

5.2 - 5.8 GHz Frequency Synthesizer

Low Phase Noise in a Lower Cost Package



Features

- Low Phase Noise: -100 dBc/Hz (100 kHz Offset)
- Internal Reference Oscillator
- No User Programming Required
- Integrated Microcontroller Look-up Table
- Customized Parallel or Serial Programming Available
- Optional 2nd Output Line is Available

API Technologies' Model LCFS1060 frequency synthesizer combines a monolithic fractional-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 7-bit binary frequency selection word. Either parallel or serial programming can be accommodated.

Technical Specifications

Parameter	Typical	Min/Max
Frequency Range	5.2 - 5.8 GHz	5.2 - 5.8 GHz
Output Power	+3 dBm	0 dBm
Internal Input Reference Frequency	40 MHz	-
Step Size	100 kHz	-
SSB Phase Noise	-80 dBc/Hz @ 1 kHz -83 dBc/Hz @ 10 kHz -100 dBc/Hz @ 100 kHz -129 dBc/Hz @ 1 MHz	-
Digital Lock Indicator	3.3 volt logic	-
Locking Speed	200 μ sec	-
Spurious	-60 dBc	-
Harmonics	-20 dBc	-
Output VSWR	1.75:1	2.0:1
Optional Binary Divided Output	2,4,8,16,32,64,128	-
DC Supply Voltage	+3.3 volts	(+/- 2%) volts
DC Supply Current	150 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.

Up to 2 Optional Outputs

- One Output line: 150 mA

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

