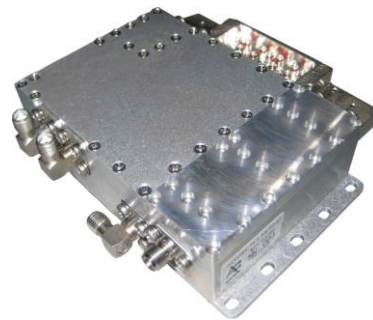


Ka-BAND UP CONVERTER

ACCVT-LKa Single Conversion with LO integrated



Ed.00
29/10/10

ACORDE Module single conversion Ka-Band frequency up converter has been designed for low consumption and low weight applications in order to provide advanced satellite communications. Cavity filter is integrated inside up converter in order to simplify system integration.

Specifications have been optimised to provide user an efficient frequency conversion. Indoor applications.

TRANSMITTER SPECIFICATIONS

Input L-band frequency	950 – 1950 MHz (see options)
Input level (no damage).....	0 dBm
Input VSWR	< 1.5:1
Input impedance	50 Ω
Output RF frequency	29.5 – 31.0 GHz (see options)
Output VSWR	< 1.5:1
Output impedance	50 Ω
Output P1dB @ 25°C	≥ +18 dBm
Spurious signal related	< -60 dBc at 0 dBm output out-of-band < -50 dBc at 0 dBm output in-band (LO+2*IF)
Spurious signal independent	< -60 dBm
Conversion Gain.....	30 dB min. @ maximum gain settings
Gain adjustment range	20 dB
Gain adjustment step	0.5 dB
Gain flatness over the whole bandwidth	± 1.5 dB BW=500 MHz ± 2 dB BW=1 GHz
Gain flatness over 40 MHz.....	± 0.75 dB
Gain stability in 24 hours.....	± 0.25 dB at constant temperature
Gain stability vs temperature	± 1.5 dB over the whole range
Noise figure.....	< 15 dB @ maximum gain settings
Carrier to intermodulation ratio	< -45 dBc (two carriers 0 dBm each)
Mute	70 dB min

LOCAL OSCILATOR

Output phase noise (IESS-308/309 – 2 dB):

100 Hz	-62 dBc/Hz
1 kHz	-72 dBc/Hz
10 kHz	-82 dBc/Hz
100 kHz	-92 dBc/Hz

Reference frequency 10 MHz

Reference mode External

Reference frequency level 0 dBm ± 3 dB

Reference stability same as external reference

Minimum external reference to compliant typical phase noise (IESS-308/309 – 2 dB):

100 Hz	-135 dBc/Hz
1 kHz	-145 dBc/Hz
10 kHz	-155 dBc/Hz

POWER SUPPLY

DC input voltage + 12 Vdc

Current consumption 800 mA (typ.)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature -40 to +80°C

Operating temperature -20 to +60°C

Relative humidity up to 95%

Operating altitude up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces:

RX output (Ka-band): K female (2.92 mm)

IF-input (L-Band): SMA female

External Ref. input: SMA female

DC input: S2B-PHSM4-TB

M&C: S4B-PHSM4-TB

PLO alarm: S2B-PHSM4-TB

Dimensions 86 (L) x 109 (W) x 26 (H) mm

Weight 410 g

OPTIONS

Frequency band:	L-band input	LO frequency	Model Number
29.5 to 30.0 GHz	950 to 1450 MHz	14.275 GHz	ACCVT-LKα-E2
30.0 to 31.0 GHz	950 to 1950 MHz	14.525 GHz	ACCVT-LKα-E6
30.0 to 31.0 GHz	1000 to 2000 MHz	14.500 GHz	ACCVT-LKα-E66