LINWAVE TECHNOLOGY

www.linwave.co.uk

Linwave DBS Band BUC 17.3 to 18.1GHz

LW30-150138

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

The BUC modules are low output power designed to be used in conjunction with a microwave driver amplifier. The DBS band variant is showcased in this datasheet.

The designs are full SMT allowing for low cost high volume manufacturing techniques. An internal 10MHz reference can also be included as an option. 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 compliant
- Temperature compensated
- Lock detect output
- Automatic internal/external reference detection and switching
- C, X and DBS band variants available
- Integral high performance output filtering

Applications:

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

Data sheet Iss 01, dated 17/09/15 DS00-150138-01, No. 1865

For price, delivery and to place orders please contact
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Specification

RF Output Frequency	17.3 to 18.1 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 1750 MHz
IF Input Connector	SMA (f), 50 Ohms
Return Loss	14 dB
Noise Figure	18 dB max
Small Signal Gain	0dB ± 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 -70 dBc/Hz max. @ 1kHz offset of the carrier -80 dBc/Hz max. @10kHz offset of the carrier -90 dBc/Hz max. @ 100kHz offset of the carrier -100 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	125 x 85 x 25 mm 450 g (4.9 x 3.3 x 1.0 ins 1.0 lbs)
Temperature Range	-20 to +60 °C operating -40 to +85 °C Storage
Humidity	95% non-condensing

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