KU LNC 4450 C PRO



Manual

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Specification

Frequency range (RF) RF input power	4400 ... 5000 MHz max. 1 mW (0 dBm)
Output frequency (IF) Output IP3 Gain (switchable) Noise figure @ 18 °C	260 ... 860 MHz (local oscillator 4140 MHz) 260 ... 860 MHz (local oscillator 5260 MHz) typ. +23 dBm (high gain), typ. +12 dBm (low gain) typ. 30 dB (high gain), typ. 19 dB (low gain) (LO frequency 4140 MHz) typ. 1.7 dB, max. 2.0 dB (LO frequency 4140 MHz, IF amplifier enabled)
LO frequency (switchable) LO accuracy @ 18 °C LO frequency stability (0 ... 40 °C) Phase noise @ 4140 MHz @ 1 kHz @ 10 kHz @ 100 kHz	4100 MHz, 4140 MHz, 4250 MHz, 5260 MHz (switchable) +/- 2 ppm +/- 3 ppm typ. -90 dBc/Hz typ. -101 dBc/Hz typ. -100 dBc/Hz
Operating case temperature range	-20 ... +55 °C
Supply voltage Current consumption Power consumption	+9 ... 36 V DC typ. 250 mA @ 12V (IF amplifier enabled) typ. 3.0 W
Input connector / impedance Output connector / impedance	N-female, 50 ohms N-female, 50 ohms
Dimensions (mm) Case Weight	82 x 64 x 22 milled aluminium, water resistant typ. 230 g

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

CE Conformity:

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

CE

Applications

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

Sig _____

Products are only to be sold to competent companies or to radio amateurs with a licence.
For operating high frequency modules legal instructions must be followed.

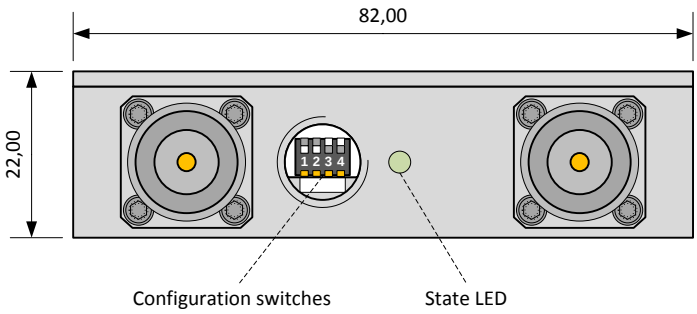
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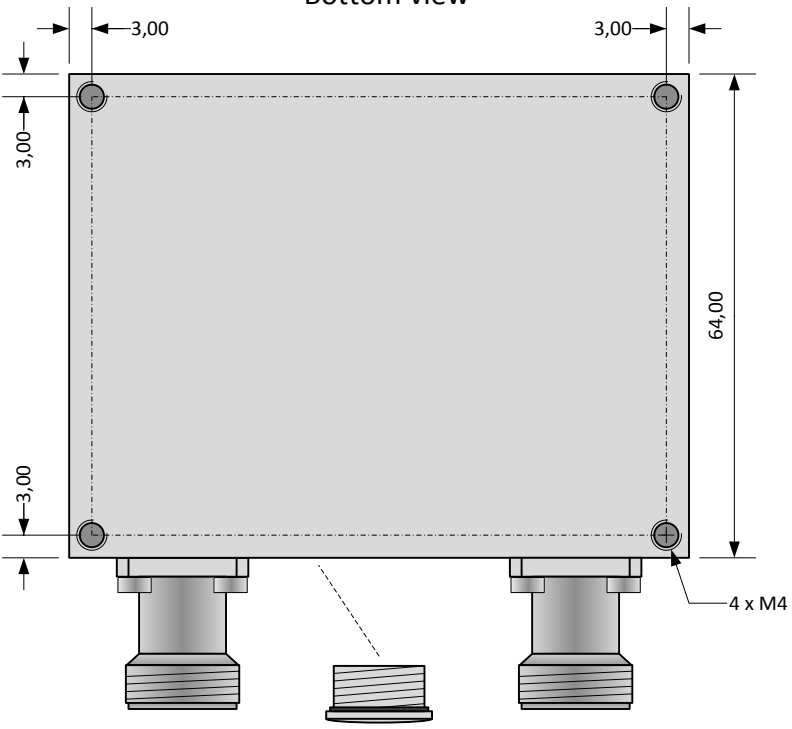
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Dimensions / Mounting holes

Front view



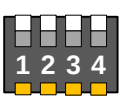
Bottom view



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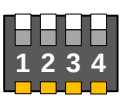
Configuration Switches / State LED



Switch 1 + 2 - (Local oscillator frequency)

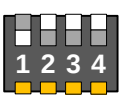
Switch 3 - (Gain)

Switch 4 - (User local oscillator frequency)



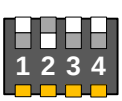
Switch 1 – OFF / Switch 2 – OFF

LO 5260 MHz
IF 260 ... 860 MHz



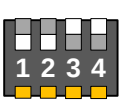
Switch 1 – ON / Switch 2 – OFF

LO 4250 MHz
IF 150 ... 750 MHz



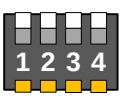
Switch 1 – OFF / Switch 2 – ON

LO 4100 MHz
IF 300 ... 900 MHz



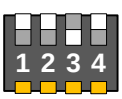
Switch 1 – ON / Switch 2 – ON

LO 4140 MHz
IF 260 ... 860 MHz



Switch 3 – OFF → **State LED** Green

Low Gain



Switch 3 – ON → **State LED** Blue

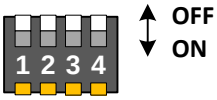
High Gain

Device Error → **State LED** Red

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Configuration Switches / State LED

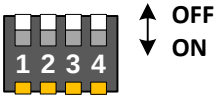


Switch 1 + 2 - (Local oscillator frequency)

Switch 3 - (Gain)

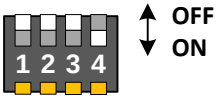
Switch 4 - (User local oscillator frequency)

User defined local oscillator frequency



Switch 4 – OFF

Local oscillator configuration with Switch 1 + 2



Switch 4 – ON

Local oscillator configuration with Switch 1 + 2 disabled
User defined local oscillator frequency is enabled

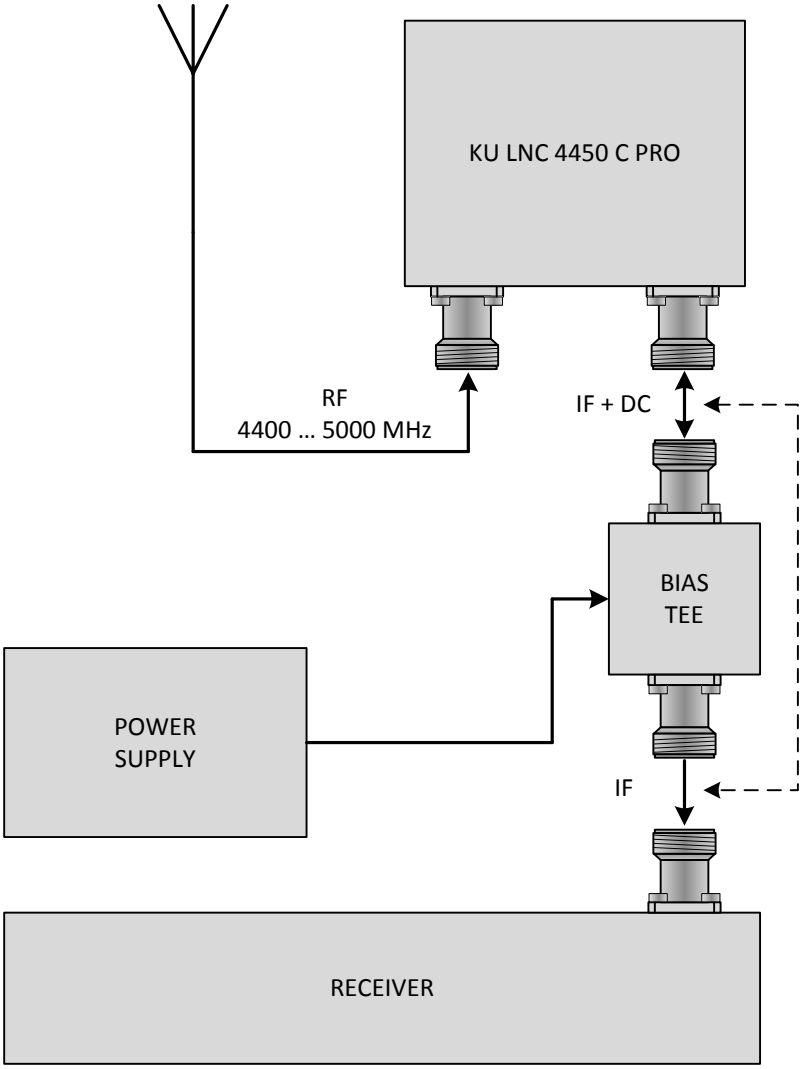
In the case that **Switch 4** is in position **ON** the user defined local oscillator frequency is activated.
This user defined local oscillator frequency can be selected in the range from 4100 … 4250 MHz or 5150 … 5300 MHz.
The frequency step size of the oscillator frequency is 5 MHz.
The user defined oscillator frequency can be programmed with a special programming cable.

For example the oscillator frequency can be choosen to 4160 MHz .

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Application diagram

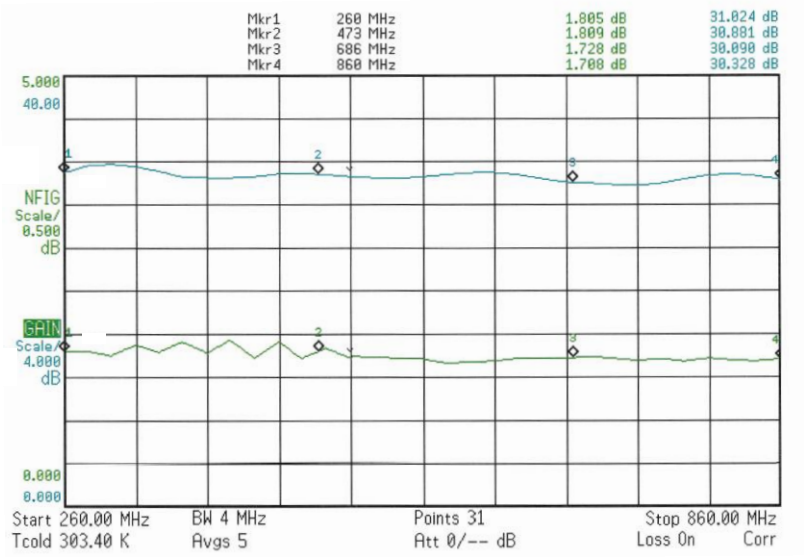


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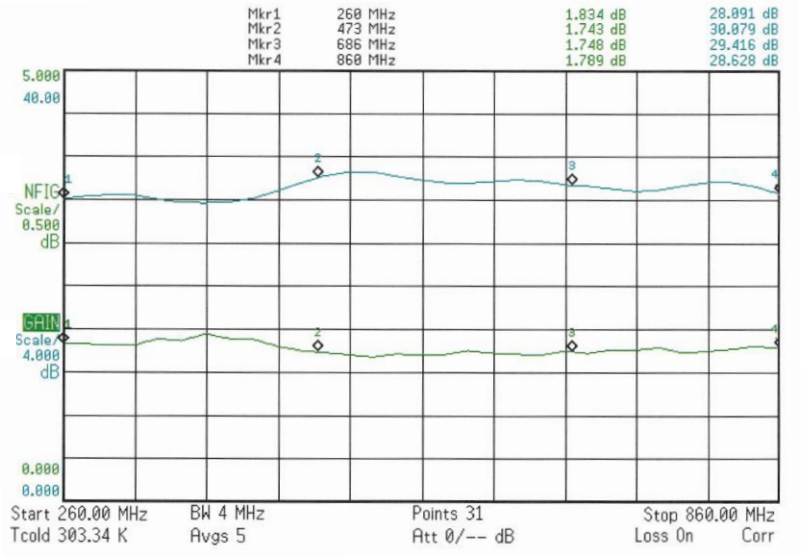
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Typical performance

Typical gain and noise figure (4140 MHz LO frequency, IF amplifier on)



Typical gain and noise figure (5260 MHz LO frequency, IF amplifier on)

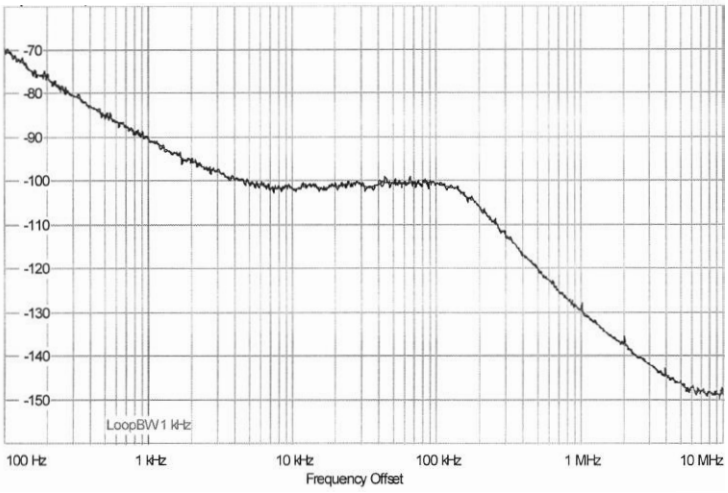


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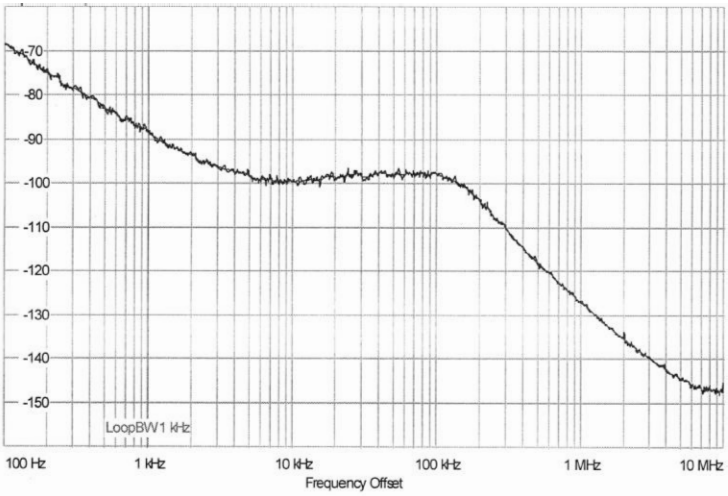
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Typical performance

Typical phase noise at 4140 MHz local oscillator frequency



Typical phase noise at 5260 MHz local oscillator frequency



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