

Programmable Frequency Synthesizer 8-16 GHz



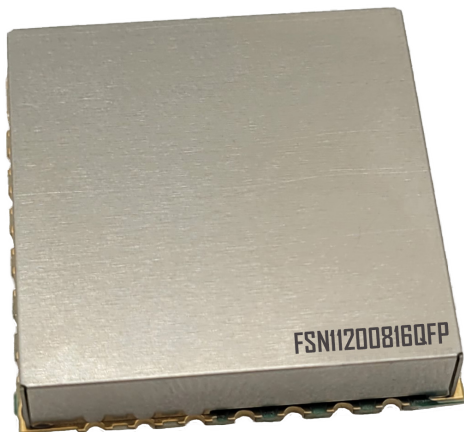
Product Datasheet

FSN11200816QFP

Programmable Microwave Synthesizer.

Overview

The FSN11200816QFP is a programmable low-phase noise Microwave Frequency Synthesizer. This product comes in a tiny surface mount package measuring 25.4 mm x 25.4 mm x 6.35 mm. The frequency of the synthesizer is custom in the range of 8-16 GHz.



Features

- Programmable frequency in the range of 8-16 GHz
- -103 dBc/ Hz phase noise at 10 KHz
- 25.4 x 25.4 mm surface mount package
- 0 dBm output power
- Low reference spurs (<-80 dBc)
- Reference signal input 10 MHz, 100 MHz or custom on request
- Switching speed of 3.5 ms. Upgraded option with 40 μ s available, requires export license.



Applications

- Satellite communications
- Radar
- Mobile communications
- 5G

Physical Specifications

Parameter	Typ	Unit
Size	25.4 x 25.4 x 6.35	mm
Weight	4	grams

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Specification Overview

Parameter	Typ	Unit
Frequency Range ¹	8-16	GHz
Step Size ²	Custom Fractional N Synthesis	
Phase Noise ³		
	1 kHz	-93 dBc/Hz
	10 kHz	-103 dBc/Hz
	100 kHz	-107 dBc/Hz
	1 MHz	-121 dBc/Hz
Power Supply @ 3.3 V	250	mA
Power Supply @ 5.0 V	150	
Output Power	1 ±2	dBm
Load Impedance	50	Ω
Spurious	<-80	dBc
Harmonics ³	-25	dBc
Subharmonics ³	-25	dBc
Programming Interface	UART	
Settling Time		
	Standard option, does not require export license.	3.5 ms
	Faster option, requires export license. Please indicate if you want this option.	40 μs
Reference Signal Input ⁴	10 / 100 / Custom on request	MHz
Operating Temperature	-40 to +85	°C

Specification References

1. Can operate up to 16.8 GHz but not guaranteed.
2. Default is 200 MHz if not specified during ordering. Supports both integer-N and fractional-N.
3. 16 GHz carrier with 200 MHz step size. Lower frequencies have better phase noise performance. The phase noise degrades with a lower step size.
4. Should be lower than 200 MHz.

Contact Information

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