

SURFACE MOUNT MODEL

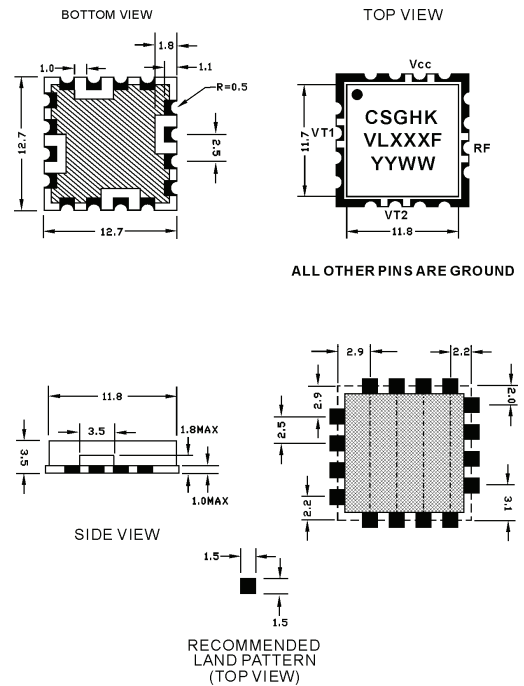
VOLTAGE CONTROLLED OSCILLATOR

Frequency 1290-1830MHz

VL1830F

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		1290		1830	MHz
Tuning Voltage :					
	VT1:	2.0		3.5	V
	VT2:	0.0		-10.0	V
RF Output Power	1290-1830MHz	6.0		10.0	dBm
Supply Voltage (Vcc)		4.75		5.25	V
Supply Current (Icc)			24	27	mA
Phase Noise :					
	@10kHz Offset:		-102	-99	dBc/Hz
	@100kHz Offset:		-123	-120	dBc/Hz
Average Tuning Sensitivity	1290-1830MHz		62.4		MHz/V
Harmonic Outputs			-10		dBc
Operating Temperature Range		-55		+85	$^{\circ}\text{C}$
Tune Input Capacitance			22		PF
Output Impedance -			50		Ω
Package Type	SK605(12.7X12.7X3.5mm)				

VT1=2.0V

VT2 TUNE	FREQUENCY(MHz)			POWER OUTPUT(dBm)		
	-55℃	+25℃	+85℃	-55℃	+25℃	+85℃
0.0	1208.5	1192.0	1183.5	10.0	9.1	6.9
-1.0	1276.0	1260.0	1252.7	10.1	9.1	6.9
-2.0	1342.0	1327.3	1321.0	10.2	9.0	7.0
-3.0	1407.5	1394.3	1388.3	10.2	8.9	7.1
-4.0	1470.7	1460.0	1453.3	10.2	8.7	7.2
-5.0	1532.7	1524.3	1517.5	10.1	8.3	7.1
-6.0	1596.3	1587.8	1580.8	10.0	8.3	7.3
-7.0	1659.3	1650.0	1642.5	9.5	8.1	7.3
-8.0	1721.0	1711.0	1702.3	9.1	8.1	7.4
-9.0	1780.8	1769.5	1760.8	8.7	8.1	7.4
-10.0	1837.8	1825.8	1817.3	8.6	8.2	7.5

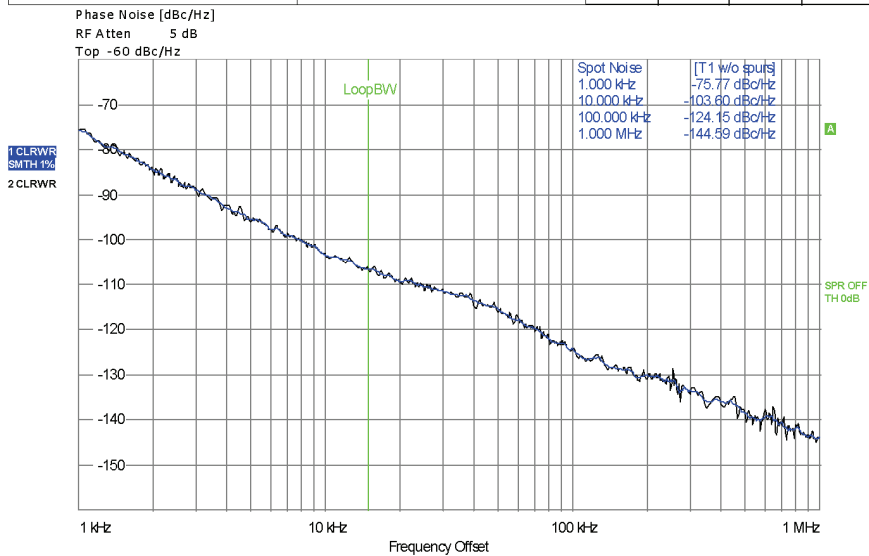
VT1=2.75V

VT2 TUNE	FREQUENCY(MHz)			POWER OUTPUT(dBm)		
	-55℃	+25℃	+85℃	-55℃	+25℃	+85℃
0.0	1257.8	1242.0	1235.0	10.1	9.0	6.7
-1.0	1324.3	1309.8	1303.5	10.1	9.0	6.8
-2.0	1389.8	1377.0	1370.5	10.2	8.7	6.8
-3.0	1454.3	1443.0	1436.0	10.1	8.6	7.0
-4.0	1516.5	1507.3	1500.8	10.1	8.3	7.0
-5.0	1580.0	1572.5	1564.3	10.0	8.3	7.1
-6.0	1643.3	1633.8	1626.0	9.5	8.1	7.2
-7.0	1705.0	1694.8	1686.5	9.0	8.1	7.2
-8.0	1765.3	1754.3	1745.5	8.7	8.1	7.3
-9.0	1823.8	1811.5	1803.0	8.6	8.1	7.3
-10.0	1879.0	1866.0	1856.3	8.5	8.2	7.2

VT1=3.5V

VT2 TUNE	FREQUENCY(MHz)			POWER OUTPUT(dBm)		
	-55℃	+25℃	+85℃	-55℃	+25℃	+85℃
0.0	1307.5	1292.3	1286.0	10.0	8.9	6.5
-1.0	1373.0	1359.3	1353.0	10.1	8.7	6.6
-2.0	1438.5	1425.8	1419.3	10.1	8.7	6.8
-3.0	1500.6	1490.8	1483.8	10.0	8.3	6.7
-4.0	1563.8	1555.0	1547.5	9.8	8.2	6.9
-5.0	1627.5	1618.0	1610.3	9.5	8.2	7.0
-6.0	1689.3	1979.0	1670.8	9.0	8.1	7.0
-7.0	1750.3	1739.3	1730.8	8.8	8.2	7.1
-8.0	1809.0	1797.0	1788.5	8.5	8.2	7.0
-9.0	1865.0	1851.8	1842.8	8.5	8.3	7.0
-10.0	1917.5	1904.3	1894.8	8.6	8.4	7.1

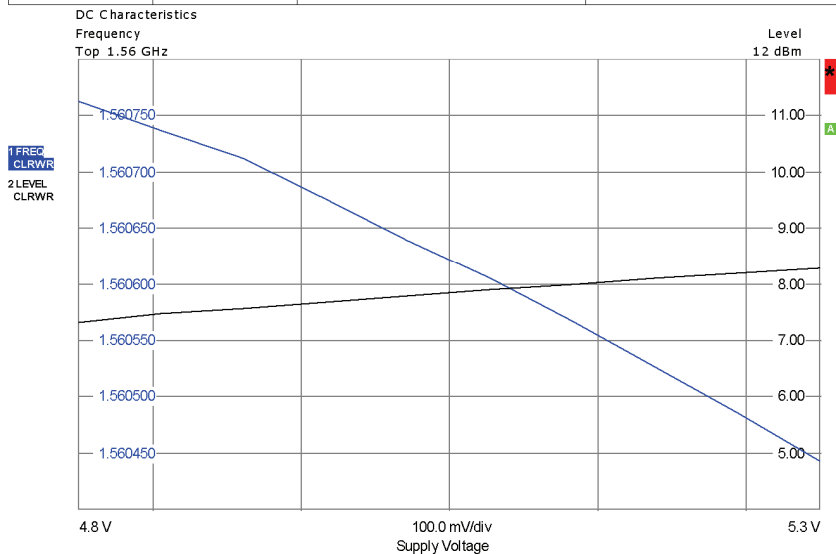
		R&S FSUP Signal Source Analyzer				LOCKED	
Settings		Residual Noise [T1 w/o spurs]		Phase Detector +0 dB			
Signal Frequency:	1.561158 GHz	Int PHN (1.0 k .. 1.0 M)	-48.2 dBc				
Signal Level:	7.95 dBm	Residual PM	0.314 °				
Cross Corr. Mode	Harmonic 1	Residual FM	88.545 Hz				
Internal Ref Tuned	Internal Phase Det	RMS Jitter	0.5586 ps				



Measurement Aborted

Date: 12.JUL.2010 15:30:37

	R&S FSUP Signal Source Analyzer			
Settings		Results		
Supply	Voltage	Frequency	Level	
Vmin	4.75 V	1.561 GHz	7.32	dBm
Vcurrent	5.00 V	1.561 GHz	7.83	dBm
Vmax	5.25 V	1.560 GHz	8.29	dBm



Measurement Aborted

Date: 12.JUL.2010 15:35:37