

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 M9200
PREPARED 编制: Duchuangang CHECKED 审核: Houshihong
APPROVED 批准: CHARLES DATE 日期: 2008-08-5

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

1. Features

- Small Volume, Applicable to Surface Mount Technology
- Low Voltage Work: +5V
- Low Phase Noise
- Working Temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

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 $19*19\text{mm}^2$ 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.

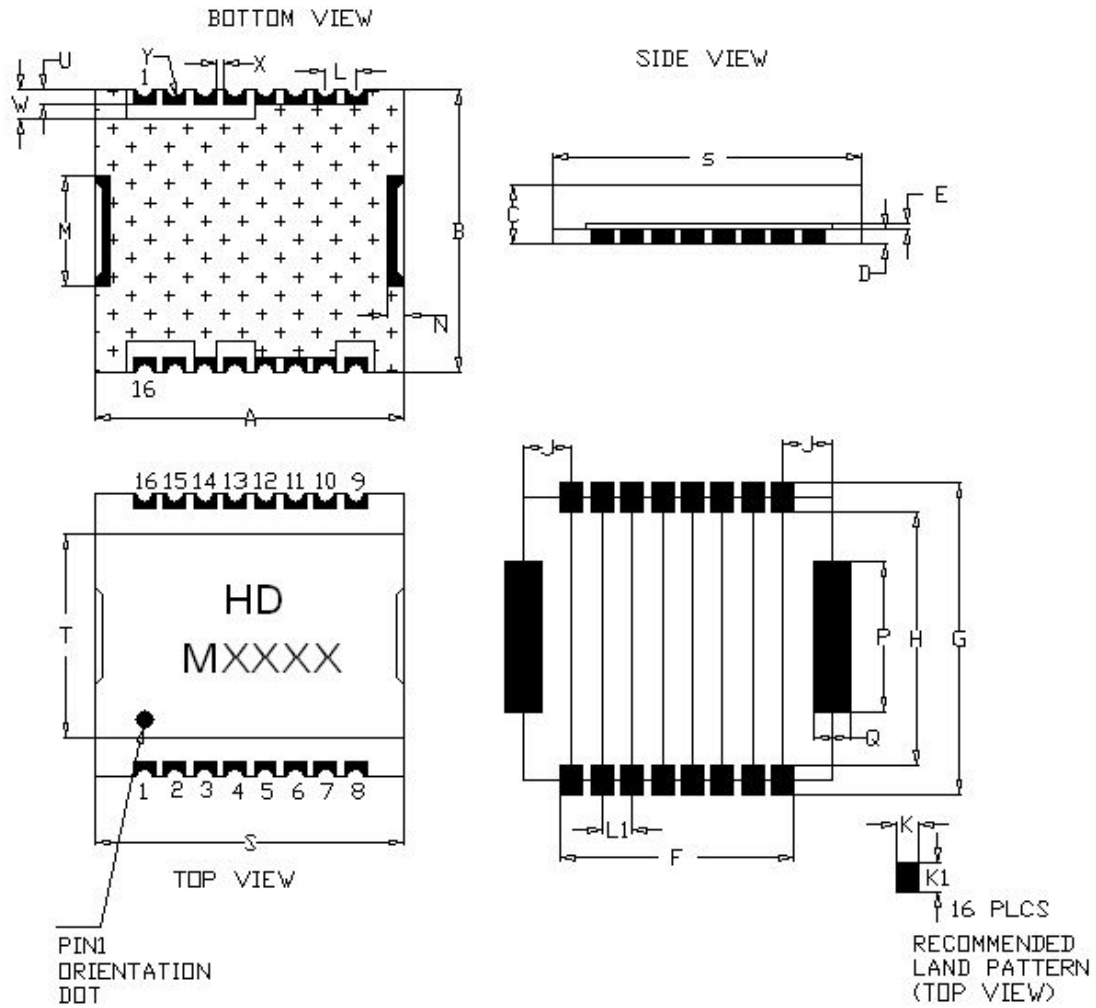
4. Electrical Specification

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	1565	1610	1650	MHz		
Step Size	-	200	-	KHz		
Output Power	+3	5	+7	dBm		
Output Phase Noise	100 Hz	-	-75	-70	dBc/Hz	
	1KHz	-	-75	-70	dBc/Hz	
	10 KHz	-	-98	-95	dBc/Hz	
	100 KHz		-118	-115	dBc/Hz	
	1MHz		-138	-135	dBc/Hz	
Power Supply	4.75	5.0	5.25	Volts		VCO
	4.75	5.0	5.25	Volts		PLL
Supply Current	-	30	35	mA		VCO
	-	8	10	mA		PLL
Harmonic Suppression: 2nd Harmonic	-	-20	-15	dBc		
Ref Osc Signal		10		MHz		
Output Impedance		50		Ω		
Phase leak	-	-80	-75	dBc		$F_{out} \pm 50KHz$
Clutter Suppression	-	-80	-75	dBc		$F_O \sim 10MHz$

5. DIMENSION



PIN OUT FROM PLL			
PIN	APPLICATION	PIN	APPLICATION
1	CLOCK	9	VCC (VCO)
2	DATA	13	RF OUT
3	ENABLE	15	VCC (CHIP)
4	OSC IN	16	LOCK DETECT

ALL OTHER PINS ARE GROUND

SYMBOL	DIMENSION(mm)	SYMBOL	DIMENSION(mm)
A	21.00±0.25	L1	2.00
B	19.05±0.25	S	21
C	4.0±0.3	T	14.2
D	1.05 MAX	U	1.0
E	0.5	W	2.0
F	15.45	X	0.6
G	20.5	Y	R=0.57
H	16.5	M	10.2
J	3.3	N	1.25
K	1.5	P	11
K1	2.0	Q	2.5
L	2.00±0.05		

NOTE.UNLESS CASE OTHERWISE SPECIFICD:

1. THE METAL CASE IS GROUND.
2. ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAN ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD.
3. CROSS HATCHED AREAS ARE GROUND AND ARE COVERED WITH LP1 SOLDER MASK OVER BARE COPPER.ALL CONTACT AREAS ARE PLATED WITH Sn63/Pb37 SOLDER.
4. SUBSTRATE MATERIAL:FR-4.
5. HDMXXXX REPRESENTS THE MODEL NUMBER.

注意事项:

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