

SMD Voltage Controlled Oscillator

Frequency

VLN106M

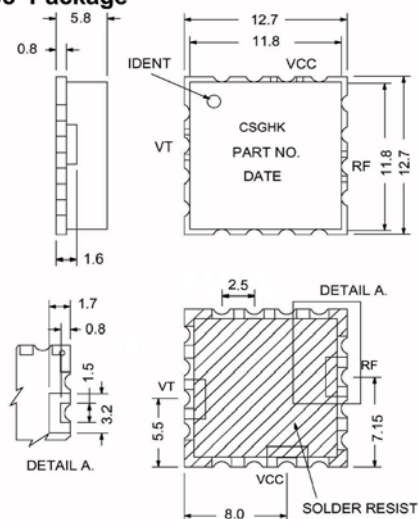
Features

- Miniature Size
- Surface Mount Package
- Electrically Shielded
- Low Phase Noise
- Highly Linear Tuning

Description

The VLN106M is a fundamental single ended oscillator designed for use in cost sensitive wireless and telemetry applications. The device has been optimized by careful selection of the bipolar transistor and varactor diode for low phase noise and high linearity tuning characteristics.

SK605 Package



Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{CC} = +5\text{V}$ (unless otherwise stated)

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Rangs		MHz		106.5	
Tuning Voltage (V)		V	1.0		4.0
RF Output Power		dBm	8.0		11.0
Supply Voltage (VCC)		V	4.75	5	5.25
Supply Current (Icc)		mA		24	27
Phase Noise :					
	@10kHz Offset:	dBc/Hz		-129	-126
	@100kHz Offset:	dBc/Hz		-151	-146
Average Tuning Sensitivity		MHz/V		1.5	
Harmonic Outputs		dBc		-20	
Operating Temperature Range		$^\circ\text{C}$	-55		+85
Tune Input Capacitance		PF		330	

Comments

All specifications apply with a 50 ohm load impedance.

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Tuning Voltage (v)	Output Frequency (MHz)	Tuning Sensitivity (MHz/V)	Output Power (dBm)	Harmonic Suppression (dBc)
-55℃				
0.5	104.6	-	10.0	-15.3
1.0	105.4	-	10.0	-15.6
1.5	106.1	-	10.0	-15.9
2.0	106.9	-	10.1	-16.2
2.5	107.6	-	10.1	-16.4
3.0	108.3	-	10.0	-16.5
3.5	109.1	-	10.0	-16.7
4.0	109.9	-	10.0	-16.8
4.5	110.7	-	10.0	-16.9
+25℃				
0.5	103.7	-	9.8	-20.9
1.0	104.4	-	9.8	-21.4
1.5	105.1	-	9.8	-21.9
2.0	105.9	-	9.8	-22.2
2.5	106.6	-	9.8	-22.6
3.0	107.3	-	9.8	-22.9
3.5	108.0	-	9.8	-23.2
4.0	108.9	-	9.8	-23.4
4.5	109.6	-	9.7	-23.6
+85℃				
0.5	102.9	-	9.2	-31.4
1.0	103.6	-	9.1	-32.4
1.5	104.3	-	9.1	-33.3
2.0	105.0	-	9.1	-34.3
2.5	105.8	-	9.1	-35.4
3.0	106.5	-	9.0	-36.0
3.5	107.2	-	9.0	-37.0
4.0	107.9	-	9.1	-37.8
4.5	108.8	-	9.0	-29.1

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