

HIGH RELIABILITY SATCOM PRODUCTS

BLx - 5

BLx - 5 Series

5 Watt C BAND Block-Up Converter



We're on your wave length

FEATURES:

- Output Power (at 1dB compression) 37dBm
- Synthesized L.O.
- External/Internal Reference
- IF, DC & External 10 MHz reference multiplexed on input coaxial cable
- Operating Temperature -40 to +60 Deg. C
- Dimensions: 300X160X60 mm
- Weather Sealed (including connector)
- Field-Proven High Reliability

The C Band VSAT upconverter transmitter is a linear outdoor unit used for the uplink of a VSAT network.

Its output power, phase locked local oscillator source, compact size and competitive price make this unit ideal choice for all VSAT and SCPC applications.

The unit is robust, rugged and is well adapted for direct mounting on the VSAT antenna feed or OMT.

PERFORMANCE CHARACTERISTICS

Electrical

Input impedance..... 50Ω
 Input return loss.....12 dB

	C-Band	Insat	Ext.C-Band
Input freq.	950-1525MHz	975-1275MHz	1075-1435MHz
Output freq.	5.85-6.425GHz	6.725-7.025GHz	6.365-6.725GHz

Output power (at 1 dB Gain Comp). +37.0dBm(min.),
 Gain(Nominal).....60±3 dB

Gain Flatness

Over any 1 MHz band.....±0.2 dB max
 Over any 36 MHz band (25°C).....±0.7 dB max
 Over frequency range.....±2.0 dB max

Gain Stability (over temp.for constant freq.) ±2.0 dB
 Ref. signal...External 10MHz(std.) -3dBm to +7dBm
 (internal ±3ppm opt.)

Spectrum sense.....Non Inverting
 (Inverting - Optional)

Total frequency accuracy.....Control by Reference

Phase noise

At 1 KHz offset..... -75 dBc/Hz
 At 10 KHz offset..... -81 dBc/Hz
 At 100 KHz offset..... -95 dBc/Hz

Leakage and Spurious Signals

Up to 1dB comp. In-Band..-55 dBc max,-60dBc typ.
 Harmonics..... -100 dBc max
 In RX band..... -140 dBm/4KHz max
 Wideband noise in RX band..... -160 dBm/Hz max
 3rd Order intercept point, IP3.....P1dB + 7 dB min

Stability: The unit will not oscillate under any
 condition of load, temperature or DC supply.

Protection

- Thermal runaway protection
- No failure for any combination of load reflections.
- DC supply spikes protection
- Missing 10MHz Ref. shuts transmitter to -60dBc min

Power supply voltage

(on input coax cable).....+15 to +24V
 Maximum current.....2.2A @ 24V input
3.6 A @ 15V input

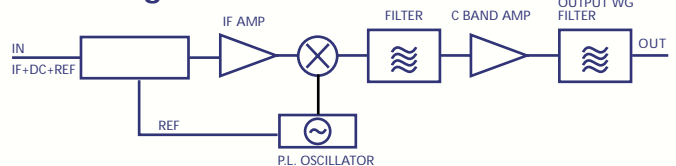
Mechanical

IF + DC + reference input.....50Ω, N-type (f)
 (F-typ optional)
 RF output.....WR-137
 (Flange CPR137G & O-ring)
 Weight.....3.8 Kg.
 Finish.....White polyurethane paint

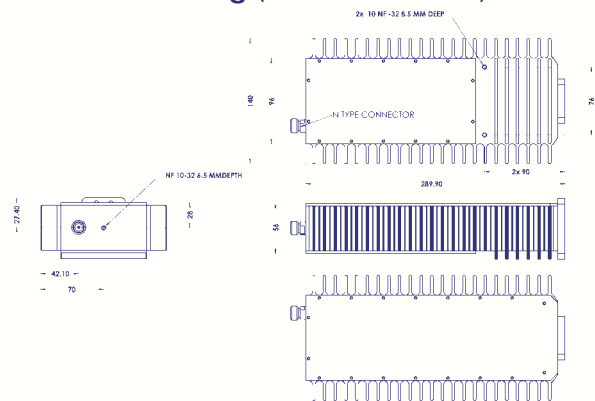
Environmental

Operating Temperature.....-40°C to +60°C
 Sealing.....Moisture sealing by O-ring
 Weather-proof
 Vibration.....5-350Hz 0.0015g²/Hz
350-500Hz -6dB/oct
500Hz 0.00074g²/Hz
 Shock.....10g @ 10m s(half sine)

Block Diagram



Outline Drawing (Dimensions in mm)



LO Frequency Table(MHz)

Band	Inverting	Non Inverting
C	7375	4900
Insat	8000	5750
Palapa	7800	5290

Ordering Information

BLC-5-*sen-ref-con* C-band
 BLIN-5-*sen-ref-con* In-Sat band
 BLPA-5-*sen-ref-con* Extended C-band (Palapa)

sen Frequency Sense
 (See frequency table above)
S Non-Inverting (default)
V Inverting

ref Reference
X External (default)
T Internal

con IF Connector
N N-Type (default)
F F-Type



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