TCKU2W

Ku-band Frequency Transceivers — High-Performance RF Units for Satellite Uplink & Downlink by UMT LLC

UMT LLC's Ku-band transceivers are advanced **RF communication devices** designed for reliable **satellite uplink and downlink** in the **Ku-band frequency range (10.7—14.5 GHz)**. These **high-stability, low-phase-noise RF transceivers** combine upconverter and downconverter functionality in a compact unit, making them ideal for **VSAT systems**, **teleports**, **broadcasting hubs**, and **mobile satellite stations**. Featuring **PLL local oscillators**, **50/75 Ohm I/O**, and **N- or SMA-type connectors**, they ensure seamless integration and precise frequency conversion.

2 W Ku-band block up-converter with LO of 9.75 GHz BUC-Ku02-9.75-v2.0 is designed for MVDS TV broadcasting systems application in accordance with DVB-S/S2 or DVB-C standards (use "Customized" button to choose needed parameters) and operates with up to 25 carriers. BUC-Ku02-9.75-v2.0 has output flange of PBR120 type and can be used with regular radio-relay link (directional) or broadcast (sector and OMNI) antennas. BUC-Ku02-9.75-v2.0 supports all modulation types up to 32APSK and 256QAM (you may choose the modulation type while filling the "customized equipment" form). BUC-Ku02-9.75-v2.0 has the best linearity parameters to ensure the stability of the output frequency and low IMD3 level (these parameters are very important for high quality modulation, therefore the local oscillator of BUC-Ku02-9.75-v2.0 is locked by PLL with internal frequency reference). BUC-Ku02-9.75-v2.0 provides 10.70 – 11.70 GHz output frequency range (bandwidth in Ku-band) for 950-1950 MHz input frequency range (bandwidth in L-band).

LO: 9.75 GHz **IN**: 950 – 1950 MHz **OUT**: 10.70 – 11.70 GHz

KEY FEATURES:

- Output flange: PBR120
- Output power (P1dB, min): 2 W
- Output frequency range: 10.70 – 11.70 GHz
- Input frequency range: 950 – 1950 MHz
- Gain (min): 53 dB
- Highly stable internal frequency reference
- LO is locked by PLL with internal frequency reference
- IMD3 level at ALC output power (the lowest value): -37 dBc max
- Operates with up to 25 carriers
- Supported modulation types: up to 32APSK and 256QAM

Input/Output Parameters:	
RX Input Frequency Range	12.7 – 14.8 GHz
IF Output Frequency Range	0.4 – 2.0 GHz
Local Oscillator:	
LO Frequencies	LO1: 17.7 – 19.8 GHz LO2: 5.4 – 7.0 GHz
LO Phase Noise:	
@1 kHz	-93 dBc/Hz
@10 kHz	-104 dBc/Hz
@100 kHz	-107 dBc/Hz
@1 MHz	-121 dBc/Hz
Reference Frequency	100 MHz
Reference Stability	< 0.5 ppm

Performance:	
Noise Figure	< 2 dB
Image Rejection	> 60 dB
Spurious Emissions	< -50 dBc
Input & Output Port Return Loss	< -10 dB
VSWR (Input/Output)	< 1.5
Conversion Gain	0 to 66 dB (adjustable)
Gain Flatness (250 MHz RTBW)	< 5 dB
Power Supply & Environment:	
Supply Voltage Range	6 – 60 VDC
Power Consumption	5.6 W @ 28 VDC
Operating Temperature Range	-40 to +85

Taking into consideration that we (UMT LLC) are developer and system integrator, also do not stop on our technical growth and improvement, know that view of all our devices and equipment including their technical parameters may be different from pictures presented on website and parameters listed on each device webpage.

Note! *All details customer has to confirm in advance during ordering and before payment. Those parameters that were not specified and / or were not agreed while ordering will be implemented as basic at the discretion of the manufacturer. Each our customer has 1.5 year warranty and 7 year aftersales support for whole range of our products.*