typ.) @ 40 dBm PEP
Efficiency	45 % (typ.) @ P3dB
Input return loss (S11)	13 dB (typ.)
ON voltage	+3 ... +50 V DC
Supply voltage	+28 V DC
Quiescent current	150 mA (typ.)
Current consumption	1 A (max.)
Forward detection	yes (log. detector)
Reflected power detection	yes (log. detector)
VSWR of load	infinite
Operating case temp. range	-20 ... +80 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	85 X 85 X 40
Weight	500 g (typ.)

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KU PA 200270-10 B, GaN-HEMT Power Amplifier

Based on GaN HEMT technology, the amplifier module achieves energy efficiencies greater than 40% over the entire 2000-2700MHz bandwidth at 10W output power.

Description

Based on GaN HEMT technology, the amplifier module achieves energy efficiencies greater than 40% over the entire 2000-2700MHz bandwidth at 10W output power. The amplifier is temperature compensated and, despite its high gain (47dB), features a very low gain ripple of typically +/- 0.5dB across the full bandwidth.
The high efficiency in combination with an extended operating temperature range of -20 ... + 80°C allows the use of the amplifier module even under suboptimal cooling conditions. An overtemperature shutdown at +80°C (with automatic restart) protects the module from overheating.
The RF output tolerates arbitrary mismatch without causing instability or damage.
In addition to the standard version with + 28V operating voltage (version A), the amplifier module is also available with wide-range supply voltage input (version B, +10 ... + 50V operating voltage).
The module provides low-impedance monitoring outputs for measurement and monitoring of forward and backward power as well as operating temperature. Power supply, control and monitoring signals are provided via a robust I/O interface (9-pin Sub-D connector) with protection against reverse polarity, overvoltage and EMI.

Features

- High efficiency and bandwidth
- Very low ripple, noise figure and good harmonic rejection over the entire bandwidth
- Robust I/O interface via Sub-D connector with monitoring outputs for forward and backward power as well as temperature
- Extended operating temperature range -20 ... + 80 ° C
- Available with wide-range supply voltage input +10 ... 50V (version B)

Applications

- Plasma generation and microwave heating in process engineering and scientific applications
- RF Measurement setups, EMC testing
- Radar
- Jammer
- Analog & Digital Transmission Systems

Technical specifications:

Frequency range	2000..2700 MHz
Maximum input power	+30 dBm
Output power P3dB	40 dBm (min.) (CW)
	10 W (min.) (CW)
Gain (small signal)	47.5 dB (typ.)
Gain flatness (small signal)	+/-0.75 dB (typ.)
Noise figure @ 18 °C	1.5 dB (typ.)
Harmonic rejection	40 dB (typ.)
Over temperature protection	yes

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IM3 (2)	30 dBc (typ.) @ 40 dBm PEP
Efficiency	40 % (typ.) @ P3dB
Input return loss (S11)	13 dB (typ.)
ON voltage	+3 ... +50 V DC
Supply voltage	+10 ... 50 V DC
Quiescent current	160mA (typ.) @ 28V DC
Current consumption	3 A (max.) @ 10V DC
Forward detection	yes (log. detector)
Reflected power detection	yes (log. detector)
VSWR of load	infinite
Operating case temp. range	-20 ... +80 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	85 X 85 X 40
Weight	500 g (typ.)

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KU PA 270330-10 A, Power amplifier

Description

Based on GaN HEMT technology, the amplifier module achieves typical energy efficiencies of 48% over the entire 2700-3300MHz bandwidth at 10W output power.
The amplifier features high gain (37dB) and a gain ripple of typically +/- 2dB across the full bandwidth.
The module provides a monitoring output for monitoring of forward power.
The power supply input features protection against reverse polarity and overvoltage.

Features

- GaN technology
- High efficiency
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Logic ON / OFF control (ON at +5 ... 14 V DC)

Applications

- Measurement, Laboratory equipment

Important notes

- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	2700..3300 MHz
Maximum input power	+10 dBm
Output power P3dB	min. 40 dBm (CW)
	min. 10 W (CW)
Gain (small signal)	typ. 40 dB, min. 37 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	typ. 22 dB @ 40 dBm
Efficiency	typ. 48 % @ 40 dBm (CW)
ON voltage	+5 ... 14 V DC
Supply voltage	+27 ... 29 V DC
Quiescent current	typ. 300 mA
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	78 x 41 x 22 mm
Weight	120 g (typ.)

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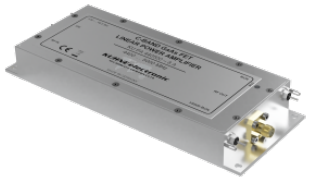
KU PA 440500-8 A, Linear Power Amplifier



Features

- GaAs FET technology
- High linearity
- Low EVM
- 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 control (ON at +5 ... 14 V DC)

Applications

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

Technical specifications:

Frequency range	4400..5000 MHz
Input power for P1dB	typ. 8 dBm
Maximum input power	+13 dBm
Output power P1dB	typ. 40 dBm, min. 39 dBm (CW)
	typ. 10 W, min. 8 W (CW)
Output power COFDM (1)	typ. 34.7 dBm, min. 34 dBm
	typ. 3 W, min. 2 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	min. 35 dB
Gain flatness (small signal)	typ. +/- 1.5 dB
Harmonic rejection	typ. 50 dB, min. 40 dB @ 40 dBm
VSWR protection	Isolator
Over temperature protection	yes
IM3 (2)	typ. 34 dBc @ 37 dBm PEP
	typ. 26 dBc @ 40 dBm PEP
Efficiency	typ. 25 % @ 40 dBm (CW)
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 3.2 A
Current consumption	max. 4 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 60 x 20
Weight	320 g (typ.)

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(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA BB 070270-80 A-2.1.1, Power Amplifier

600 ... 2700 MHz • 100 W

analog & digital transmission systems test equipment jamming

- versatile application
- for all common mobile radio bands
- Excellent operational safety thanks to numerous protection and monitoring circuits

Features

- GaN technology
- Wide bandwidth
- High gain
- Monitor output for forward power detection
- Monitor output for reverse power detection
- SWR protection
- Power good indication
- Over temperature protection
- Gate Current protection

Application

- CW / pulsed systems
- Laboratory equipment
- Radar
- Jammer

Important notes

Please notice the following:The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.
- The recommended fans need a supply voltage of 24 ... 28 V DC.

Technical specifications:

Frequency range	600..2700 MHz
Maximum input power	+10 dBm
Saturation power	min. 49 dBm
	min. 80 W
Gain (small signal)	typ. 52 dB
IM3 (1)	typ. 22 dBc @ 80 W PEP
Efficiency	typ. 25 % @ 80 W (CW)
Input return loss (S11)	typ. 12 dB, min. 10 dB
ON voltage	+5 V DC
Supply voltage	+ 32 V DC
Quiescent current	typ. 2.8 A
Current consumption	typ. 13 A, max. 15 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C

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Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	180 x 95 x 26
Weight	800 g (typ.)
(1)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA BB 003350-15 B, Power Amplifier

30 ... 3500 MHz

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

- High bandwidth
- Variety of analog monitor signals
- Very fast mute functionality
- High efficiency
- Low small and large signal gain ripple
- Available with one or two RF inputs

The KU PA BB 003350-15 A/B is the latest broadband power amplifier from KUHNE and 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.

Description

The KU PA BB 003350-15 A / B has a gain of at least 39 dB in large-signal operation at 15 W output power and can therefore be fed with a low input power of less than 2 mW. The amplifier has many monitor and control signals, for example the monitoring of temperature, current consumption, forward and reverse power as well as a fast mute function for switching off the RF signal. For the simultaneous disruption of several radio services, a B version with two equivalent RF inputs and an internal broadband combiner is available.

Features

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

Technical specifications:

Frequency range	30..3500 MHz
Maximum input power	+17 dBm
Saturation power	min. 15 W (30 ... 2500 MHz)
	min. 10 W (2500 ... 3500 MHz)
Gain (small signal)	min. 45 dB
Gain	min. 39 dB
Gain flatness (small signal)	max. +/- 1.5 dB (30 ... 2500 MHz)
Flatness	max. +/- 2 dB (2500 ... 3500 MHz)
Noise figure @ 18 °C	max. 15 dB (30 ... 200 MHz)
	max. 9 dB (200 ... 3500 MHz)
Harmonic rejection	min. 12 dB
Over temperature protection	yes
IM3 (2)	min. 12 dBc @ 15 W PEP
Input return loss (S11)	min. 12 dB (30 ... 100 MHz)
Input return loss (S11)	min. 14 dB (100 ... 3500 MHz)
Supply voltage	+18 ... 36 V DC
Quiescent current	max. 2.5 A @ 24 V DC
Current consumption	max. 3,6 A @ 24 V DC

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Power Amplifiers

Forward detection	yes (log. detector)
Reflected power detection	yes (log. detector)
VSWR of load	max. 10 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	200 X 115 X 25 mm
Weight	950 g (typ.)
Duty Cycle	max. 100 %
mute functionality	Yes, high-active mute
Mute-functionality switching time	max. 5 us
Output power desity at active mute	max. -140 dBm/Hz
Current consumption at active mute	max. 0.5 A @ 24 V DC

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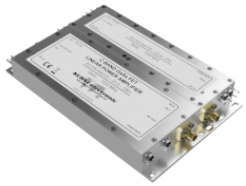
KU PA 640700 25 A, Power Amplifier

6400 ... 7000 MHz • 25 W

As very powerful and highly linear amplifier the PA 640700 - 25 A is designed for terrestrial data-links or satellite up-links.

- **High power up tu 25 W**
- **Very good linearity and low shoulders for modulated signals**
- **Low EVM of 2%**



Description

The KU PA 640700 - 25 A is a high power and highly linear amplifier for terrestrial data links and SATCOM uplinks. Using GaAs FETs a preeminent linearity in combination with high frequency and output power is reached. The 12 V supply voltage ease usage in non-stationary environments such as broadcast vehicles or flying platforms.

Features

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

Applications

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

Important notes

Please notice the following:
- Only use with proper cooling.
- Specifications valid at room temperature.
- Suggested cooling and fans designed at 25 °C ambient temperature.
- More information regarding cooling design can be found on our FAQ-page.

Technical specifications:

Frequency range	6400..7000 MHz
Input power for P1dB	typ. 2 dBm
Maximum input power	+6 dBm
Output power P1dB	typ. 43,8 dBm, min. 42,5 dBm
	typ. 24 W, min. 18 W (CW)
Output power COFDM (1)	typ. 38.5 dBm, min. 37 dBm
	typ. 7 W, min. 5 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	typ. 46 dB, min. 42 dB
Gain flatness (small signal)	typ. +/- 3 dB
Harmonic rejection	typ. 52 dB, min. 47 dB @ 42.5 dBm

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VSWR protection	Isolator
Over temperature protection	yes
IM3 (2)	typ. 35 dBc, min. 30 dBc @ 40 dBm PEP typ. 20 dBc @ 42.5 dBm PEP
Efficiency	typ. 18 %, min. 13 % @ 42.5 dBm (CW)
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 9 A
Current consumption	max. 12 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 100 x 20
Weight	550 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 440500-25 B, Linear Power Amplifier

4400 ... 5000 MHz • 25 W

Features

- GaAs FET technology
- High linearity
- Low EVM
- 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 control (ON at +5 ... 14 V DC)

Applications

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

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	4400..5000 MHz
Input power for P1dB	typ. 2 dBm
Maximum input power	+6 dBm
Output power P1dB	min. 44 dBm (CW)
	min. 25 W (CW)
Output power COFDM (1)	typ. 40 dBm
	typ. 10 W
Automatic level control (ALC)	yes (adjustable ALC)
Gain (small signal)	typ. 46 dB, min. 42 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	min. 48 dB @ 44 dBm
VSWR protection	Isolator
Over temperature protection	yes
IM3 (2)	typ. 40 dBc @ 40 dBm PEP
	typ. 36 dBc @ 43 dBm PEP
Efficiency	typ. 18 % @ 44 dBm (CW)
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC
Quiescent current	typ. 9 A
Current consumption	max. 12 A

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Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 100 x 20
Weight	550 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 125160-45 A, Power Amplifier

1250 ... 1600 MHz • 45 W

- High efficiency
- Analog transmission systems
- COFDM (QAM, QPSK)

This power amplifier is designed for digital as well as analog radio systems. Furthermore, this power amplifier achieves a high relative bandwidth of over 24%.

Description

This power amplifier was specially developed and optimized for the frequency range from 1.25 GHz to 1.60 GHz. The result of this development is a power amplifier with a 1 dB compression point of over 40 watts and very good intermodulation behavior.

Features

- LD-MOSFET-technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case

Applications

- COFDM – systems with modulation QPSK, QAM
- Analog transmission systems
- Measurement and laboratory equipment

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	1250..1600 MHz
Input power for P1dB	typ. 34.5 dBm, min. 33 dBm
Maximum input power	37.8 dBm
Output power P1dB	typ. 46.5 dBm, min. 46 dBm
	typ. 45 W, min. 40 W (CW)
Output power COFDM (1)	typ. 40 dBm
	typ. 10 W
Gain (small signal)	typ. 13 dB, min. 11 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	typ. 40 dB @ 46.5 dBm
IM3 (2)	typ. 45 dBc @ 44 dBm PEP
Efficiency	typ. 48 % @ 47 dBm (CW)
Supply voltage	+28 V DC
Quiescent current	typ. 380 mA

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Power Amplifiers

Current consumption	max. 5 A
Forward detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	80 x 60 x 20
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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KU PA 9501050 -30 A, GaAs-FET Power Amplifier

9500 ... 10500 MHz • 30 W

- High linearity
- Analog transmission systems
- COFDM (QAM, QPSK)

This power amplifier is designed for digital as well as analog radio systems. Furthermore, this power amplifier achieves a high bandwidth of 1 GHz.

Description

This power amplifier was specially developed and optimized for the frequency range from 9.5 GHz to 10.5 GHz. The result of this development is a power amplifier with a 1 dB compression point of over 25 watts and good intermodulation behavior.

Features

- GaAs FET-technology
- Reverse polarity protection
- Monitor output for forward power detection (DC voltage)
- Milled aluminium case

Applications

- COFDM – systems with modulation QPSK, QAM
- Analog transmission systems
- Measurement and laboratory equipment

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	9500..10500 MHz
Input power for P1dB	typ. 2 dBm
Maximum input power	+7 dBm
Output power P1dB	typ. 44 dBm, min. 44.7 dBm
	typ. 30 W, min. 25 W
Output power COFDM (1)	typ. 37 dBm, min. 34.8 dBm
	typ. 5 W, min. 3 W
Gain (small signal)	typ. 48 dB
Gain flatness (small signal)	typ. +/- 2 dB
Harmonic rejection	typ. 40 dB @ 44 dBm
Over temperature protection	yes
IM3 (2)	typ. 35 dBc @ 40 dBm PEP
Efficiency	min. 15 % @ 44 dBm (CW)
ON voltage	+5 ... 15 V DC
Supply voltage	+12 ... 14 V DC

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Current consumption @ P1dB	typ. 14 A
Forward detection	yes (diode detector)
VSWR of load	max. 1.8 : 1
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 64 x 22
Weight	380 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz

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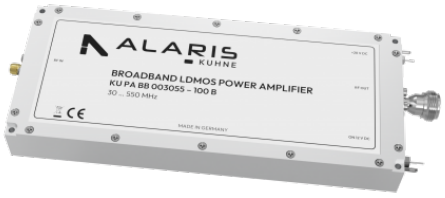
KU PA BB 003055-100 B, RF Power Amplifier

30 ... 550 MHz • 100 W

With the KU PA BB 003055-100 B Kuhne electronic puts a broadband power amplifier in the frequency range from 30 MHz to 550 MHz with an typical output power of 100 W on the market. The amplifier can be used for EMC-tests, laboratory measurements and other applications. Because of its high gain the power amplifier can be connected to every common signal generator.



Features

- LD-MOSFET-technology
- Reverse polarity protection
- Milled aluminium case
- ON / OFF control with DC voltage
- Over temperature protection (@ 65°C case temperature)

Applications

- Analog transmission systems
- Measurement, Laboratory equipment
- EMC-measurement
- Jammer

Important notes

Please notice the following:
- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	30..550 MHz
Input power for P3dB	min. +5 dBm
Maximum input power	+10 dBm
Output power P1dB	typ. 49,5 dBm, min. 47 dBm (CW)
Output power P3dB	typ. 50 dBm, min. 49 dBm (CW)
Saturation power	min. 50 dBm
Gain (small signal)	typ. 49 dB, min. 47 dB
Gain flatness (small signal)	typ. +/- 1.5 dB
Harmonic rejection	typ. 15 dB (30 .. 250 MHz) @ 47 dBm
	typ. 30 dB (300 ... 550 MHz) @ 47 dBm
IM3 (2)	typ. 25 dBc @ 47 dBm PEP
Efficiency	typ. 50 % @ 50 dBm (CW)
Input return loss (S11)	min. 10 dB
ON voltage	+9 ... 14 V DC
Supply voltage	+28 V DC
Quiescent current	typ. 1.5 A
Current consumption @ P3dB	max. 9 A
VSWR of load	max. 1.8 : 1
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	N-female / 50 Ohms

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Dimensions (mm)	192 x 80 x 22
Weight	580 g (typ.)
(2)	Measured 2-tone, frequency spacing: 1 MHz

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