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ACORDE

Tri-Band Frequency Synthesizer

Ed.00

ACSINT-TB

14/12/09

DESCRIPTION

ACSINT-TB is a state of art frequency synthesizer designed to meet the hardest requirements of the modern satellite communication systems. Leading the customer's needs, ACORDE Technologies has complied requirement of 1 KHz frequency step, wide bandwidth with an excellent spurious rejection.

ACSINT-TB covers three most required frequency bands C, X and Ku. Ka-band is also available as option. Synthesizer can be operated via remote control RS232 and RS422/485. Operating temperature range is 0ºC to +50ºC (-20ºC to +55ºC option in outdoor enclosure is also available).

SYNTHESIZER SPECIFICATIONS

Output impedance ..... 50 Ω
Output power @ 25ºC ..... +13 dBm min
Output flatness ..... ± 1.0 dB over the whole bandwidth
Output stability vs temperature ..... ± 1.0 dB over the whole range

Frequency step ..... 1 KHz (See options)
Frequency accuracy ..... < 0.001Hz

RF 2nd Harmonic suppression ..... < -25dBc
Fixed PLO 2nd Harmonic suppression ..... < -60dBc
Spurious in-band ..... < -60dBc
Spurious out-of-band ..... < -65dBc

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 (5 MHz as option)
Reference input level ..... 0 dBm ± 5 dB
LO frequency stability ..... same as external reference
Acquisition time (to phase lock) ..... 500 ms max.

Minimum external reference to compliant typical phase noise (IESS-308/309 – 5 dB):
- 100 Hz ..... -135 dBc/Hz
- 1 KHz ..... -145 dBc/Hz
- 10 KHz ..... -155 dBc/Hz

ACORDE • PCTCAN, Albert Einstein 6 • 39011 Santander • Spain
Phone: +34 942 76 44 00 • Fax: +34 942 76 44 03
Web: www.acorde.com

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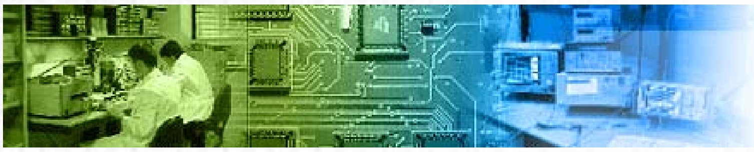

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POWER SUPPLY

DC input voltage .... +7 VDC (1400 mA typ.)
Current consumption....................................... 1300 mA (C-band active)
1300 mA (X-band active)
1450 mA (Ku-band active)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature .... -40 to +80°C
Operating temperature .... 0 to +50°C (-20 to +55°C could be selected as option)
Relative humidity... up to 100%
Operating altitude .... up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces	RF outputs (C-X-Ku):	SMA female 50 Ω
	Fixed LO output:	SMA female 50 Ω
	Reference input:	SMA female 50 Ω
	Serial port RS485:	S6B-PH-SM4-TB
	Power supply:	Feedthrough 7A
Cooling system	None	
Dimensions...	183 x 151 x 32 mm	
Weight...	1.8 Kg	

OPTIONS

C-band:	X-band:	Ku-band:	Step size	Fixed LO frequency	Model Number
4.63 - 5.205 GHz	6.68 - 7.18GHz	12.53 - 13.28 GHz	125 KHz	1150 MHz	ACSINT-TB-E1-V1-xxx
4.63 - 5.205 GHz	6.68 - 7.18GHz	12.53 - 13.28 GHz	1 KHz	1150 MHz	ACSINT-TB-E1-V2-xxx
5.84 - 6.64GHz	9.69 - 10.19GHz	13.14 - 15.19GHz	125 KHz	2510 MHz	ACSINT-TB-E2-V1-xxx
5.84 - 6.64GHz	9.69 - 10.19GHz	13.14 - 15.19GHz	1 KHz	2510 MHz	ACSINT-TB-E2-V2-xxx

SY1: .... External 5 MHz Reference
SY2: .... Operating temperature (-20 to +55°C)
SCC: .... Custom Design

Note (1) → Other frequency steps up to 1 Hz upon request
Note (2) → Fixed LO frequency available at L and S band in 5 MHz step

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