C-BAND FREQUENCY SYNTHESIZER
ACSINT-C Series

ACSINT-C 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-C series cover required frequency bandwidth for all C-band Rx/Tx frequency converters.

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Output power @ 25°C</td>
<td>+13 dBm min</td>
</tr>
<tr>
<td>Output flatness</td>
<td>± 1.0 dB over the whole bandwidth</td>
</tr>
<tr>
<td>Output stability vs temperature</td>
<td>± 1.0 dB over the whole range</td>
</tr>
<tr>
<td>Output sample ports</td>
<td>-20 dBC</td>
</tr>
</tbody>
</table>

Frequency step: 1 kHz (See options)
Frequency accuracy: < 0.001 Hz

RF 2nd Harmonic suppression: < -25 dBc
Fixed PLO 2nd Harmonic suppression: < -60 dBc
Spurious in-band: < -60 dBc
Spurious out-of-band: < -70 dBc

Output phase noise (IESS-308/309 – 10 dB):
- 100 Hz: -70 dBc/Hz
- 1 kHz: -80 dBc/Hz
- 10 kHz: -90 dBc/Hz
- 100 kHz: -100 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 – 10 dB):
- 100 Hz: -135 dBc/Hz
- 1 kHz: -145 dBc/Hz
- 10 kHz: -155 dBc/Hz
POWER SUPPLY

DC input voltage 1 .................................................................+7 VDC (1200 mA typ.)
DC input voltage 2 .................................................................+15 VDC (30 mA typ.)

ENVIRONMENTAL SPECIFICATIONS

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

MECHANICAL SPECIFICATIONS

Interfaces:
- RF output ................................................................. SMA female 50 Ω
- RF monitor .................................................................. SMA female 50 Ω
- Fixed LO output .......................................................... SMA female 50 Ω
- Fixed LO monitor .......................................................... SMA female 50 Ω
- Reference input ............................................................ SMA female 50 Ω
- Serial port RS485 ........................................................... S6B-PH-SM4-TB
- Power supply +7 VDC ..................................................... Feedthrough 7A
- Power supply +15 VDC ................................................... Feedthrough 7A
- Cooling system .............................................................. None
- Dimensions ................................................................. 156 x 129 x 38 mm
- Weight ................................................................. 1.1 kg

OPTIONS

<table>
<thead>
<tr>
<th>Frequency band</th>
<th>Step size (1)</th>
<th>Fixed LO frequency (2)</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.63 to 5.205 GHz</td>
<td>125 kHz</td>
<td>1150 MHz</td>
<td>ACSINT-C-E1-V1-xxx</td>
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<td>4.63 to 5.205 GHz</td>
<td>1 kHz</td>
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<tr>
<td>5.84 to 6.64 GHz</td>
<td>125 kHz</td>
<td>2510 MHz</td>
<td>ACSINT-C-E6-V1-xxx</td>
</tr>
<tr>
<td>5.84 to 6.64 GHz</td>
<td>1 kHz</td>
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<td>ACSINT-C-E6-V2-xxx</td>
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SY1: .........................................................................................External 5 MHz Reference
SY2: .........................................................................................Operating temperature (-20 to +55ºC)
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