

LO6000 Local Oscillator

23.5 MHz to 6000 MHz

LO6000

Description

LO6000 is ultra-wideband phase-locked loop (PLL) with integrated voltage control oscillators (VCOs). It is a high-performance frequency synthesizer capable of synthesizing frequencies from 23.5MHz to 6.0GHz while maintaining superior phase noise and spurious performance.



Features

- 23.5MHz to 6000MHz Output
- Programmable Outputs Power in 4 steps
- Low Phase Noise
- Low Spurious Outputs

Applications

- Wireless Infrastructure
- Test and Measurement
- Satellite Communications
- Wireless LANs/CATV
- Military and Aerospace
- PMAR/LMAR/Public
- Safety Radio
- Clock generation

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Electrical Specifications

Parameter		Minimum	Typical	Maximum	Unit
Frequency Range		23.5		6000	MHz
Required REF input Frequency			10		MHz
Output Power @1GHz	Power Setting 0		-8		dBm
	Power Setting 1		-5		dBm
	Power Setting 2		-2		dBm
	Power Setting 3		1		dBm
2nd Harmonic			-20		dBc
3rd Harmonic			-7		dBc
Frequency Resolution	3000 to 6000 MHz		100		KHz
	1500 to 3000 MHz		50		KHz
	750 to 1500 MHz		25		KHz
	375 to 750 MHz		12.5		KHz
	187.5 to 375 MHz		6.25		KHz
Phase Noise @ 1GHz , 10 KHz offset		--	-104	--	dBc/Hz

Max. Ratings

DC Voltage on RF output or REF in	50 Volt
Operating Temperature	-40°C to 85°C

Exceeding any of the limits of this section may lead to permanent damage to the device. Furthermore, extended operation at these maximum ratings may reduce the life of this device

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Typical Characteristics

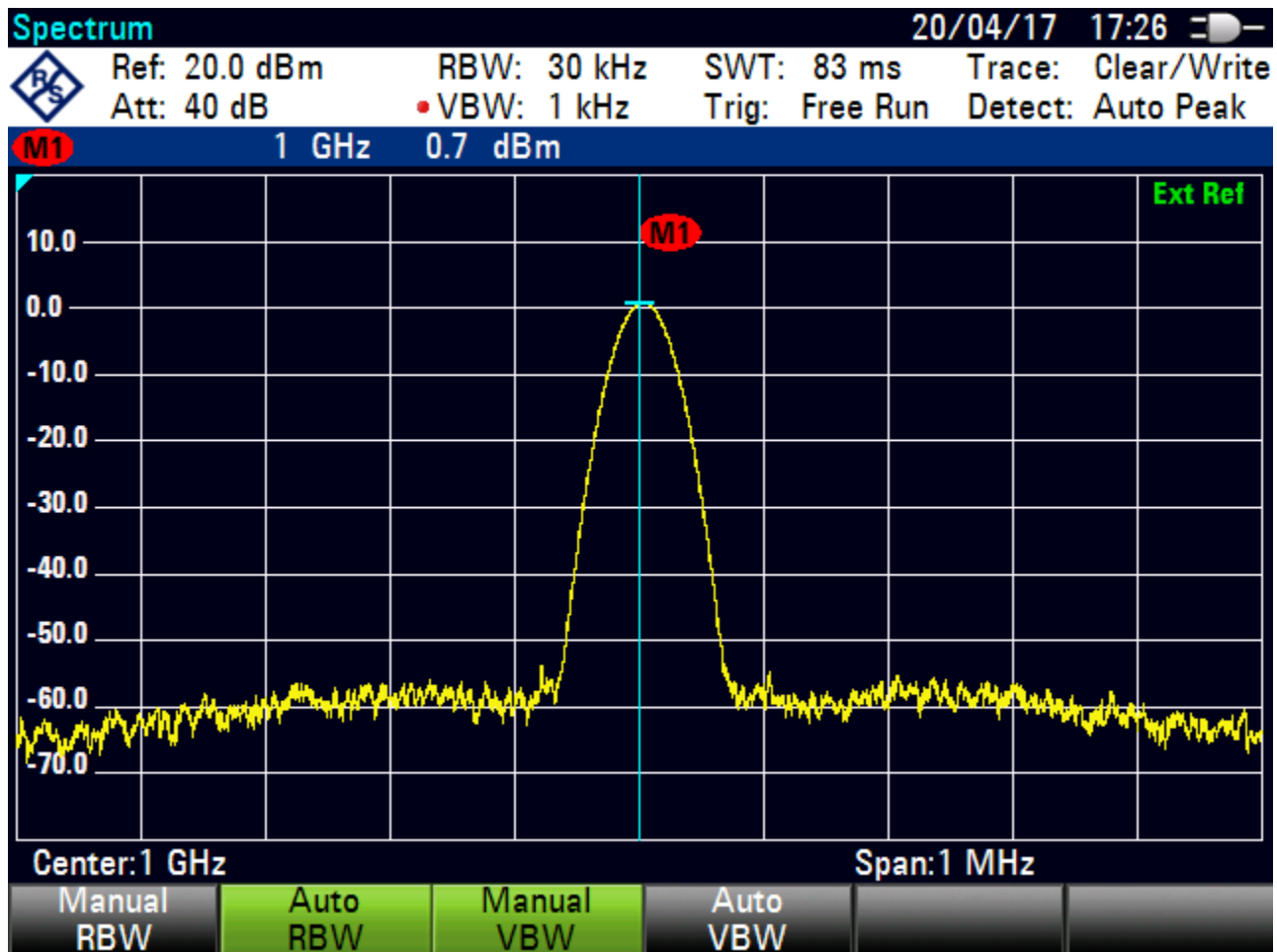


Fig. 1 GHz output

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MATLAB Code Example

```
sys=serial('COM113','BaudRate',1000000,'DataBits',8,'Parity','none','FlowControl','none',  
'Timeout',1);  
  
fopen(sys); % open COM port  
  
LO6000_address = 33;  
  
ION_ON(sys,LO6000_address); % turn module ON  
pause(0.01);  
  
LO6000(sys,LO6000_address,1000e6,3); % Generate 1 GHz with power setting 3  
  
ION_SET_DEFAULT(sys,LO6000_address); % save current setting to default  
  
fclose(sys); % close COM port
```