

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

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