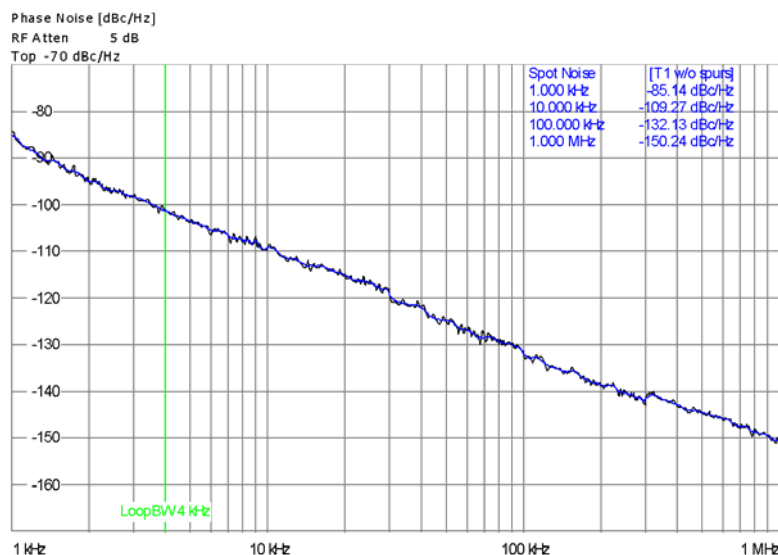


SURFACE MOUNT MODEL VOLTAGE CONTROLLED OSCILLATOR

Frequency 1093-1381MHz

VL1381A



FEATURES

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

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{CC} = +5.0\text{V}$ (unless otherwise stated)

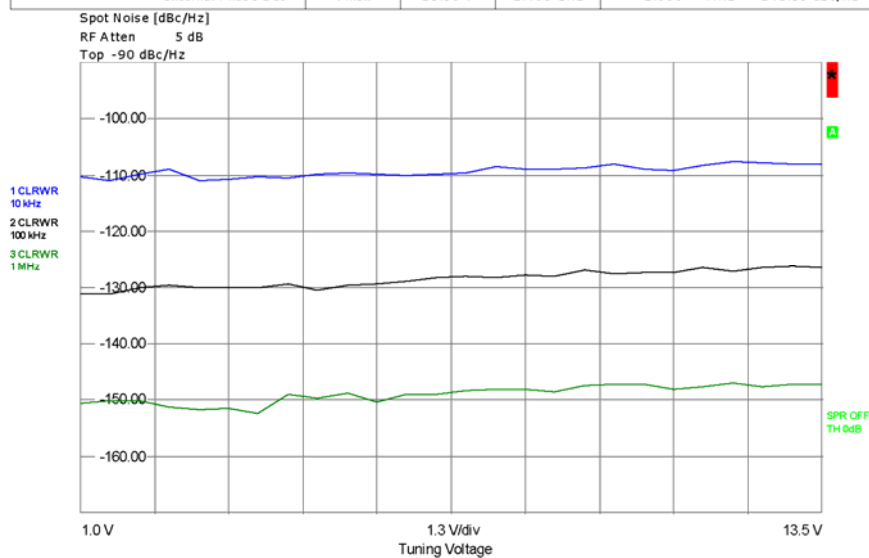
Parameter	Test Conditions	Min	Typ	Max	Units
Frequency Rangs		1093		1381	MHz
Tuning Voltage (V)		1.0		13.5	V
RF Output Power	1093-1381MHz	1.0		5.0	dBm
Supply Voltage (Vcc)		4.75	5	5.25	V
Supply Current (Icc)			27	30	mA
Phase Noise :					
	@10kHz Offset:		-109	-106	dBc/Hz
	@100kHz Offset:		-130	-127	dBc/Hz
Average Tuning Sensitivity	1093-1381MHz		27.6		MHz/V
Harmonic Outputs			-10		dBc
Operating Temperature		-55		+85	$^\circ\text{C}$
Tune Input Capacitance			22		PF
Output Impedance -			50		Ω
Package Type	SK605(12.7X12.7X4.3mm)				

Comments

X Indicates parameter to be tested 100% in production

V TUNE	TUNING SENS. (MHz/V)	FREQUENCY(MHz)			POWER OUTPUT(dBm)			HARMONIC(dBc)		
		-55℃	+25℃	+85℃	-55℃	+25℃	+85℃	-55℃	+25℃	+85℃
1.0	23.6	1075.4	1066.2	1059.8	5.1	4.4	2.8	-11.9	-15.5	-15.8
2.0	24.3	1099.6	1090.4	1083.9	4.7	4.2	2.5	-11.1	-14.4	-14.8
3.0	25.8	1125.1	1115.7	1109.1	4.1	3.9	2.2	-9.8	-13.5	-14.3
4.0	27.3	1152.0	1142.5	1136.1	4.2	3.6	1.9	-9.9	-12.8	-14.2
5.0	28.5	1180.2	1170.3	1164.3	4.0	3.4	1.6	-9.5	-12.4	-14.3
6.0	29.1	1209.2	1199.2	1192.8	4.0	3.3	1.5	-9.4	-12.0	-14.2
7.0	29.3	1238.7	1228.2	1221.9	3.9	3.1	1.3	-9.0	-11.5	-14.3
8.0	29.0	1268.6	1257.9	1251.5	4.0	3.0	1.1	-8.6	-11.3	-14.6
9.0	28.6	1297.9	1286.7	1280.3	4.1	3.1	1.2	-8.6	-11.4	-14.5
10.0	28.1	1326.5	1315.3	1308.6	4.0	2.9	1.1	-8.6	-11.3	-14.5
11.0	27.1	1354.5	1343.2	1336.8	4.0	2.8	0.9	-8.6	-11.1	-14.4
12.0	25.7	1380.8	1369.5	1362.9	4.0	2.9	1.0	-8.8	-11.1	-14.1
13.0	23.9	1405.8	1394.1	1387.4	4.0	2.7	0.9	-9.0	-11.0	-13.9
13.5	23.0	1417.9	1405.9	1399.1	3.8	2.7	0.8	-8.6	-11.0	-14.0

R&S FSUP Signal Source Analyzer									
Settings				Results			Spot Noise [Vtune 7.5 V] w/o spurs		
Signal Frequency:	1.257358 GHz	Tuning	Voltage	Frequency	10.000 kHz	-109.69 dBc/Hz			
Signal Level:	3.93 dBm	Vmin	1.00 V	1.067 GHz	100.000 kHz	-128.08 dBc/Hz			
Spot Noise Tuning:	Harmonic 1	Vcurrent	7.50 V	1.243 GHz	1.000 MHz	-148.39 dBc/Hz			
Internal Phase Det		Vmax	13.50 V	1.405 GHz	1.000 MHz	-148.39 dBc/Hz			



Measurement Aborted

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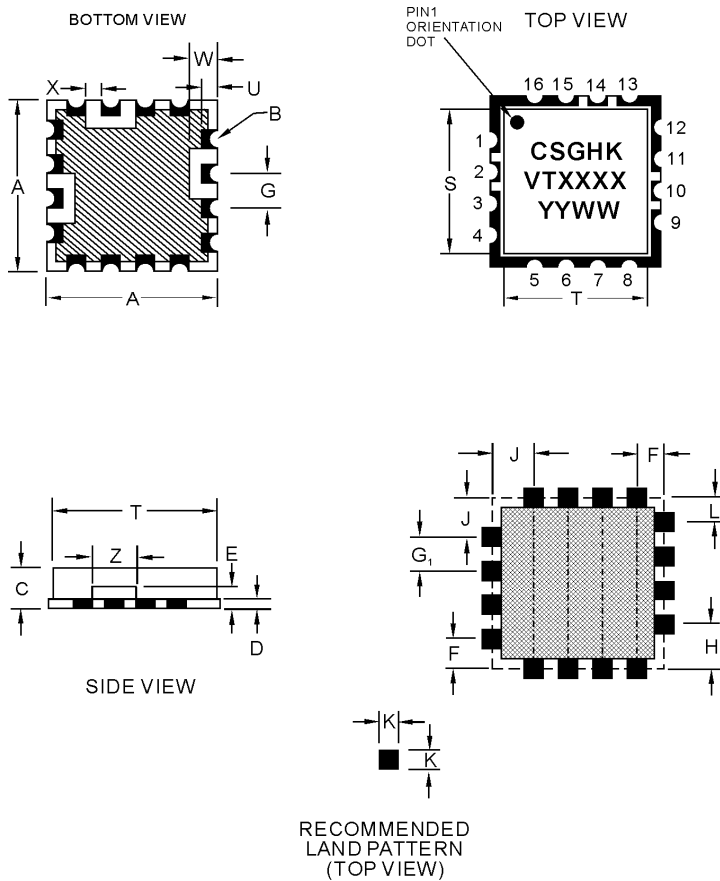
REVISIONS

NOTE. UNLESS OTHERWISE SPECIFIED:

1. THE METAL CASE IS GROUND
2. ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAD ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD.
3. HATCHED AREAS GROUND AND ARE COVERED WITH LPI SOLDER MASK OVER BARE COPPER. ALL CONTACT AREAS ARE PLATED. SIGNAL VIAS MAY BE LOCATED WITHIN GROUND PLANE.
4. SUBSTRATE MATERIAL: FR-4
5. XXXX REPRESENTS THE MODEL NUMBER.
6. YYWW IS THE DATA CODE.

PIN OUT FOR PLL	
PIN	APPLICATION
2	VT
10	RF OUT
14	VCC

ALL OTHER PINS ARE GROUND



SYMBOL	DIMENSION	
	MILLIMETERS	INCHES
A	12.7±0.25	0.50±0.010
B	R=0.50	R=0.019
C	4.3	0.169
D	0.99MAX	0.039MAX
E	1.75MAX	0.069MAX
F	2.16	0.085
G	2.54±0.08	0.100±0.003
G ₁	2.54	0.100
H	3.07	0.121
J	2.92	0.115
K	1.52	0.060
L	2.00	0.079
S	11.68	0.460
T	11.81	0.465
U	1.10	0.043
W	1.78	0.188
X	1.02	0.040
Z	3.49	0.137

	APPROVALS	DATA	 SK605 PACKAGE MECHANICAL PCB OUTLINE
DRAWN BY			
CHECKED BY			
PROCESS ENG			
QUALITY			