Model # LCFS1069

375 to 750 MHz Frequency Synthesizer

Low Phase Noise in a Lower Cost Package

Features

- Low Phase Noise: -116 dBc/Hz (100 kHz offset)
- **External Reference Oscillator (Internal Ref. Option at No Extra Charge)**
- No User Programming Required
- Integrated Microcontroller Look-up Table
- Customized Parallel or Serial Programming Available
- 3 Additional Complementary Output Lines are Available

API Technologies' Model LCFS1069 frequency synthesizer combines a monolithic integer-n microwave synthesizer, 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	375 to 750 MHz	375 to 750 MHz
Output Power	+13 dBm	-
External Reference Input Power Requirement (CW)	0 to +13 dBm	0 to +13 dBm
Step Size	10 MHz	-
SSB Phase Noise**	-98 dBc/Hz @ 1 kHz -98 dBc/Hz @ 10 kHz -116 dBc/Hz @ 100 kHz -145 dBc/Hz @ 1 MHz -168 dBc/Hz @ 10 MHz	-
Digital Lock Indicator	3.3 volt logic	-
Locking Speed	200 µsec	-
Spurious	-40 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*	---

** SSB phase noise dependent on the input reference performance.

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. Single output model.

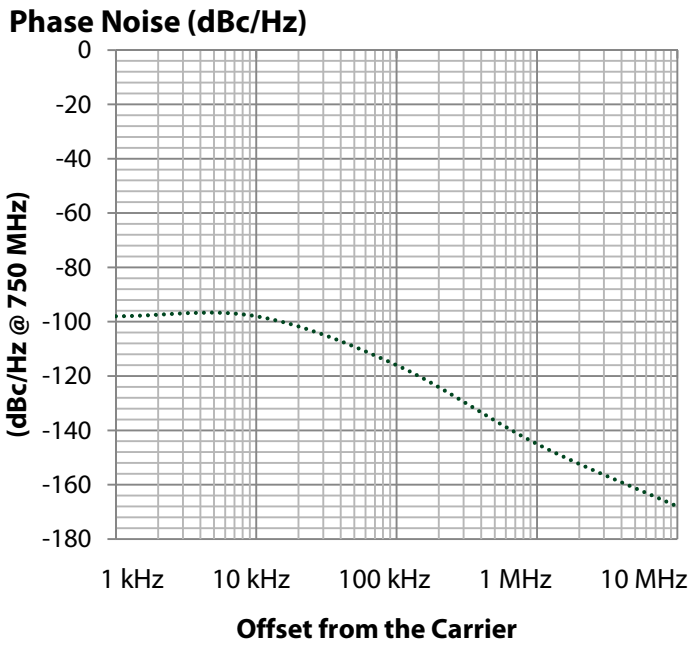
Up to 4 Optional Outputs*

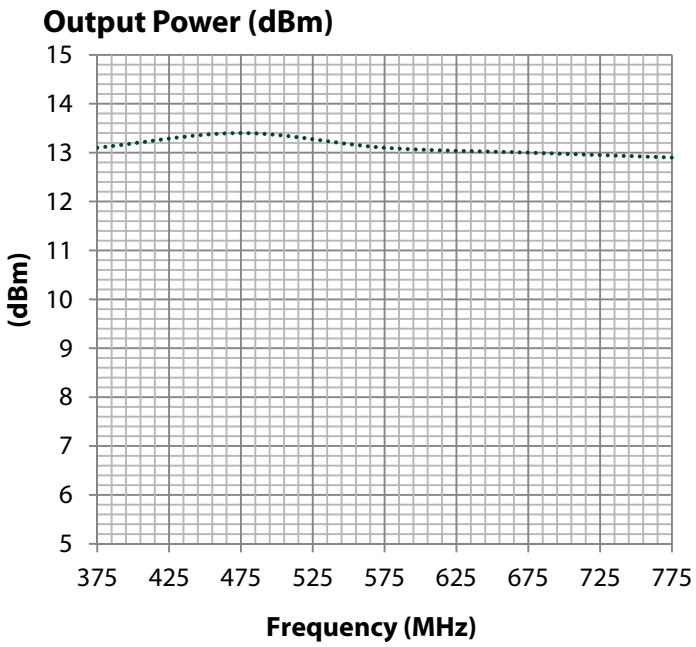
- One Output line: 150 mA*
- Two Output Lines: 225 mA
- Three Output Lines: 300 mA
- Four Output Lines: 375 mA

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

Typical Performance





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.

Outline Drawing

(LC800 Package)