CSGHK

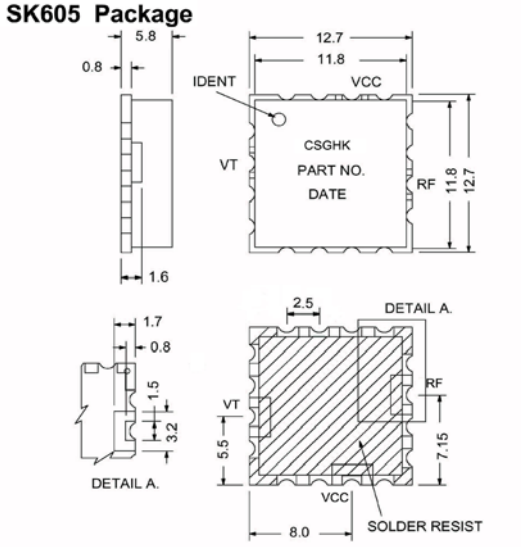
SMD Voltage Controlled Oscillator

Frequency 109-138MHz VLN138A

Features

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

SK605 Package



Description

The VLN138A 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.

Electrical Specifications, T_A = +25℃, V_{CC} = +5V(unless otherwise stated)

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Rangs		MHz	109		138
Tuning Voltage (V)		V	2.0		10.0
RF Output Power	109-138MHz	dBm	10.0		14.0
Supply Voltage (VCC)		V	4.75	5	5.25
Supply Current (Icc)		mA		36	40
Phase Noise :					
	@10kHz Offset:	dBc/Hz		-128	-124
	@100kHz Offset:	dBc/Hz		-149	-145
Average Tuning Sensitivity	109-138MHz	MHz/V		4.6	
Harmonic Outputs		dBc		-20	
OperatingTemperature Range		℃	-55		+85
Tune Input Capacitance		PF		330	

Comments

All specifications apply with a 50 ohm load impedance.

Shenzhen Sways Electronic Co., Ltd Tel : 86-0755-83938305 Fax : 86-0755-83512043 E-mail:csghk@csghk.com

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Frequency 109-138MHZ VLN138A

Tuning Voltage (V)	−55℃			+25℃			+85℃		
	Frequency (MHz)	Power (dBm)	2^n (dBc)	Frequency (MHz)	Power (dBm)	2^n (dBc)	Frequency (MHz)	Power (dBm)	2^n (dBc)
2.0	105.4	13.0	-19.2	105.1	12.8	-21.9	104.4	12.5	-27.5
3.0	111.4	12.9	-22.0	110.8	12.6	-24.7	110.0	12.4	-29.4
4.0	117.9	12.7	-23.7	116.1	12.5	-26.1	115.3	12.3	-31.8
5.0	121.9	12.6	-26.1	121.1	12.4	-28.8	120.2	12.2	-34.2
6.0	126.6	12.4	-27.6	125.7	12.3	-32.0	124.8	12.0	-38.7
7.0	132.9	11.9	-31.3	131.8	11.8	-38.1	130.5	11.4	-43.7
8.0	136.6	11.5	-34.0	135.8	11.5	-60.7	135.0	11.2	-36.1
9.0	140.2	11.2	-34.1	139.4	11.1	-41.2	138.6	10.8	-34.0
10.0	143.6	10.9	-32.3	142.8	10.7	-47.1	141.9	10.5	-32.8

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