

Synthesizer, 1.6-2.5GHz

1kHz Step Size, 13dBm Power Output, Internal or External Reference

Features:

2 Model types

- (IR) Internal Reference
Frequency Adjustment applicable
- (ER) External 10 MHz Reference
Input with 10 MHz In connector-

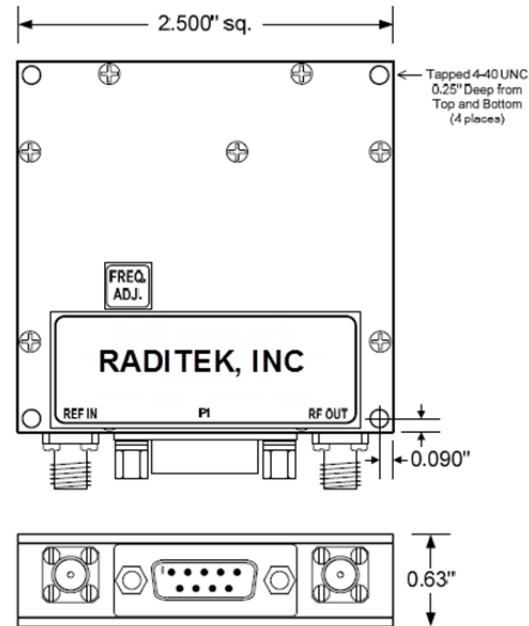
Fractional +N architecture

With External input the output frequency has the same stability as input and typically accurate to within 2 Hz

Non-Volatile Memory Feature -

At Power on will return to the last set frequency

**Heat Sink Required
to keep temperature less
than +70° C**



Order Examples: RSYNTH-1.6-2.5-Sf-13d-5Vdc-ER-L16

Description: (Synthesizer, 1.6-2.5GHz, SMA Female Connectors, 13dBm Output, 5VoltsDC, External Reference)

Additional Options: IR (Internal Reference)

Specifications		Units
Output Frequency		
Output Frequency range	1.6 - 2.5 GHz	GHz
Frequency Step size (see note 4)	1	KHz
Frequency stability and accuracy		
(ER) External Reference Unit (option) (with 10 MHz In Connector)	Same as Input	
(IR) Internal Reference Unit (option)	±0.5	ppm (over temp range)
Aging (After 2 months):	±1	ppm (max per year @25° C)
Adjustability (typ)	10	Years
Phase Noise in dBc/Hz @ 2GHz		
Offset @10 Hz-	-80	dBc/Hz
Offset @100 Hz-	-80	dBc/Hz
Offset @1 kHz -	-95	dBc/Hz
Offset @10 kHz-	-105	dBc/Hz
Offset @100 kHz	-110	dBc/Hz
Offset @1 MHz-	-135	dBc/Hz
Spurious (typ.): (see note 5)	-60	dBc
Harmonics (typ.):	-20	dBc
Power out (min.):	+13	dBm

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Specifications		Units
Power variation (freq. & temp.) (max.):	±3	dB
Load VSWR (max.):	2:1	
Reference Frequency		
Input reference frequency:	10 MHz	
Input level	0 ± 3	dB
Frequency Tuning / Alarm		
Frequency control:	RS-485	
Acquisition time (typ):	< 5	msec
Phase-lock indicator (LD), High = lock (Options)	Open Collector	or TTL
DC Power		
+5.5 VDC ±0.5 V	650	mA
Environment		
Operating temperature range (surface): (see note)	-10 to +70	°C
Storage temperature range:	-40 to 85	°C
Relative humidity (non-condensing):	90 @ 40°C	%RH
Shock	30	G / 10msec
Vibration	4 G / 20 Hz - 20 kHz	
Dimensions (LxWxH)	2.5(63.5)x 2.5(63.5) x 0.63(16.002)	inches/(mm)

NOTES:

1. This unit is available with an internal TCXO (±0.5 PPM).
2. The Frequency adjustment is only applicable on units with internal reference.
3. The '10 MHz IN' connector is not provided on units with internal reference.
4. This synthesizer employs a fractional ÷N architecture. With an external input the output frequency has the same stability as the input and is typically accurate to within 2 Hz.
5. There is a very small set of frequencies at which a spectral anomaly occurs where the close in spurious are >-60 dBc. These can often be eliminated by shifting Fo by 1 or 2 kHz.
6. These units have a non-volatile memory feature and at power on the unit will return to the last set frequency.
7. Proper heatsinking is required to keep surface temperature less than +70°C.