CSGHK

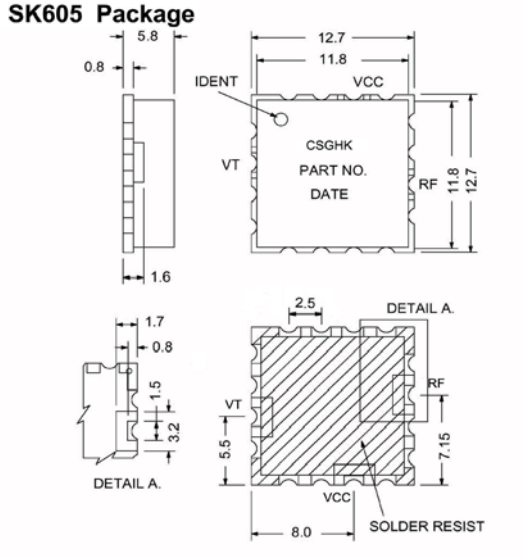
SMD Voltage Controlled Oscillator

Frequency 72-102MHz SN102M

Features

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

SK605 Package



Description

The VLN102M 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	72		102
Tuning Voltage (V)		V	3.0		10.0
RF Output Power	72-102MHz	dBm	7.0		10.0
Supply Voltage (VCC)		V	4.75	5	5.25
Supply Current (Icc)		mA		22	25
Phase Noise :					
	@10kHz Offset:	dBc/Hz		-124	-120
	@100kHz Offset:	dBc/Hz		-148	-145
Average Tuning Sensitivity	72-102MHz	MHz/V		4.6	
Harmonic Outputs		dBc		-20	-15
OperatingTemperature Range		℃	-55		+85
Tune Input Capacitance		PF		1000	

Comments

All specifications apply with a 50 ohm load impedance.

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Tuning Voltage (v)	Output Frequency (MHz)	Tuning Sensitivity (MHz)	Output Power (dBm)	Harmonic Suppression (dBc)
+85℃	0V: 51.9	4.7		
3.0	70.15		6.5	-19.8
4.0	75.65	4.65	6.5	-24.1
5.0	81.09	5.44	6.8	-27.1
6.0	86.33	5.24	7.1	-32.0
7.0	91.20	4.87	7.3	-36.7
8.0	95.32	4.12	7.2	-39.9
9.0	99.12	3.80	7.1	-42.1
10.0	102.47	3.35	6.7	-44.7
+25℃	0V: 52.5	6.1		
3.0	70.71		7.0	-16.4
4.0	76.24	5.53	7.1	-19.6
5.0	81.81	5.57	7.9	-23.0
6.0	87.02	5.21	8.4	-27.2
7.0	91.75	4.73	8.6	-31.1
8.0	96.01	4.26	8.5	-32.6
9.0	99.84	3.83	8.3	-33.5
10.0	103.2	3.36	8.0	-34.9
-55℃	0V: 53.0	5.9		
3.0	71.51		6.5	-14.6
4.0	77.02	5.51	6.9	-18.0
5.0	82.44	5.42	7.7	-20.6
6.0	87.61	5.17	8.3	-24.4
7.0	92.46	4.85	8.6	-27.8
8.0	97.10	4.64	8.5	-28.7
9.0	100.67	3.57	8.4	-29.4
10.0	104.05	3.38	8.1	-30.6

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