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PLL400-875Y

5V NARROWBAND PHASE-LOCKED LOOP

Package: PLL400, 15.24mm x 15.24mm x 3mm

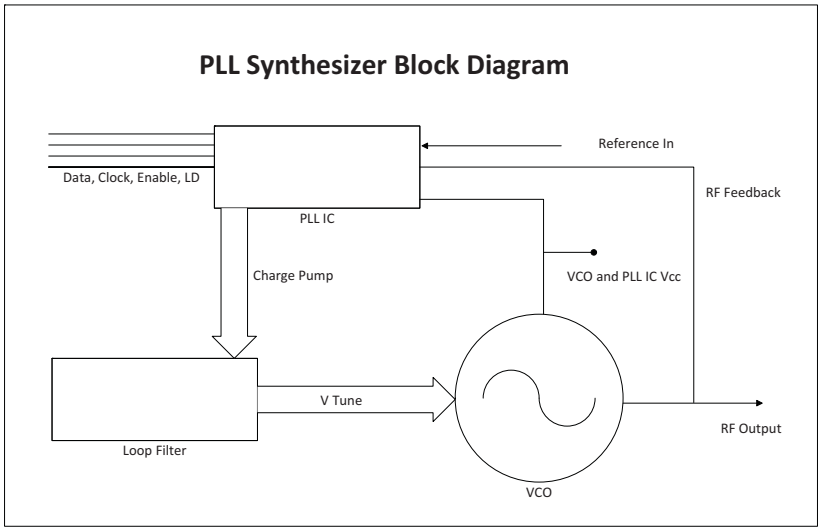
RoHS

Features

- Low Phase Noise / Fast Settling Time
- SPI Bus Compatible
- Frequency: 750MHz to 1000MHz
- Resonator: Aircoil
- PCB: FR4 and S1170
- Package Size: 15.24mm x 15.24mm x 3mm (0.6in x 0.6in x 0.118in)

Applications

- Cellular Infrastructure
- RFID
- General Wireless



Functional Block Diagram

Product Description

RFMD® offers complete Phase Locked Modules (PLLs) integrating a PLL IC, a VCO, loop filter components, and buffer amplifiers. RFMD has a broad selection of oscillator topologies, resonator technologies, supply voltages, and substrate materials available, allowing us to provide customers with a PLL solution that meets the specific cost, performance, and size requirements for their applications.

Ordering Information

PLL400-875Y	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

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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	750	875	1000	MHz	
Step Size		250		kHz	
Settling Time		5	10	ms	To within 1.0kHz
Output Power	-3	0	3	dBm	
Output Phase Noise		-80	-74	dBc/Hz	1kHz
		-80	-74	dBc/Hz	10kHz
		-111	-105	dBc/Hz	100kHz
Spurious Product		-70	-60	dBc	250kHz
Reference Feedthrough		-80	-60	dBc	
Harmonic Suppression		-15	-8	dBc	2nd harmonic
		-18	-10	dBc	3rd harmonic
Reference Oscillator Signal		10		MHz	Frequency
	3		5	Vp-p	Amplitude
		-145		dBc/Hz	Phase noise - 1kHz
		100		kΩ	Input impedance
Output Impedance		50		Ω	
Power Supply					
Operating Voltage	4.75	5	5.25	V	
Supply Current		30	35	mA	

PLL Synthesizer Programming

Refer to Application Note 109, Option 100.

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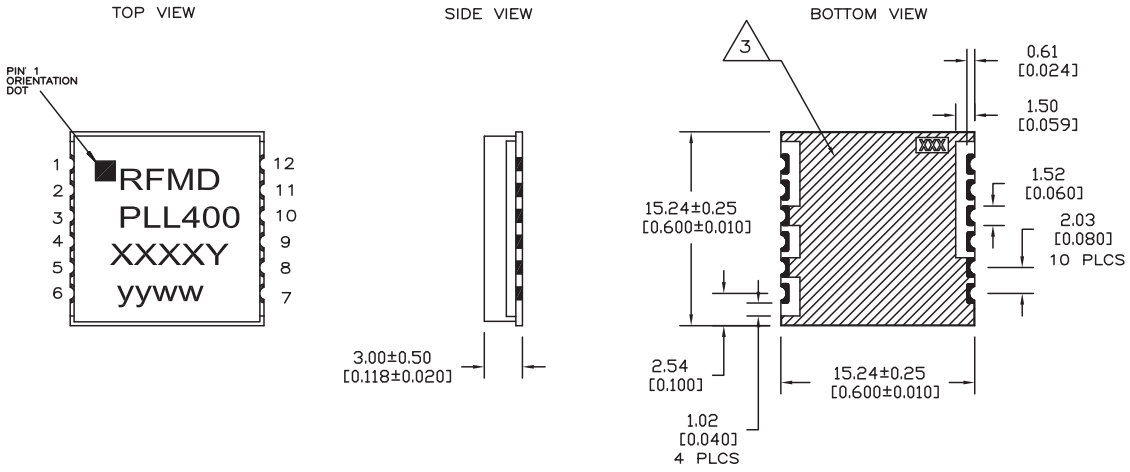
Package Drawing & Pin Outs

15.24mm x 15.24mm x 3mm (0.6in x 0.6in x 0.118in)



PIN OUT FOR PLL	
PIN	APPLICATION
1	CLOCK
2	DATA
3	ENABLE
4	REF. OSC IN
6	GROUND *
7	VCC (VCO)
9	RF OUT
11	LOCK DETECT
12	VCC (CHIP)

ALL OTHER PINS ARE GROUND
* OPTIONAL MODULATION PORT

NOTE, UNLESS OTHERWISE SPECIFIED:

1. THE METAL CASE IS GROUND.
2. ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAD ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD.
3. HATCHED AREAS ARE GROUND AND ARE COVERED WITH LPI SOLDER MASK OVER BARE COPPER. ALL CONTACT AREAS ARE PLATED. SIGNAL VIAS MAY BE LOCATED WITHIN GROUND PLANE.
4. CROSS HATCHED AREA INDICATES AREA WHERE SOLDER MASK SHOULD BE APPLIED TO MOUNTING BOARD.
5. SUBSTRATE MATERIAL: FR-4.
6. XXXX REPRESENTS THE MODEL NUMBER.
7. yyww IS THE DATE CODE.
8. Y AT THE END OF MODEL NUMBER DESIGNATES RoHS COMPLIANCE.
9. DIMENSIONS ARE IN MILLIMETERS AND [INCHES].

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