RFMD
rfmd.com

PNP-1650-L22-G

PLUG-N-PLAY NARROWBAND SYNTHESIZER

Package: L22, 12.7mm x 12.7mm x 4.57mm

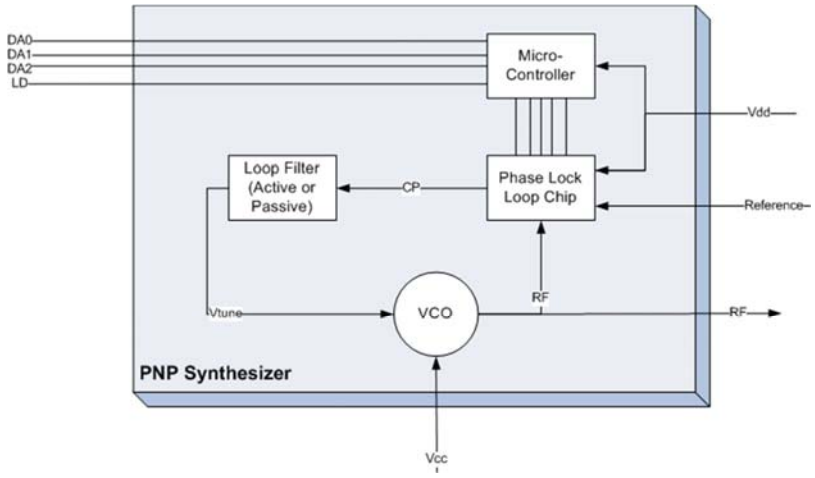
RoHS

Features

- Internal Microcontroller
- Programmable START/STOP/Step Size
- SPI BUS Compatible
- Frequency: 1600MHz to 1700MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)

Applications

- Highly Integrated Radio Designs
- High-Performance Radios
- Mircrowave Radio IF Conversion
- Instrumentation
- Frequency Synthesizers



Functional Block Diagram

Product Description

RFMD offers complete Plug-N-Play Synthesizers (PNPs) for low noise frequency synthesizer applications consisting of a VCO, PLL, loop filter and Micro-controller interface. The PNP family of RF signal sources is the world's first family of truly configurable frequency synthesizer modules. These synthesizers can make quick adjustments with amazing accuracy, speed, and performance.

Ordering Information

PNP-1650-L22-G Contact us at 1-480-756-6070

Optimum Technology Matching® Applied

☐ GaAs HBT	☐ SiGe BiCMOS	☐ GaAs pHEMT	☐ GaN HEMT
☐ GaAs MESFET	☐ Si BiCMOS	☐ Si CMOS	☐ BiFET HBT
☐ InGaP HBT	☐ SiGe HBT	☑ Si BJT	☐ LDMOS

7628 Thorndike Road, Greensboro, NC 27409-9421 · For sales or technical support, contact RFMD at **(+1) 336-678-5570** or **customerservice@rfmd.com**.

Absolute Maximum Ratings

Parameter	Rating	Unit
Operating Ambient Temperature	-40 to +85	°C
Storage Temperature	-55 to +125	°C

Caution! ESD sensitive device.

Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute Maximum Rating conditions is not implied.

RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

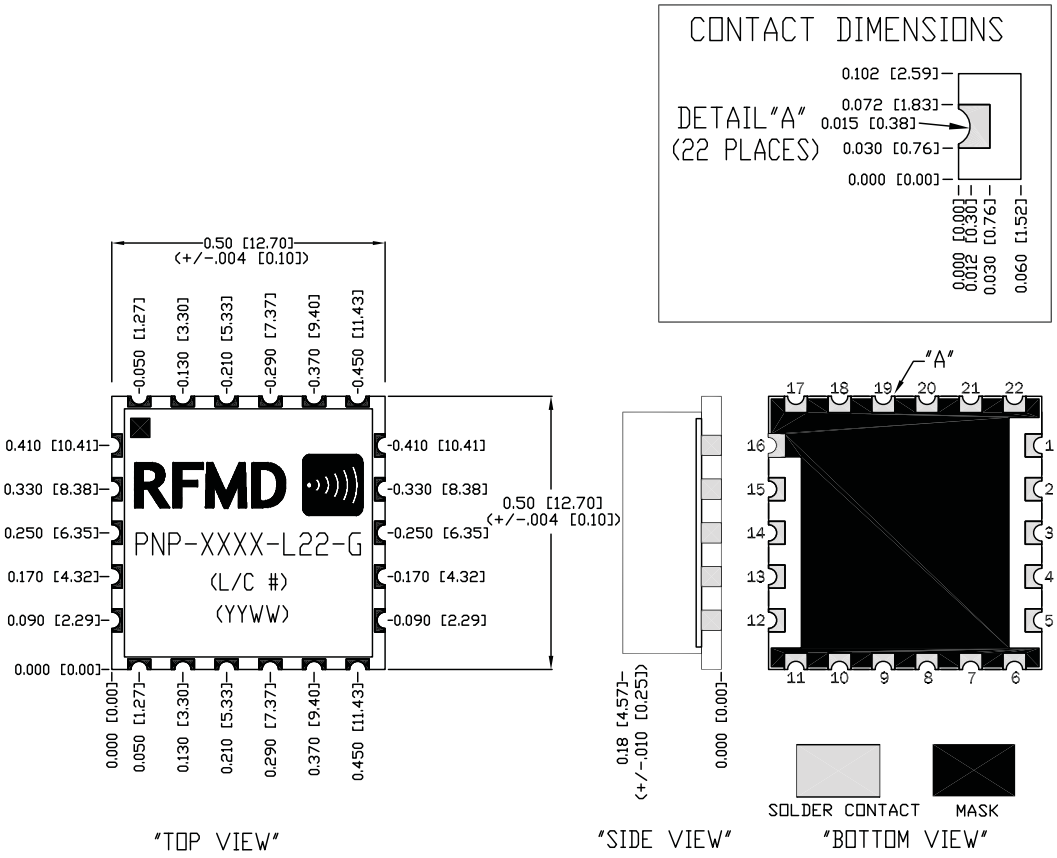
Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	1600		1700	MHz	
Step Size	25		10000	kHz	
Output Power	-2	0	2	dBm	
Output Phase Noise		-90	-85	dBc/Hz	1kHz
		-106	-101	dBc/Hz	10kHz
		-126	-121	dBc/Hz	100kHz
		-146	-141	dBc/Hz	1000kHz
Spurious Product		-80	-70	dBc	10MHz step size
		–70	-60	dBc	250kHz step size
		-70	-55	dBc	62.5kHz step size
Reference Feedthrough		-70	-65	dBc	
Second Harmonic		-18	-12	dBc	
Reference Oscillator Signal	10	20	250	MHz	Frequency
	0		3.3	V_{P-P}	Amplitude - DC coupled
Power Supply					
Operating Voltage	4.9	5	5.1	V	V1
	2.7	3	3.3	V	V2
Supply Current		30	40	mA	I1
		25	35	mA	I2

Notes:
1) Reference Input Level: -5dBm minimum, +5dBm maximum, AC coupled.
2) Specification Test Conditions: V1 = 5V, V2 = 3V, REF = 20MHz.

7628 Thorndike Road, Greensboro, NC 27409-9421 · For sales or technical support, contact RFMD at **(+1) 336-678-5570** or **customerservice@rfmd.com**.

Package Drawing & Pin Outs

12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)



CONTACT ASSIGNMENTS	
1: DA0, Serial Interface	12: RF OUTPUT
2: DA1, Serial Interface	13: V1, ANALOG SUPPLY INPUT
3: DA2, Serial Interface	14: V2, DIGITAL SUPPLY INPUT
4: LOCK DETECT	15: REFERENCE INPUT
5: NO CONNECT	ALL OTHER CONTACTS ARE GROUND