ACORDE TECHNOLOGIES

C-BAND Block Up Converter (BUC) Ed.05

ACTX-C-LC High Power Series Low Cost (100,150 & 200W) 23/07/09

DESCRIPTION

The ACTX-C-LC series is a family of outdoor RF Block-Up Converters (BUC) low cost, designed for C-band satellite communication systems. ACTX-C BUCs are integrated units with power supply, phase locked oscillator, power amplifier, frequency converters and cooling system.

The ACTX-C-LC series BUCs has been tested and calibrated between -20º and +60ºC, so they assure very good gain stability with temperature. They also include a temperature alarm and power supply shutdown to protect the amplifier from permanent damages in high temperature conditions. Moreover, ACTX-C-LC series allows RS-485/RS-232 communication with TCP/IP and SNMP as option.

TRANSMITTER SPECIFICATIONS

Input frequency ..... 950 – 1825 MHz (see options)
Input impedance ..... 50 Ohms
Input L-Band VSWR ..... <1.5:1

Output frequency ..... 5.850 – 7.025 GHz (see options)
Output impedance ..... 50 Ohms
Output C-Band VSWR ..... <1.3:1
Spectrum inversion ..... None

Transmit Characteristics @ 25ºC	P1dB (typ.)	Gain	Power Consumption	Size (LxWxH)	Weight
ACTX-C100W-LC	50.0 dBm	75 dB min	~ 700 W	495 x 265 x 255 mm	22 Kg
ACTX-C150W-LC	51.8 dBm	75 dB min	~ 1000 W	495 x 265 x 255 mm	22 Kg
ACTX-C200W-LC	53.0 dBm	75 dB min	~ 1300 W	495 x 265 x 255 mm	24 Kg

Gain flatness over the whole bandwidth ..... ± 2.0 dB
Gain flatness over 40 MHz ..... ± 0.75 dB
Gain variation over temperature ..... ± 2.0 dB over the whole range
Signal monitor ..... -45 ± 2 dBc

Attenuation adjustment range ..... 20 dB, with 0.5 dB steps
Mute ..... > 50 dB
Noise figure ..... ≤ 15 dB (at maximum gain)

Spurious ..... < -55 dBc at P_{OUT}=P1dB dBm
Harmonics ..... ≤ -50 dBc
Third order intermodulation products ..... < -25 dBc for 2 tones Δf=5 Mhz for P_{OUT}=P1dB-3 dB

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LOCAL OSCILLATOR

Output phase Noise (IESS-308/309 – 5 dB):

100 Hz	-65 dBc/Hz
1 KHz	-75 dBc/Hz
10 KHz	-85 dBc/Hz
100 KHz	-95 dBc/Hz
Reference frequency	10 MHz
Reference mode	External (internal as option)
Reference frequency level	0 dBm ± 3 dB (multiplexed at input L-Band Connector)
Reference stability	same as external reference

Minimum reference to compliant typical phase noise (IESS-308/309 – 5 dB):

100 Hz	-125 dBc/Hz
1 KHz	-135 dBc/Hz
10 KHz	-145 dBc/Hz

POWER SUPPLY

AC input voltage	110/220 VAC Autoranging (47-63 Hz)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 to +80ºC	
Operating temperature	-20 to +60ºC	(-40 to +55ºC could be selected as option)
Relative humidity	up to 95%	
Operating altitude	up to 3500 m.	

MECHANICAL SPECIFICATIONS

Interfaces	TX input(L-Band+Ext. Ref):	Type N(F) 50 ohm.
	TX output (C-Band):	WR137 CPRG flange
	TX output sample:	Type N(F) 50 ohm.
	Power supply:	MS3112E12-3P
	Monitoring & Control:	MS3112E12-14S
Cooling system	Forced air integrated	
Finish	White	

OPTIONS

Frequency band:	L-band input	LO frequency	Model Number
5.85 to 6.425 GHz	950 to 1525 MHz	4.900 GHz	ACTX-Cxx-LC-E1-xxx
5.85 to 6.725 GHz	950 to 1825 MHz	4.900 GHz	ACTX-Cxx-LC-E2-xxx
6.725 to 7.025 GHz	1075 to 1375 GHz	5.650 GHz	ACTX-Cxx-LC-E3-xxx
6.425 to 6.725 GHz	975 to 1275 GHz	5.450 GHz	ACTX-Cxx-LC-E4-xxx

HP1:	Internal 10 MHz Reference
HP2:	Operating temperature (-40 to +55ºC)
HP3:	Ethernet interface (TCP/IP)
HP4:	SNMP Agent
HPC:	Custom design

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