

规格书编号

SPEC NO :

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_  
PRODUCT 产品: **Frequency Synthesizer**  
MODEL NO 型号: **HD M9130**  
PREPARED 编制: Duchuangang CHECKED 审核: Houshihong  
APPROVED 批准: CHARLES DATE 日期: 2008-01-30

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子有限公司  
Shoulder Electronics Limited

更改历史记录  
History Record

更改日期 Date	规格书编号 Spec No	产品型号 Part No	客户产品型号 Customer No	更改内容描述 Modify Content	备注 Remark

## 1. Features

- Small Volume, Applicable to Surface Mount Technology
- Low Voltage Work: +5V
- Low Phase Noise
- Working Temperature: -30°C ~ +85 °C

## 2. Applications

CDMA, WCDMA, TD-SCDMA Wireless Base Station  
CDMA, WCDMA, TD-SCDMA Wireless Repeater  
Peer-to-Peer Communications Equipment  
RFID

## 3. Product Description

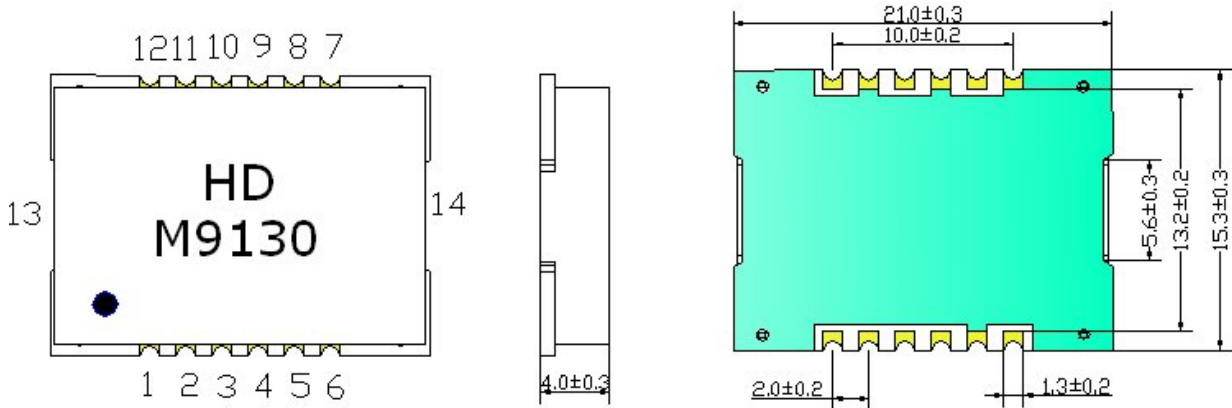
M9000 series of low phase noise SMD micro frequency synthesizer introduces Hybrid Integration Technology, by integrating PLL chips, loop filters, buffer, relevant external components and circuit Performance Indicators in a size of 20\*15mm<sup>2</sup> through SMD technology. This series frequency synthesizer needs to be connected outside with reference signal through 3-wire Serial Control Interface to settle working frequency.

### 4. Electrical Specification

Test conditions: Reference Freq.=10MHz, Reference Level=1Vp-p,  
Reference P.Noise=-145dBc/Hz(fm=1KHz)

Parameter	Min	Typ	Max	Units	Test Results	Remarks
Frequency Range	370	390	410	MHz		
Step Size	-	25	-	KHz		
Output Power	-2	1	+2	dBm		
Output Phase Noise	1 KHz	-	-75	-73	dBc/Hz	
	10 KHz	-	-102	-100	dBc/Hz	
	100 KHz	-	-125	-123	dBc/Hz	
	200 KHz				dBc/Hz	
	400 KHz				dBc/Hz	
	800 KHz				dBc/Hz	
Power Supply	4.75	5.0	5.25	Volts		VCO
	4.75	5.0	5.25	Volts		PLL
Supply Current	-	25	30	mA		VCO
	-	8	10	mA		PLL
Reference Feedthrough				dBc		
Harmonic Suppression: 2nd Harmonic	-	-20	-15	dBc		
Ref Osc Signal				MHz		
Output Impedance		50		$\Omega$		
Phase leak	-	-75	-70			
Clutter Suppression	-	-75	-70			

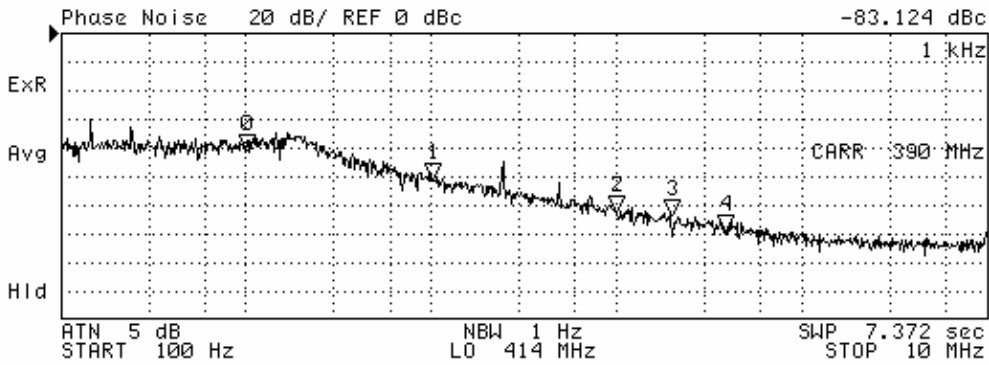
5. DIMENSION



Pin NO.	Function	Pin NO.	Function
1	Vpll	8	GND
2	GND	9	MUXOUT
3	REFin	10	CLK
4	GND	12	DATA
5	Vvco	12	LE
6	GND	13	GND
7	RFout	14	GND

注意事项:

- To Good Grounding
- Good Power Filter
- The maximum Welding Temperature 230 °C, 10S



N	SWP PARAM	VAL
0	1 kHz	-83.124 dBc
1	10 kHz	-103.73 dBc
2	100 kHz	-126.04 dBc
3	200 kHz	-128.81 dBc
4	400 kHz	-140.13 dBc

SELECT LETTER

SPACE

BACK SPACE

ERASE TITLE

DONE

STOR DEV [DISK]

5

CANCEL