

6 GHz to 10 GHz Frequency Synthesizer

Low Phase Noise in a Lower Cost Package



Features

- Low Phase Noise: -92 dBc/Hz (100 kHz offset)
- Internal Reference Oscillator (External Optional)
- No User Programming Required
- Integrated Microcontroller Look-up Table
- Customized Parallel or Serial Programming Available

API Technologies' Model LCFS1064 frequency synthesizer combines a monolithic integer-n microwave synthesizer, a reference oscillator and a microcontroller to provide an economical frequency source solution. Complex serial register programming is not required. A built-in lookup table in the microcontroller allows for simplified frequency programming with a dual 8-bit binary frequency selection word. Either parallel or serial programming can be accommodated.

Technical Specifications

Parameter	Typical	Min/Max
Frequency Range	6 GHz to 10 GHz	6 GHz to 10 GHz
Output Power	+0 dBm	-
Internal Input Reference Frequency	40 MHz	-
Step Size	20 MHz	-
SSB Phase Noise	-74 dBc/Hz @ 1 kHz -74 dBc/Hz @ 10 kHz -92 dBc/Hz @ 100 kHz -121 dBc/Hz @ 1 MHz -144 dBc/Hz @ 10 MHz	-
Digital Lock Indicator	3.3 volt logic	-
Locking Speed	200 μ sec	-
Spurious	-40 dBc	-
Harmonics	-20 dBc	-
Output VSWR	1.75:1	2.0:1
DC Supply Voltage	+3.3 volts	(+/- 2%) volts
DC Supply Current**	200 mA	---
Frequency Accuracy	\pm 2 PPM	---
Frequency Aging	\pm 1 PPM	---
Frequency vs. Temperature	\pm 2 PPM	---

Maximum (No Damage) Ratings

Storage Temperature	-55°C to +125°C
Operating Temperature	-40°C to +85°C
DC Voltage	+5 volts

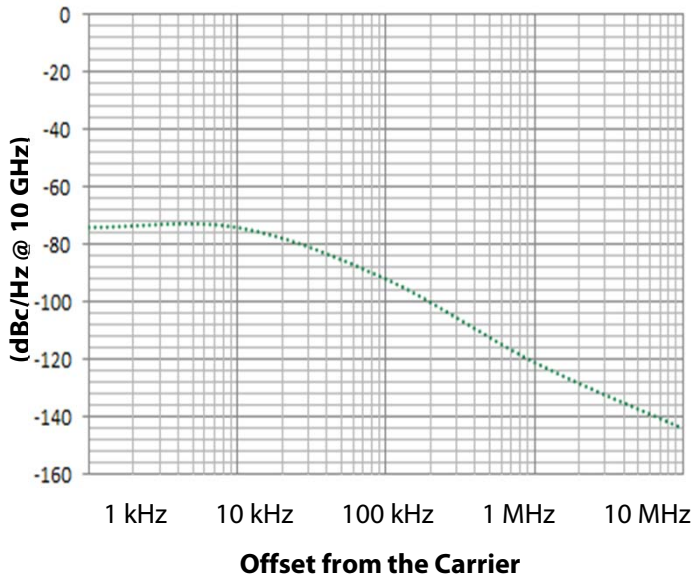
Notes: Typical values are measured at 25°C, but not guaranteed.

Mechanical & Electrical

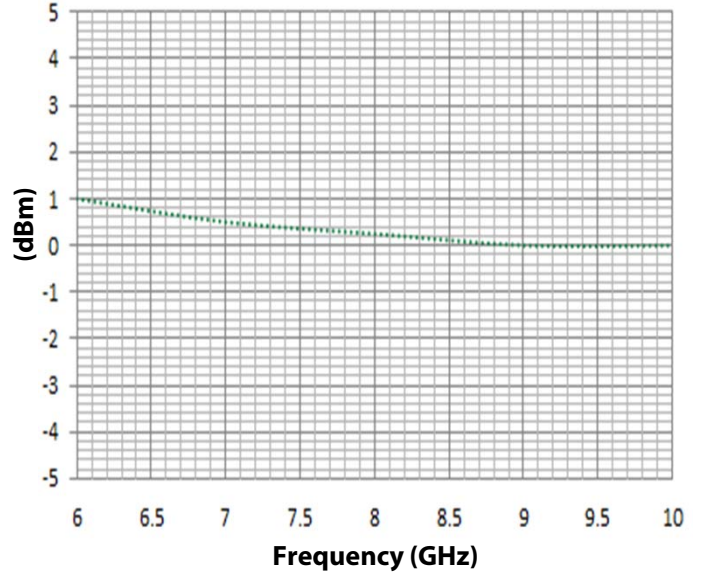
Parameter	Specification
Specification Temperatures (Min/Max)	-20°C to +70°C
Housing Size	0.800" L x 0.800" W x 0.130" H
Housing Drawing	LC800
Package Type	Surface Mount

Typical Performance

Phase Noise (dBc/Hz)



Output Power (dBm)



Notes

1. Specifications labeled "min." or "max." are guaranteed in a 50 Ohm system over the specified temperature range.
2. Output frequency and step size must be specified.
3. Other input voltages are available.
4. Signal output pin is RF2B

Outline Drawing (LC800 Package)

