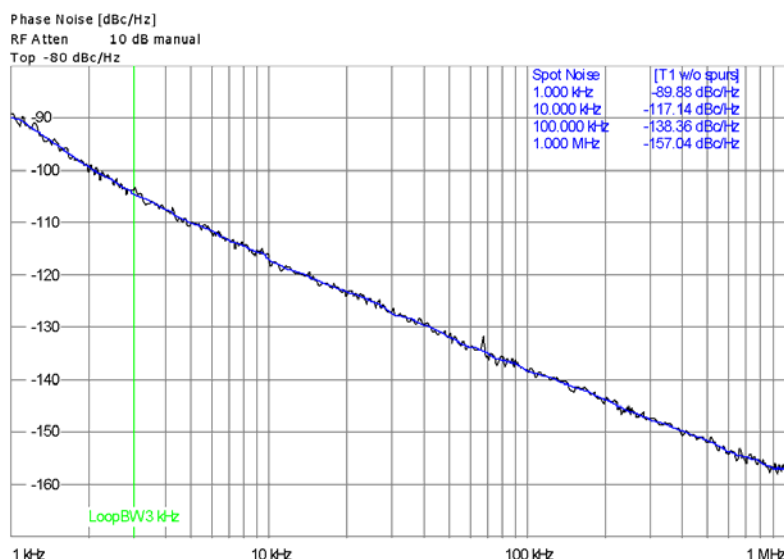
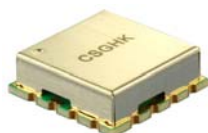


SURFACE MOUNT MODEL

VOLTAGE CONTROLLED OSCILLATOR

Frequency **150-220 MHz**

VL220M



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)

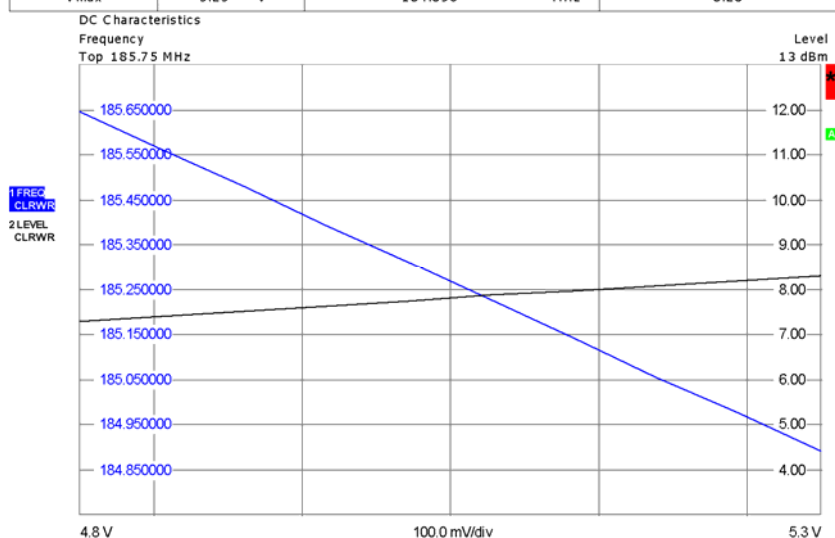
Parameter	Test Conditions	Min	Typ	Max	Units
Frequency Rangs		150		220	MHz
Tuning Voltage (V)		1.0		9.0	V
RF Output Power	150-220MHz	6.0		10.0	dBm
Supply Voltage (Vcc)		4.75		5.25	V
Supply Current (Icc)			20	23	mA
Phase Noise :					
	@10kHz Offset:		-116	-113	dBc/Hz
	@100kHz Offset:		-137	-134	dBc/Hz
Average Tuning Sensitivity	150-220MHz		13.1		MHz/V
Harmonic Outputs			-20		dBc
Operating Temperature		-55		+85	$^\circ\text{C}$
Tune Input Capacitance			-		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	10.8	135.9	134.2	133.6	8.6	9.0	8.3	-23.7	-23.6	-24.1
1.5	11.5	141.6	139.9	138.9	8.4	8.7	8.2	-24.7	-24.9	-25.6
2.0	11.8	147.6	145.8	144.7	8.2	8.6	8.1	-25.2	-25.6	-26.3
2.5	12.2	153.7	151.9	150.6	8.0	8.4	8.0	-25.8	-26.3	-26.7
3.0	12.6	160.0	158.1	156.8	7.9	8.3	7.9	-26.0	-26.5	-26.8
3.5	12.9	166.4	164.6	163.3	7.8	8.2	7.9	-26.1	-26.7	-27.2
4.0	13.3	172.9	171.2	169.9	7.6	8.1	7.7	-26.0	-26.8	-27.3
4.5	13.3	179.5	177.9	176.6	7.5	7.9	7.7	-26.0	-27.1	-27.5
5.0	13.3	186.2	184.5	183.4	7.4	7.9	7.7	-26.5	-27.2	-27.4
5.5	13.3	192.7	191.1	189.9	7.4	7.9	7.7	-27.3	-26.9	-27.0
6.0	13.1	199.2	197.7	196.6	7.3	7.9	7.6	-26.7	-27.0	-26.8
6.5	13.6	206.0	204.5	203.5	7.3	7.7	7.3	-27.5	-26.8	-26.8
7.0	13.5	212.5	211.1	210.1	7.2	7.4	7.1	-26.9	-27.2	-27.8
7.5	13.1	219.2	219.9	216.7	6.9	7.2	7.0	-27.1	-29.2	-28.5
8.0	12.6	225.9	224.3	223.2	6.7	7.2	7.0	-29.1	-29.5	-28.8
8.5	12.4	232.0	230.5	229.3	6.6	7.2	7.0	-30.9	-29.7	-28.7
9.0	12.0	238.2	236.6	235.2	6.6	7.1	7.0	-31.8	-29.2	-28.2

R&S FSUP Signal Source Analyzer					
Settings			Results		
Supply	Voltage		Frequency		Level
Vmin	4.75	V	185.645	MHz	7.27 dBm
Vcurrent	5.00	V	185.270	MHz	7.78 dBm
Vmax	5.25	V	184.890	MHz	8.28 dBm



Measurement Aborted

Date: 26.JUL.2013 08:50:32

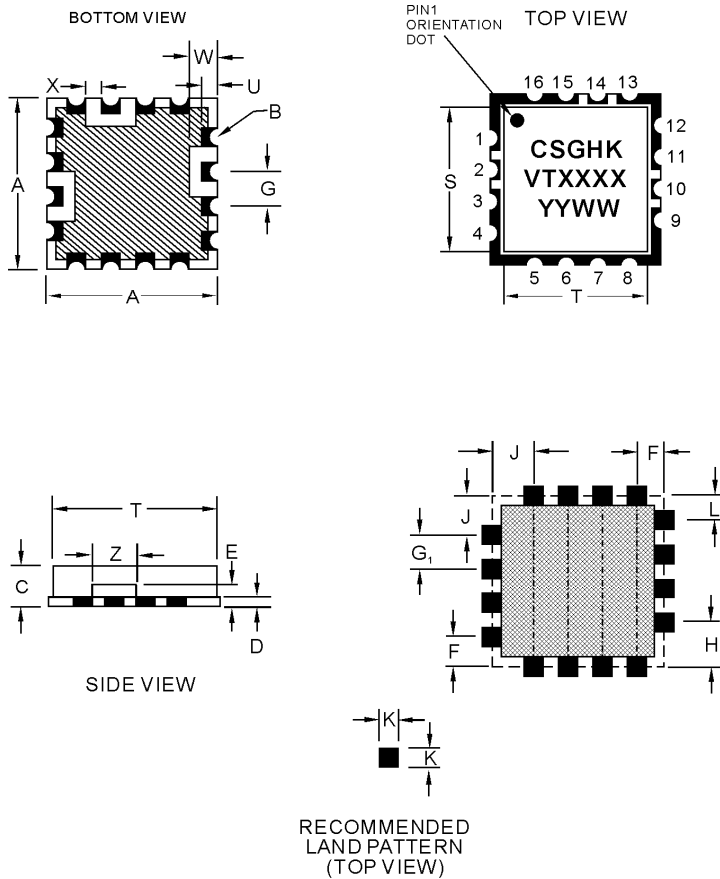
REVISIONS

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			