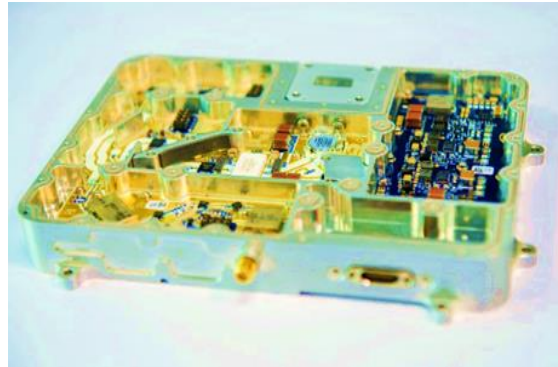


Linwave Ku Band BUC 13.75 to 14.50GHz

LW30-99999

Linwave Technology manufacture a range of low power L band Block Up-Converter (BUC) modules for use in Satellite Communications systems.

The BUC modules provide a small size solution designed to be used to feed a TWT or SSPA o/p module. Units can be modified to include additional gain or SSPA upgrades for more integrated applications.



The Up-converter utilises latest MMIC phase locked local oscillator to provide enhanced microphonic performance and improved signal integrity. An internal 10MHz reference is used with auto detect if external system reference is available. The frequency converters can be supplied as single units to be integrated into bigger amplifier systems or fully weatherised for outdoor use with optional integral mains power supplies.

Features:

- IESS-308/9 compliant
- Temperature compensated
- Lock detect output
- Automatic internal/external reference detection and switching
- Integrated SSPA and additional gain variants available
- Integral high performance output filtering

Applications:

- Ground and Avionics Comms
- SSPA/TWTA Power Amplifier systems
- Can be used in conjunction with Linwave driver amplifiers

Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.

Data sheet Iss 01, dated draft

Specification

RF Output Frequency	13.75 to 14.50 GHz
RF Output Connector	SMA (f), 50 Ohms
Return Loss	14dB
Output Power	+0 dBm min at 1 dB of gain compression
IF Input Frequency	950 to 1700 MHz
IF Input Connector	SMA (f), 50 Ohms
Return Loss	14 dB
Noise Figure	15 dB max
Small Signal Gain	0dB \pm 2dB
Gain Stability	+/- 1.5 dB at a fixed frequency over operating temperature
Gain Flatness	+/- 0.5 dB over 40 MHz +/- 1.0 dB over full band
Phase Noise	-60 dBc/Hz max. @ 100 Hz offset of the carrier -75 dBc/Hz max. @ 1kHz offset of the carrier -85dBc/Hz max. @10kHz offset of the carrier -95 dBc/Hz max. @ 100kHz offset of the carrier -105 dBc/Hz max. @ 1MHz offset of the carrier
Third Order Intercept Point	+15 dBm min
Spurious Outputs	-60 dBc signal related in band with 0 dBm output -85 dBm signal independent in band -70 dBm LO leakage
Frequency Reference	10 MHz sine wave -5 to +5 dBm on L band IF input Phase noise (SSB) -135 dBc/Hz max. @ 100Hz -145 dBc/Hz max. @ 1kHz -155 dBc/Hz max. @ 10kHz
Phase Lock Alarm	Open collector active low indicates LO is locked via 9 pin D type
Power Supply	15 V dc nominal (13.0 to 16.0 operating to specification) via 9 pin D type, 1A max
Size & Weight	110 x 75 x 20 mm 400 g
Temperature Range	-40 to +70 °C operating -40 to +85 °C Storage
Humidity	95% non-condensing

Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.

Data sheet Iss 01, dated draft