

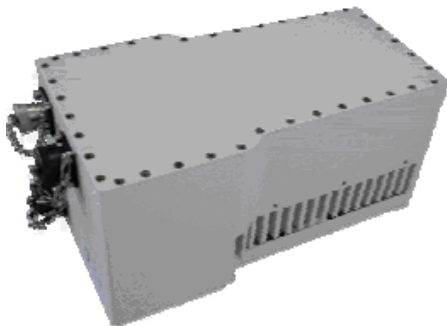


# Block Up Converter L to Ka-Band N-Type Female Connector, 10MHz Ext Reference, 10 and 20Watts



## Features

- Ka-Band Satellite BUC
- Internal power supply, phase locked LO and frequency converter/ power amp.
- Operating temp: -20 to +55 °C (wider option)
- Over temperature alarm with power supply shutdown (if in alarm)
- Standard communication via serial port
- TCP/IP AND SNMP optional.



|                     |                                                                                          |
|---------------------|------------------------------------------------------------------------------------------|
| Input Frequency     | 950 to 1450 MHz (Commercial)<br>950 to 1950 MHz (Military)<br>1000 to 2000 MHz(Military) |
| Input impedance     | 50 Ohms                                                                                  |
| Input L-band VSWR   | <1.5:1                                                                                   |
| Output frequency    | 29.5 to 30.0 GHz (Commercial)<br>30.0 to 31.0 GHz (Military)                             |
| Output impedance    | 50 Ohms                                                                                  |
| Output Ka-band VSWR | < 1.5:1                                                                                  |
| Spectrum inversion  | None                                                                                     |

**Order Examples:** RBUC-L(950-1450M) to Ka(29.5-30.0)-Nf-ER10M-10W-c8

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

**Additional Options:** L(950-1950M) Ka(30.0-31.0) 10W or 20W  
L(1000-2000M) Ka(30.0-31.0) 10W or 20W

| Transmitter Specifications @ 25°C | P1 dB min. | Gain     | Power Consumption | Size (LxWxH)   | Weight |
|-----------------------------------|------------|----------|-------------------|----------------|--------|
| Ka 10W                            | 40.0 dBm   | 65dB min | 110W@P1dB         | 260x140x125 mm | 5 Kg   |
| Ka 20W                            | 43.0 dBm   | 65dB min | 200W @ P1dB       | 260x140x125 mm | 5 Kg   |

|                                        |                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------|
| Maximum input level without damage     | +10 dBm                                                                                    |
| Gain flatness over the whole bandwidth | ± 1.5 dB for BW = 500MHz<br>± 2 dB for 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)<br>± 2 dB over the whole range (-40 to +55°C) |
| Attenuation adjustment range           | 20 dB in 0.5 dB steps                                                                      |
| Mute                                   | > 50 dB                                                                                    |
| Noise Figure                           | ≤15 dB (at maximum gain)                                                                   |
| Output Noise                           | < -90 dBm/Hz (Tx Band 29.5 to 31.0 GHz)<br>< -140 dBm/Hz (Rx Band 19.2 to 21.2 GHz)        |
| Spurious                               | < -60 dBc @POUT=P1dB dBm                                                                   |
| Spectral Regrowth @ P1dB               | < -20dBc QPSK modulation at 1.0 x rate offset from carrier                                 |

**RBUC-LBand to Ka-Nf-ER10M-10-20W-c8**

Specifications may be subject to change

**11/18/12**

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## Block Up Converter L to Ka-Band N-Type Female Connector, 10MHz Ext Reference, 10 and 20Watts

|                                                                                          |                                                |
|------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Local Oscillator</b> (Output phase noise (IESS-308/309-2dB):                          |                                                |
| 100 Hz                                                                                   | -62 dBc/Hz                                     |
| 1 KHz                                                                                    | -72dBc/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                     |
| <i>Minimum external reference to compliant typical phase noise (IESS-308/309 – 2 dB)</i> |                                                |
| 100 Hz                                                                                   | -135 dBc/Hz                                    |
| 1 KHz                                                                                    | -145 dBc/Hz                                    |
| 10 KHz                                                                                   | -155 dBc/Hz                                    |

|                     |                  |                      |
|---------------------|------------------|----------------------|
| <b>Power Supply</b> | DC input voltage | 48 DVC (AC optional) |
|---------------------|------------------|----------------------|

### Environmental Specifications

|                       |                                          |
|-----------------------|------------------------------------------|
| Storage temperature   | -40 to + 80°C                            |
| Operating temperature | -20 to + 55°C (-40 to + 55°C – optional) |
| Relative humidity     | Up to 95%                                |
| Operating altitude    | Up to 3500 m                             |

### Mechanical Specifications

|                |                                                                                               |                                                            |
|----------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Interfaces     | TX input (L-Band+Ext. Ref):<br>TX output (Ka-Band):<br>Monitoring & Control:<br>Power Supply: | Type N(F) 50 Ohm<br>WR28G<br>MS3112E12-14S<br>MS3112E12-3P |
| Cooling System | Forced or integrated                                                                          |                                                            |
| Finish         | White                                                                                         |                                                            |

| Frequency band:  | L-band input     | LO frequency | Watts    |
|------------------|------------------|--------------|----------|
| 29.5 to 30.0 GHz | 950 to 1450 MHz  | 28.55 GHz    | 10 or 20 |
| 30.0 to 31.0 GHz | 950 to 1950 MHz  | 29.05 GHz    | 10 or 20 |
| 30.0 to 31.0 GHz | 1000 to 2000 MHz | 29.00 GHz    | 10 or 20 |

### Options

|   |                                                                           |
|---|---------------------------------------------------------------------------|
| 1 | AC Power Supply (85-265 VAC 47-63 Hz)                                     |
| 2 | Internal 10 MHz Reference (with automatic external selection on presence) |
| 3 | Operating Temperature (-40 to + 55°C)                                     |
| 4 | Ethernet interface (TCP/IP)                                               |
| 5 | SNMP Agent                                                                |
| 6 | NATO green IR finish                                                      |
| 7 | Desert Sand finish                                                        |