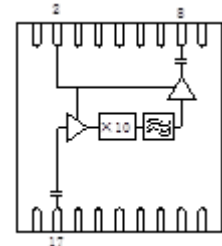


VMFG-1000M-SM0909

FEATURES

- ◆ Input Frequency: 100MHz
- ◆ Output Frequency: 1000MHz
- ◆ Phase Noise: $\leq -140\text{dBc/Hz}@1\text{kHz}$
- ◆ Power Supply: $\leq 170\text{mA}@5\text{V}$
- ◆ Dimension: $9.0\text{mm} \times 9.0\text{mm} \times 1.8\text{mm}$
- ◆ Weight: $\leq 0.7\text{g}$



TYPICAL APPLICATIONS

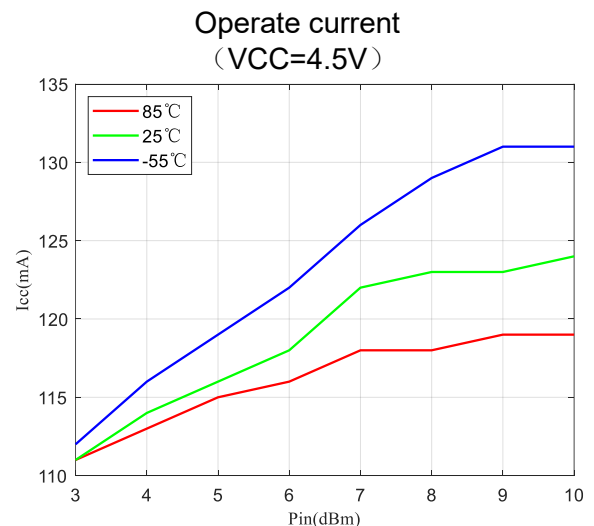
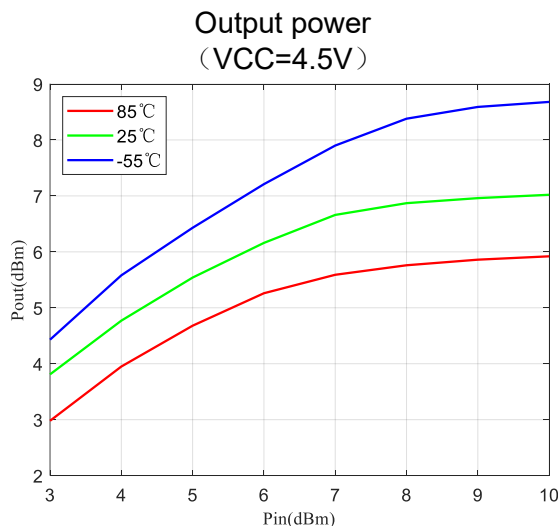
- ◆ L, S, C, X, Ku band Radar
- ◆ Military Radio
- ◆ General Amplification

ELECTRICAL SPECIFICATIONS

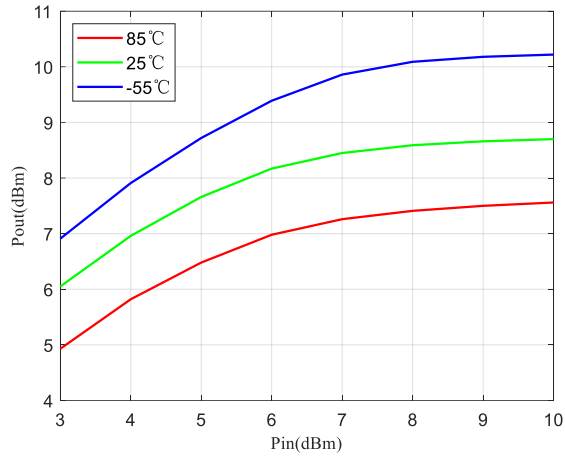
(TA=25°C, VCC=5V, Input Frequency 100MHz, Input Power 7dBm, Input Phase noise -160dBc/Hz @1kHz)

Parameter	Min	Typ	Max	Unit
Output Frequency	-	1000	-	MHz
Output Power	8	9	10	dBm
Phase Noise Decrease@1kHz	-	3	5	dB
Spurious	-	-80	-70	dBc
Harmonic	-	-40	-30	dBc
Current	-	150	170	mA

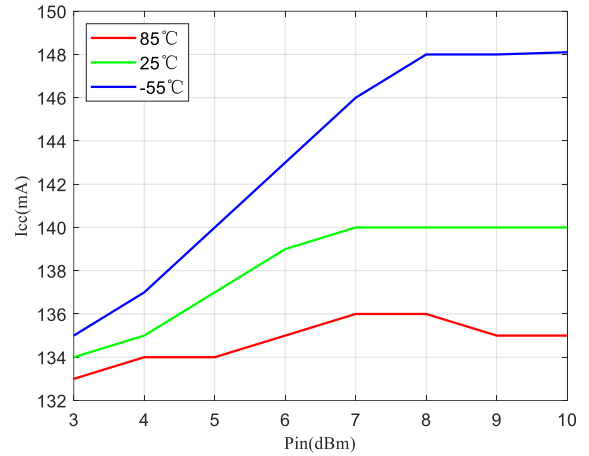
TYPICAL PERFORMANCE CHARACTERISTICS



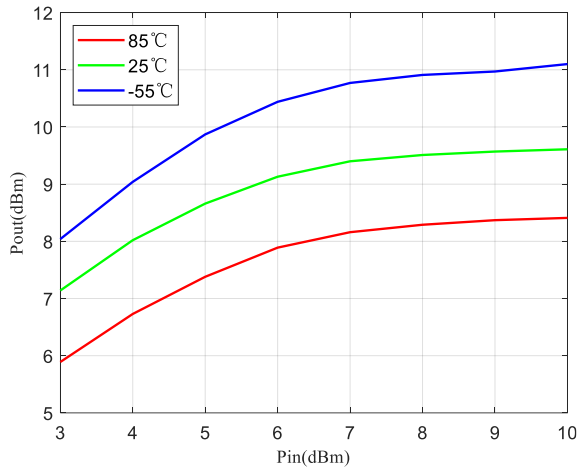
Output power
(VCC=4.8V)



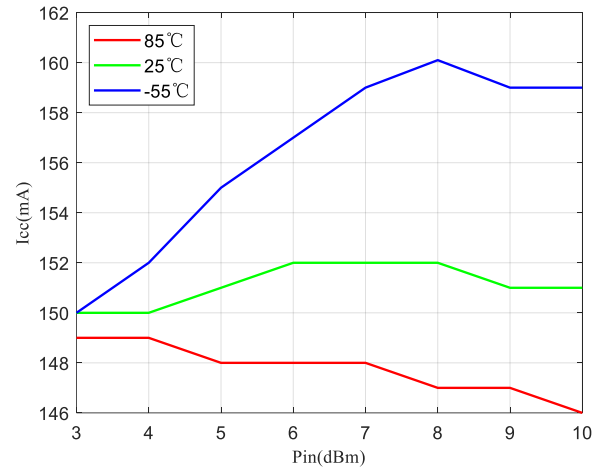
Operate current
(VCC=4.8V)



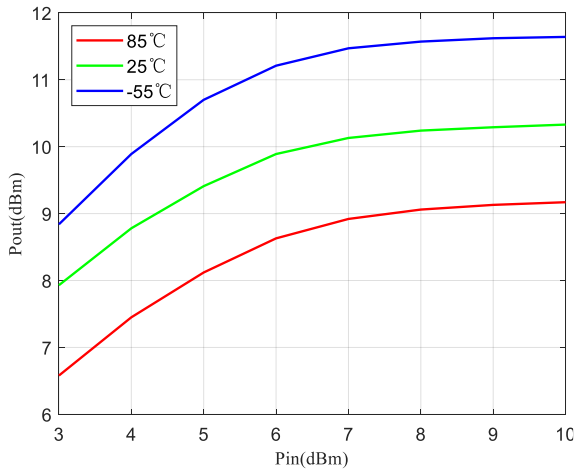
Output power
(VCC=5V)



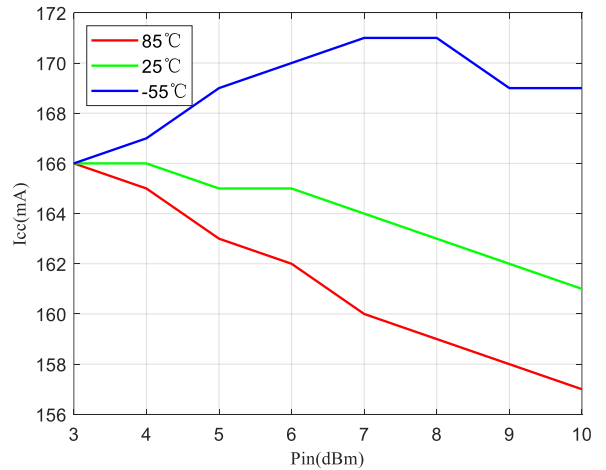
Operate current
(VCC=5V)



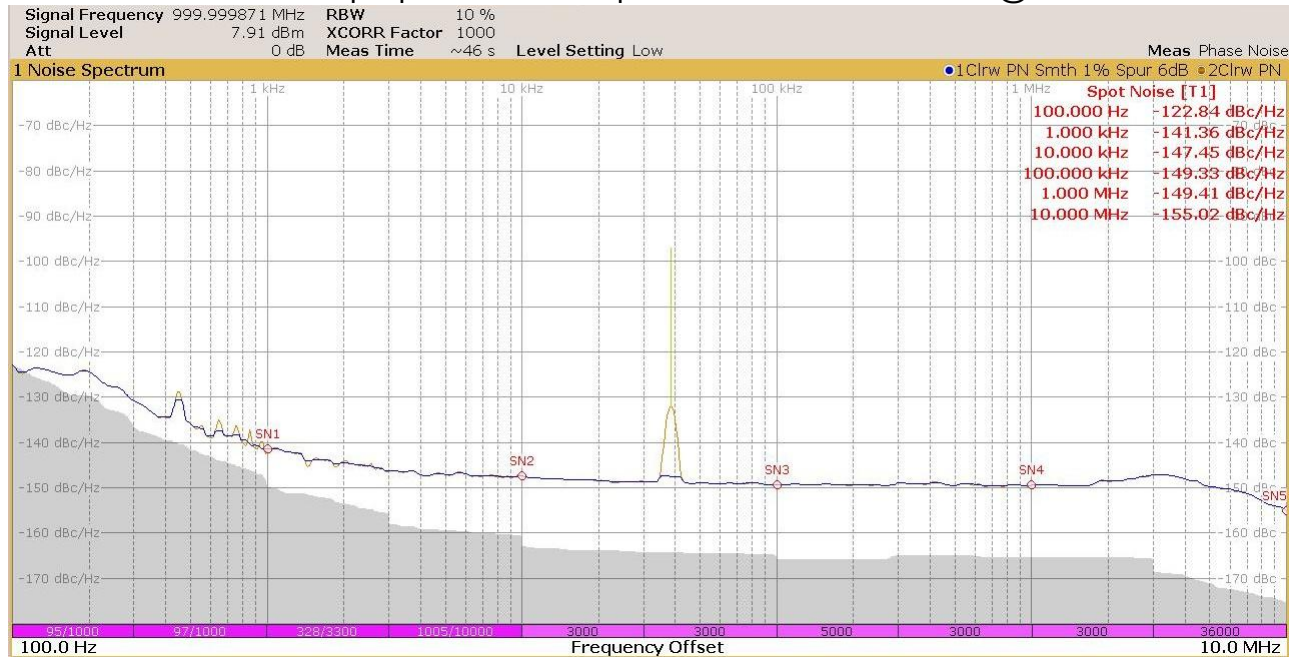
Output power
(VCC=5.2V)



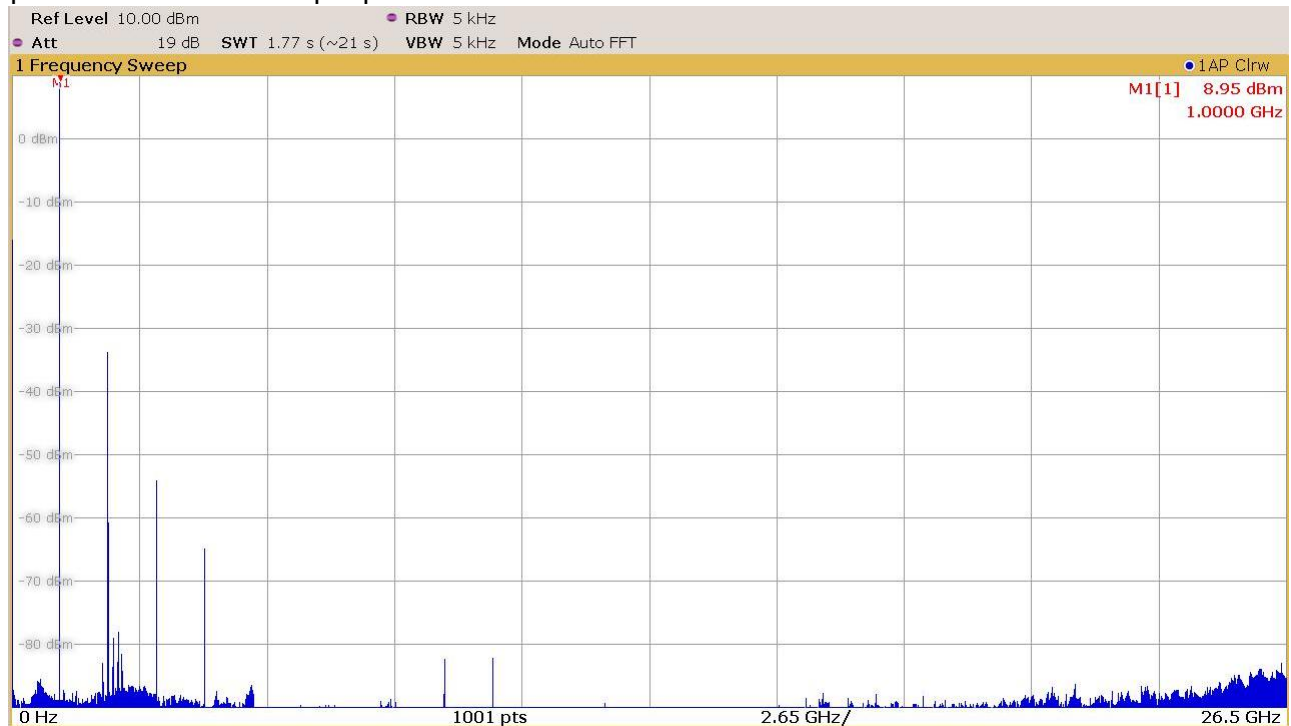
Operate current
(VCC=5.2V)



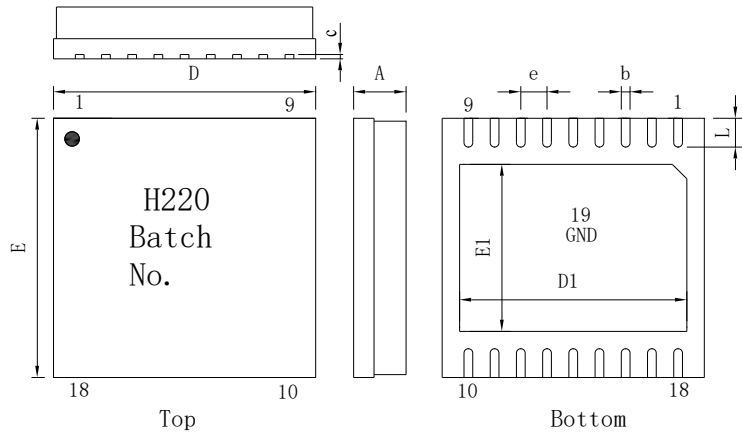
Phase noise (TA=25°C, Input power:7dBm, Input Phase noise: -162dBc/Hz@1kHz, VCC=5V)



Spectrum (TA=25°C, Input power: 7dBm, VCC=5V)



OUTLINE DRAWING

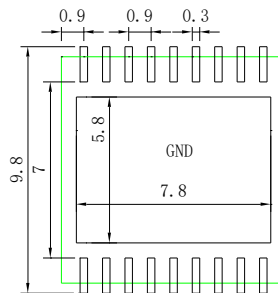


Symbol	Dimensions(mm)		
	Min	Typ	Max
A	1.60	1.80	1.90
b	0.25	0.30	0.35
c	-	0.15	-
D	8.85	9.00	9.15
l	7.75	7.80	7.85
e	-	0.90	-
E	8.85	9.00	9.15
E1	5.75	5.80	5.85
L	0.95	1.00	1.05

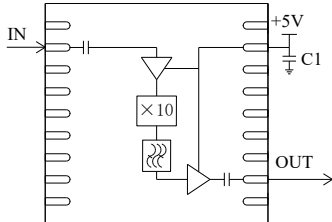
PIN FUNCTION

Pin No.	Function	Symbol
2	+5V power	VCC
8	1GHz output	OUT
17	100MHz input	IN
1, 3~7, 9~16, 18, 19	Ground	GND

RECOMMENDED FOOTPRINT



APPLICATION NOTE



The circuit requires a +5V power supply routed through a low-noise LDO; otherwise, the phase noise of the output signal may degrade. Place a 10µF decoupling capacitor close to the power input to suppress supply noise.

ABSOLUTE MAXIMUN RATINGS

Parameter	Function
VCC	+5.5V
Input power	+13dBm
Reflow Soldering Peak Temperature	255°C/30Sec