

SMD Voltage Controlled Oscillator

Frequency 154-213MHz

VLN213M

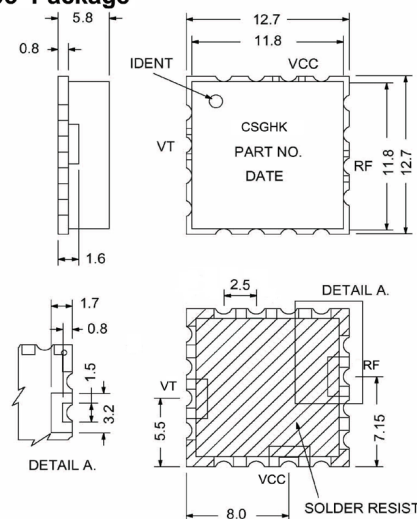
Features

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

Description

The VLN213M 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	154		213
Tuning Voltage (V)		V	1.0		11.0
RF Output Power	154-213MHz	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		-126	-123
	@100kHz Offset:	dBc/Hz		-147	-144
Average Tuning Sensitivity	154-213MHz	MHz/V		6.4	
Harmonic Outputs		dBc		-20	-15
OperatingTemperature 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)	-55°C			+25°C			+85°C		
	Frequency (MHz)	Power (dBm)	2 ⁿ (dBc)	Frequency (MHz)	Power (dBm)	2 ⁿ (dBc)	Frequency (MHz)	Power (dBm)	2 ⁿ (dBc)
1.0	152.7	8.9	-12.6	152.1	8.7	-16.6	151.1	7.2	-14.8
2.0	161.5	9.4	-15.3	160.4	9.1	-19.4	159.0	7.7	-27.7
3.0	169.4	9.4	-16.9	167.7	9.1	-21.6	166.2	7.8	-30.7
4.0	176.8	9.3	-18.1	175.1	9.1	-21.5	173.3	7.9	-29.5
5.0	184.0	9.6	-20.6	182.2	9.2	-23.9	180.4	8.0	-31.1
6.0	190.8	9.9	-21.3	189.1	9.4	-25.8	187.4	8.1	-35.3
7.0	197.2	9.9	-23.4	195.6	9.2	-28.2	194.0	7.9	-42.0
8.0	203.2	9.6	-24.0	201.7	9.1	-29.2	199.9	7.7	-41.2
9.0	208.7	9.6	-24.1	207.0	9.0	-28.7	205.2	7.6	-38.9
10.0	213.5	9.6	-25.5	211.6	8.9	-29.3	209.6	7.6	-38.6
11.0	217.8	9.6	-26.5	215.7	8.9	-30.9	213.5	7.5	-40.1

Phase Noise :

