

KUHNE electronic

MICROWAVE TECHNOLOGY REIMAGINED

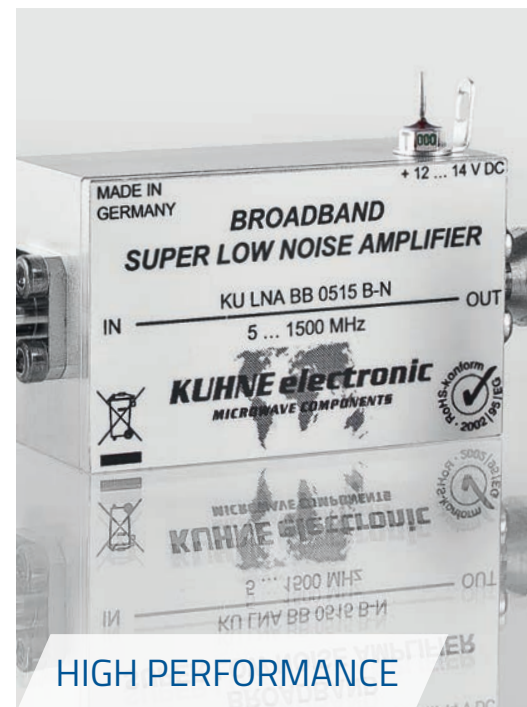
Latest microwave technology Made in Germany



INNOVATIVE



FLEXIBLE



HIGH PERFORMANCE

HIGH TECH | MADE IN GERMANY

High frequency technology reimagined.



"After 25 years and customers in over 60 countries, we can claim to be one of the first ports of call worldwide in radio-frequency technology in the range from 100 MHz to 50 GHz.

We can offer you design, implementation, individual and/or serial production through to the after sales service from a single source.

Facing even the most demanding tasks is a challenge that we are always willing to accept, because we are well known for our flexibility as well as for our innovative strength.

Let yourself be convinced.
We look forward to hearing from you."

Yours

Jutta Kuhne

CEO/Managing Director



Our strengths in summary:

- » **Flexibility:** We will handle your enquiry **within 2 working days**
- » **Quality:** On all Kuhne equipment and components we give a **3-year warranty**
- » **Advice:** You will have **a dedicated competent partner** for the entire duration of the project
- » **Service:** Usual repairs are carried out by our service department **within a week**





Developments Made by Kuhne in Germany.

The heart of Kuhne electronic beats in our own, experienced, and constantly growing R&D department. Our engineer team has proven it's experience and innovative capacity in various research and development projects. The ongoing improvement and further development of amplifiers, generators, and converters is at the focus of our work.



The key benefits of Kuhne appliances and components at a glance:

- » In-house developments with **stand-alone properties** in the market
- » Extraordinary **energy efficiency**
- » **Robust** and **easy to handle**
- » **Optimum performance** regarding individual requirements

Kuhne Power Amplifiers simply unique



KU PA BB 060270-100 A, Power Amplifier

- Frequency range 600 ... 2700 MHz
- Maximum input power +10 dBm
- Saturation power 80 ... 100 W
- Gain (small signal) typ. 52 dB
- IM3 typ. 22 dBc @ 80 W PEP

Broadband,
robust and
compact

Features

GaN technology / Wide bandwidth / High gain / Monitor output for forward power detection (DC voltage) / Monitor output for reverse power detection (DC voltage) / SWR protection / Power good indication / Over temperature protection / Gate Current protection

Applications

CW / pulsed systems / laboratory equipment / radar / jammer



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

- Frequency range 2000 ... 2700 MHz
- Output power 10 W (CW)
- Gain 47 dB
- Efficiency typ. 45 % @ P3dB
- Supply voltage +28 ... +50 V DC

Features

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

Applications

Plasma generation and microwave heating in process and scientific applications / Measurement technology, EMC test / Radar / Jammer / Analog & digital transmission systems



45 % efficiency
over 700 MHz
bandwidth

KU BDA 240250-25A, Bi-Directional-Amplifier

- Frequency range 2400 ... 2500 MHz
- Switching time typ. 600 ns, max. 1 us
- Output power P1dB typ. 44 dBm, min. 43 dBm
- Noise figure typ. 1.7 dB, max. 2 dB

Features

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



You can find technical specifications
and more information at
www.kuhne-electronic.de

High Performance energy efficient

KU PA 200240-80 LIN, LDMOS Power Amplifier

- Frequency range 2000 ... 2400 MHz
- Output power COFDM typ. 10 W, min. 8 W
- Harmonic rejection typ. 60 dB @ 40 dBm
- Current consumption typ. 2.8 A



Features

LDMOS technology / High linearity (built-in linearizer) / Good harmonic rejection / Isolator for protection against high VSWR / Adjustable ALC (automatic level control) / True RMS detector output for forward and reflected power (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)

KU PA 330360-40 LIN, LDMOS Power Amplifier

- Frequency range 3300 ... 3600 MHz
- Output power COFDM typ. 5 W, min. 4 W
- Harmonic rejection typ. 50 dB @ 37 dBm
- Current consumption typ. 2.0 A @ 5 W



Features

LDMOS technology / High linearity (built-in linearizer) / Good harmonic rejection / Isolator for protection against high VSWR / Adjustable ALC (automatic level control) / True RMS detector output for forward and reflected power (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)

Down Converters

high bandwidth and linearity



Flexible
in IF and
gain

KU LNC 2027 C PRO2, Down Converter

- Input frequency (RF) 2000 ... 2700 MHz
- Output frequency (IF) 160 ... 860 MHz
- Noise figure @ 18 °C typ. 0.8 dB, max. 1.0 dB
- Gain @ 25 °C typ. 35 dB
- Output IP3 25 dBm
- Configurable LO frequency & gain

Features

Low noise figure / Large bandwidth / Low phase noise oscillator / High frequency stability of the oscillator / High linearity / Antenna port protected against static discharge / Small and light-weight to allow easy pole mounting / Tri-colour LED indicates unit status and gain mode setting / Overvoltage protection and reverse polarity protection / Remote power supply via output connector / switchable gain / switchable local oscillator frequencies / normal or reverse output spectrum selectable

Applications

Multichannel Multipoint Distribution Services (MMDS) / Digital broadcast systems (DVB-T, DVB-S) / Analog and digital transmission systems

You can find technical specifications
and more information at
www.kuhne-electronic.de

Kuhne Preamplifiers super low noise

KU LNA 1090-2 A TM, Selective Low Noise Amplifier

- Frequency range 1070 ... 1110 MHz
- Noise figure @ 18 °C typ. 0.5 dB, max. 0.6 dB
- Gain min. 30 dB
- Maximum input power 1 mW
- Operating case temp. range -40 ... +65 °C

Features

High IP3 for excellent large signal performance / Low noise figure / ESD protection at preamplifier input / Built-in bias tee for remote power supply via coaxial cable / Built-in band pass filter

Applications

Low noise amplifier for avionics



KU LNA 8000 B WG, Super Low Noise Amplifier

- Frequency range 8000 ... 8450 MHz
- Noise figure @ 18 °C typ. 0.7 dB
- Gain typ. 32 dB
- Maximum input power 1 mW

Features

Extremely low noise figure / Reverse polarity protection / Unconditionally stable. No parasitic oscillations in case of poor antenna match / Milled aluminium housing

Applications

Deep space communications



Microwave Generators

latest technology



KU SG 2.45-250 A, Microwave Generator

- Frequency range 2400 ... 2500 MHz
- Output power 0 ... 250 W
- Protection function isolator
- Supply voltage 32 V DC

Up to 250 W,
freely adjustable

Features

GUI for controlling and monitoring / Setting the frequency in 1 MHz steps / Output power adjustable (0 ... 250 W in 1 W steps) / Sweep function / Pulse function (pulse/pause length adjustable) / Identification of the frequency with the lowest reflection / Isolator to protect against output mismatch / Monitoring function against too high a reflected power (steps can be selected) / Stable output power across large temperature range / Monitoring and querying of transistor temperature

Applications

Warming or heating through microwaves / Plasma generation / Investigation of propagation of electromagnetic waves / EMC tests (electromagnetic compatibility)

You can find technical specifications
and more information at
www.kuhne-electronic.de

19" Racks

Microwave generators



KU SG 1000-50 W, Microwave Generator

- Output frequency 10000 MHz
- Output power min. 50 W
- Waveform CW
- Protection functions VSWR (isolator), overtemperature
- Remote control LAN
- Output / impedance WR-90 / 50 ohms

Features

Remote control via LAN / High operational safety due to integrated waveguide isolator / Simple operation

Applications

Ion implantation / Plasma generation / Microwave heating



KU SG 2.45-RACK, Microwave Generator

- Frequency range 2400 ... 2500 MHz
- Output power 0 ... 250 W
- Protection functions VSWR (isolator), overtemperature
- Remote control LAN
- Output / impedance N socket / 50 ohms
- 7" touch display



Features

Adjustment of frequency in 1 MHz steps / Output power adjustable (0 ... 250 W in 1 W steps) / Frequency sweep functionality / Pulse function (pulse width and duty cycle adjustable) / Algorithm to find the frequency with the minimum reflection / Isolator for protection against high VSWR / Monitoring function against too high a reflected power (levels adjustable) / Monitoring and querying of transistor temperature / Switch-off if the power amplifier transistor reaches a too high temperature / Monitoring and querying of the forward power / Monitoring and querying of the reflected power / Undervoltage warning / ON/OFF control via interface or pin (ext. voltage)

Applications

Warming or heating through microwaves / Plasma generation / Investigation of propagation of electromagnetic waves / EMC tests (electromagnetic compatibility)

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Bias Tees, Power Splitters

KU BT 6000 N, Bias Tee

- Frequency range 10 ... 6000 MHz
- Insertion loss max. 1 dB
- Isolations 30 dB (typ.)
- Voltage range 0 ... 30 V DC
- Current rating 3 A (max.)



KU 7106, Active Power Splitter

- Frequency range 70 ... 1000 MHz
- Number of outputs 6

Features

Active amplifier circuitry / High linearity / Low insertion loss / Reverse polarity protection / Compact / Robust / All-purpose

Applications

Digital transmission systems / DVB / COFDM systems / Analog transmission systems



Oscillator – one module for all frequencies



Top
value
for money
with maximum
flexibility

MKU LO 8-13 PLL, Oscillator

- Output frequency 54 ... 6850 MHz & 8400 ... 13600 MHz
- Output power typ. 20 mW
- Frequency can be freely configured
- Remote controllable
- 1 Hz accurate setting

Features

Frequency step size 1 Hz / Temperature-compensated crystal oscillator / CW Keying / 10 MHz reference frequency input

Applications

Signal source for: Measuring and testing technology, power generators, CW generators



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Ready for the Future New Products 2020

High
performance!

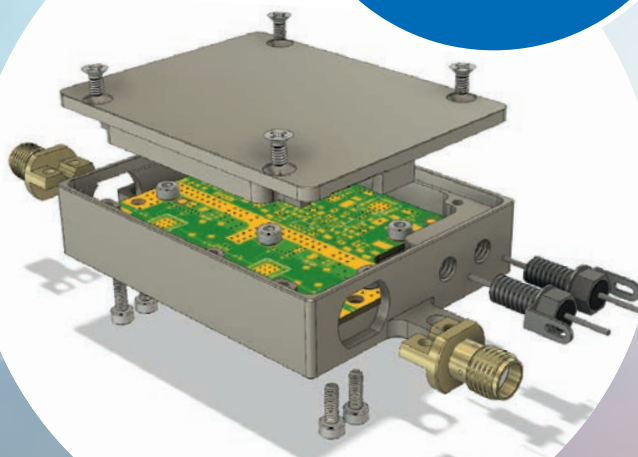
Higher
bandwidths!

Highest
linearity!

What our development department stands for:

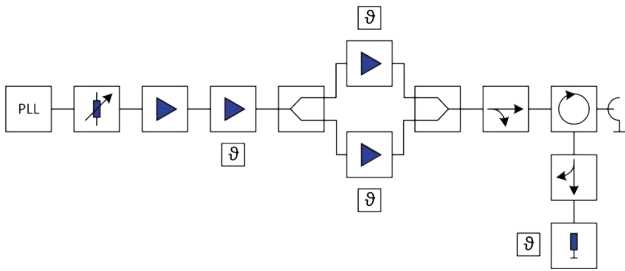
- » Ground-breaking research projects for high frequency technology / amateur radio
- » Customized developments
- » Flexibility and individuality
- » Recognizing and esponding to needs in the market

Complete package
– Everything from
one source



From our R&D department to the market

2020 - The year when Kuhne electronic will present a new generation of amplifiers and signal generators to you:



500 W Signal Generator

- Twice the power
- 2.4 – 2.5 GHz
- High intrinsic safety
- Ultra robust
- Various analog and digital interfaces

Power Amplifier

- 20 MHz – 6 GHz
- Ultra broadband
- Robust
- Quick blanking function

Robust ultra
broadband
amplifier



Power Amplifier

- 4.4 – 5 GHz with 30 W
- High linearity
- Video transmission

26.5 GHz
bandwidth

Broadband Preamplifier

- Broadband 10 MHz to 26.5 GHz
- One product for numerous applications
- Science, EMC, measuring technology



Kuhne electronic

– From Bavaria to the world.



At www.kuhne-electronic.de you will find a large selection of Kuhne appliances and components such as power amplifiers, microwave generators, converters and many, many more...

Make the most out of this opportunity. It will be worth while!



Over
500 Kuhne
products
online!



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