

TRI-BAND FREQUENCY SYNTHESIZER

ACSINT-TB Series



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ACSINT-TB series are a state of art frequency synthesizers 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 series cover three most required frequency bands C, X and Ku. Ka-band is also available as option.

Synthesizers can be operated via remote control RS232 and RS422/485. Operating temperature range is 0°C to +50°C (-20°C to +55°C option in outdoor enclosure is also available).

SYNTHESIZER SPECIFICATIONS

Output impedance	50 Ω
Output power @ 25°C	+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

▼ POWER SUPPLY

DC input voltage 1	+7 VDC (1400 mA typ.)
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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 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 ⁽¹⁾	Fixed LO frequency ⁽²⁾	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

⁽¹⁾ Other frequency steps up to 1 Hz upon request

⁽²⁾ Fixed LO frequency available at L and S band in 5 MHz step