

X-BAND MINI BLOCK UP CONVERTER (MBUC)

ACMB-X Medium Power Series (80/100W)



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ACMB-X Series consists of integrated RF Block Up Converters (BUCs), designed for X-band satellite communication systems. All products in this series have been tested and calibrated between -20°C and +60°C, so they assure very good gain stability with temperature.

ACMB-X Series also includes a temperature alarm and power supply shutdown to protect the amplifier from permanent damages in high temperature conditions. Moreover, ACMB-X could be configured with AC or DC power supply, easy to change in field without tools. This MBUC allows communication via serial port (RS232/RS485), but TCP/IP, SNMP and FSK could be selected as options.

TRANSMITTER SPECIFICATIONS

Input frequency	950 - 1450 MHz
Input impedance.....	50 Ω
Input L-band VSWR.....	< 1.5:1
Output frequency.....	7.9 - 8.4 GHz
Output impedance.....	50 Ω
Output X-band VSWR.....	< 1.3:1
Spectrum inversion	None

Transmit Characteristics @ 25°C	P1dB (min)	Gain	Power Consumption	Size (LxWxH)	Weight
ACMB-X80W-E1-V2	49.0 dBm	74 dB min	600 W	320 x 207 x 145 mm	10.0 kg
ACMB-X100W-E1-V2	50.0 dBm	74 dB min	650 W	12.6 x 8.1 x 5.7 inches	22.0 lbs

Gain flatness over 500 MHz	± 1.5 dB
Gain flatness over 40 MHz	± 0.5 dB
Gain stability over 24h.....	≤ 0.5 dB @ constant temp.
Gain variation over temperature.....	± 1.5 dB
Attenuation range.....	20 dB with 0.5 dB step
Mute.....	> 50 dB
Noise figure	≤ 15 dB @ maximum gain
Output noise.....	≤ -80 dBm/Hz (7.25-7.75 GHz)
Spurious	< -60 dBc @ Pout = P1dB
Intermodulation products.....	< -25 dBc 2 tones Δf=5MHz for Pout=P1dB-3 dB

LOCAL OSCILATOR

Local oscillator frequency.....	6.950 GHz
Output phase noise typical:	
100 Hz.....	-70 dBc/Hz
1 kHz.....	-78 dBc/Hz
10 kHz.....	-88 dBc/Hz
100 kHz.....	-110 dBc/Hz
Reference frequency.....	10 MHz
Reference mode.....	External
Reference level.....	0 ± 3 dBm (multiplexed on L-band)

POWER SUPPLY

AC input	85-264 VAC (47-63 Hz) (48 VDC as option)
Power consumption	600 / 650 W @ P1dB

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 to +85°C
Operating temperature.....	-20 to +60°C (-40 to +60°C as option)
Relative humidity	Up to 95%
Operating altitude.....	Up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces	
RX input (Ka-Band):	WR42 grooved
RX output (L-Band+DC+Ext. Ref.):	Type N(F) 50 Ω
Dimensions.....	114 x 58 x 36 mm
Weight	350 g
Finish.....	White

OPTIONS

MP1:	48 VDC power supply
MP2:	Internal reference (with automatic external selection on presence)
MP3:	Operating temperature -40 to +60°C
MP4:	Ethernet interface (TCP/IP)
MP5:	SNMP Agent
MP6:	FSK communication multiplexed on L-band
MPC:	Custom design