



Block Up Converter L to Ka-Band

N-Type Female Connector, 10MHz Ext Reference, 5 Watts



FEATURES

- ❖ Designed for Ka-band satellite communication systems.
- ❖ Integrated with power supply, phase locked oscillator, power amplifier and frequency converter.
- ❖ Tested between -20°C and +55°C, providing very good gain stability with temperature.
- ❖ Includes a temperature alarm and power supply shutdown
- ❖ Standard communication via serial port (RS232/RS485) with TCP/IP and SNMP as options

Order Examples: **RBUC-L(950-1450M)** to **Ka(29.5-30.0)-Nf-ER10M-5W-c8**

Description: (Block Up Converter, L Band(950-1450MHz) to Ka(29.5-30.0GHz), N-Type Female Connector, 10MHz External Reference, 5 Watts)

Additional Options: **L(950-1950M)** **Ka(30.0-31.0)**

TRANSMITTER SPECIFICATIONS

Input frequency..... 950 to 1950 MHz (See options)
Input impedance..... 50 Ohms
Input L-band VSWR..... < 1.8:1
Output frequency 29.5 to 31.0 GHz (See options)
Output impedance 50 Ohms
Output Ka-band VSWR < 2.0:1
Spectrum inversion None

Transmitter Characteristics @ 25°C	P1dB min.	Gain	Power Consumption	Size (LxWxH)	Weight
	37.0 dBm	65 dB min	60 W @ P1dB	195 x 135 x 50 mm	1.8 Kg

Maximum input level without damage..... +10 dBm
Gain flatness over the whole bandwidth..... ± 1.5 dB BW=500 MHz
± 2 dB BW=1 GHz
Gain flatness over 40 MHz ± 0.5 dB
Gain stability (24 Hours) < 0.5 dB
Gain variation over temperature..... ± 1.5 dB over the whole range (-20 to +55°C)
± 2 dB over the whole range (-40 to +55°C)
Attenuation adjustment range 20 dB, with 0.5 dB steps
Mute..... > 50 dB
Noise figure..... ≤ 15 dB (at maximum gain)
Output noise < -100 dBm/Hz (Tx Band 29.5 to 31.0 GHz)
< -140 dBm/Hz (Rx Band 19.2 to 21.2 GHz)
Spurious..... < -60 dBc at POUT=P1dB dBm
Spectral Regrowth @ P1dB..... < -20dBc QPSK modulation at 1.0 x rate offset from carrier

RBUC-LBand to Ka-Nf-ER10M-5W-c8

Specifications may be subject to change

11/18/12

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LOCAL OSCILLATOR

Output phase noise (IESS-308/309 – 2 dB):

100 Hz	-62 dBc/Hz
1 KHz	-72 dBc/Hz
10 KHz	-82 dBc/Hz
100 KHz	-92 dBc/Hz
Reference frequency	10 MHz
Reference mode.....	External (internal as option)
Reference input level	0 dBm $\pm$ 3 dB (multiplexed on L-band input)
LO frequency stability	same as external reference
Minimum external reference to compliant typical phase noise (IESS-308/309 – 2 dB):	
100 Hz	-135 dBc/Hz
1 KHz	-145 dBc/Hz
10 KHz	-155 dBc/Hz

POWER SUPPLY

DC input voltage 48VDC (24 VDC could be selected as option)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 to +80°C
Operating temperature	-20 to +55°C (-40 to +55°C could be selected as option)
Relative humidity.....	up to 95%
Operating altitude	up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces	TX input (L-Band+DC+Ext. Ref.): Type N(F) 50 ohm
TX output (Ka-Band):	WR28 grooved
Monitoring & Control	
Cooling system.....	None
Finish.....	White

OPTIONS

Frequency band:	L-band input	LO frequency
29.5 to 30.0 GHz	950 to 1450 MHz	28.550 GHz
30.0 to 31.0 GHz	950 to 1950 MHz	29.050 GHz

LP1:	24 VDC power supply
LP2:	Internal 10 MHz Reference
LP3:	Operating temperature (-40 to +55°C)
LP4:	Ethernet interface (TCP/IP)
LP5:	SNMP Agent