

NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

MOS-810-119+

5V Tuning for PLL IC's 740 to 810 MHz



CASE STYLE: CZ682

Features

- linear tuning characteristics
- low phase noise
- low pulling
- aqueous washable

Applications

- wireless communications

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	Typ.				VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.	Max.	Vcc (volts)	Current (mA)
					1	10	100	1000														
MOS-810-119+	740	810	+2	-81	-110	-131	-151	0.5	5	29-33	90	30	-90	-28	-14	0.6	1	5	28			

Pin Connections

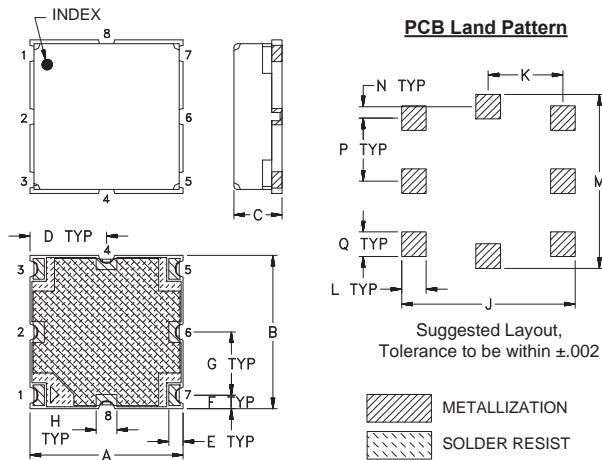
RF OUT	5
VCC	3
V-TUNE	1
GROUND	2,4,6,7,8

Maximum Ratings

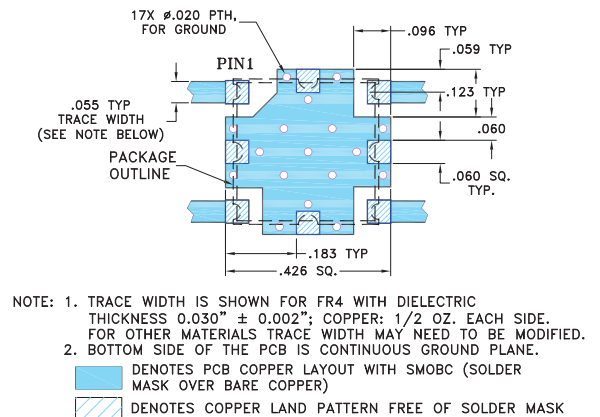
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

Outline Drawing



Demo Board MCL P/N: TB-128 Suggested PCB Layout (PL-023)



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	wt.
.375	.375	.131	.188	.035	.033	.154	.050	.425	.183	.060	.425	.028	.154	.060	grams
9.52	9.52	3.33	4.77	0.89	0.84	3.91	1.27	10.80	4.65	1.52	10.80	0.71	3.91	1.52	.60



For detailed performance specs & shopping online see web site

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REV. B
 M149087
 EDR-8154
 MOS-810-119+
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NON-CATALOG

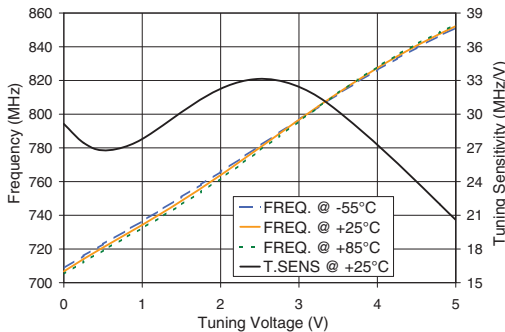
Performance Data & Curves*

MOS-810-119+

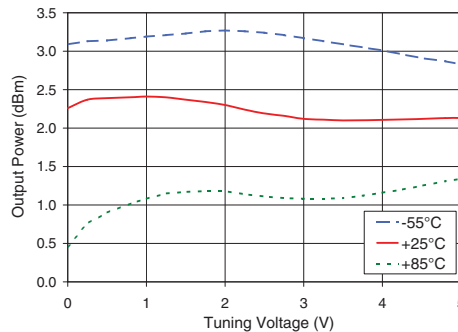
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 775 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1KHz	10KHz	100KHz	1MHz		
0.00	29.13	708.6	706.7	705.1	3.09	2.26	0.46	23.25	-31.1	-31.5	-47.8	0.88	0.24	-85.0	-111.3	-132.3	-151.8	1.0	-81.57
0.50	26.77	722.9	720.9	719.2	3.14	2.39	0.90	23.26	-29.8	-29.5	-44.3	0.71	0.41	-83.1	-112.5	-133.7	-154.0	2.0	-89.32
0.80	27.14	731.1	728.9	727.1	3.17	2.40	1.02	23.26	-30.7	-29.2	-42.5	0.54	0.56	-84.0	-113.5	-134.1	-153.6	3.5	-100.55
1.00	27.79	736.6	734.3	732.4	3.19	2.41	1.08	23.27	-31.4	-28.9	-41.1	0.44	0.60	-82.2	-112.6	-134.2	-153.8	6.0	-103.31
1.25	28.94	743.6	741.2	739.2	3.21	2.40	1.15	23.27	-32.0	-28.5	-39.4	0.34	0.50	-83.6	-112.3	-134.2	-153.5	8.5	-107.59
1.50	30.17	750.8	748.5	746.4	3.23	2.37	1.17	23.26	-32.0	-28.2	-38.1	0.28	0.26	-84.2	-112.3	-134.3	-153.9	10.0	-109.56
1.75	31.32	758.3	756.0	753.9	3.26	2.34	1.18	23.26	-30.8	-27.9	-36.1	0.29	0.20	-83.3	-112.0	-133.6	-153.7	20.8	-114.82
2.00	32.26	765.9	763.9	761.8	3.27	2.30	1.18	23.26	-29.0	-28.0	-34.6	0.39	0.56	-81.2	-110.8	-133.3	-152.8	35.5	-122.11
2.25	32.89	773.5	771.9	770.0	3.26	2.24	1.14	23.25	-27.5	-27.8	-33.3	0.58	0.77	-80.6	-109.8	-131.7	-151.9	60.7	-126.14
2.50	33.14	781.3	780.1	778.5	3.24	2.19	1.11	23.25	-26.0	-28.0	-32.7	0.86	0.62	-79.7	-109.1	-131.0	-151.1	86.7	-130.34
2.75	32.98	789.1	788.4	787.1	3.21	2.16	1.09	23.25	-25.0	-28.7	-31.3	1.22	0.17	-81.9	-108.0	-130.1	-150.1	100.0	-131.75
3.00	32.43	796.8	796.7	795.7	3.17	2.12	1.08	23.25	-24.4	-29.7	-31.0	1.65	0.68	-80.7	-106.8	-129.3	-149.3	148.1	-135.25
3.25	31.53	804.4	804.8	804.3	3.13	2.11	1.08	23.24	-24.0	-30.7	-30.4	2.12	1.06	-78.5	-106.3	-128.4	-148.6	177.0	-136.68
3.50	30.25	811.9	812.7	812.6	3.09	2.10	1.09	23.24	-24.2	-31.6	-30.5	2.60	1.14	-77.1	-105.2	-128.0	-148.3	211.6	-136.97
3.75	28.80	819.2	820.2	820.5	3.05	2.10	1.12	23.25	-24.8	-32.9	-30.0	3.07	0.82	-78.3	-105.0	-127.8	-148.5	302.4	-141.28
4.00	27.28	826.3	827.4	828.1	3.01	2.11	1.16	23.25	-25.5	-33.7	-30.5	3.51	0.24	-79.5	-104.5	-127.9	-148.2	361.5	-142.69
4.25	25.67	833.0	834.2	835.1	2.96	2.11	1.20	23.26	-26.7	-33.9	-30.7	3.90	0.71	-77.5	-105.9	-128.3	-148.1	507.5	-145.80
4.50	23.99	839.4	840.7	841.6	2.91	2.12	1.25	23.27	-28.1	-33.3	-30.5	4.21	1.21	-77.7	-105.4	-128.4	-148.8	606.7	-147.39
4.80	21.95	846.6	847.8	848.7	2.87	2.13	1.31	23.29	-30.5	-32.6	-31.1	4.46	1.40	-78.2	-106.0	-128.9	-148.9	851.6	-150.45
5.00	20.59	851.2	852.2	853.1	2.83	2.13	1.34	23.30	-32.5	-32.0	-31.4	4.55	1.35	-80.6	-105.5	-129.2	-149.3	1000.0	-151.72

*at 25°C unless mentioned otherwise

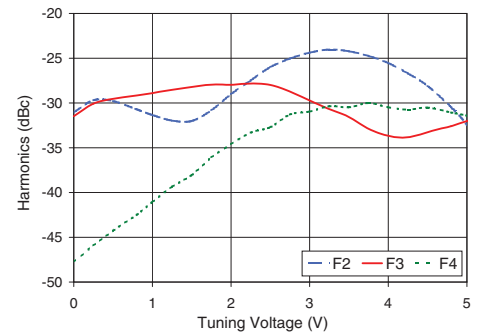
MOS-810-119+
Frequency and Tuning Sensitivity



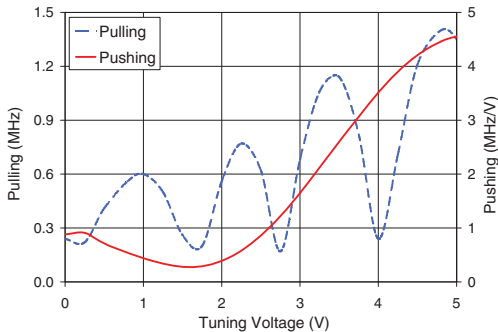
MOS-810-119+
Power Output



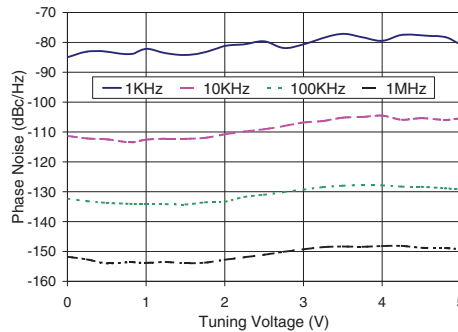
MOS-810-119+
Harmonics Level



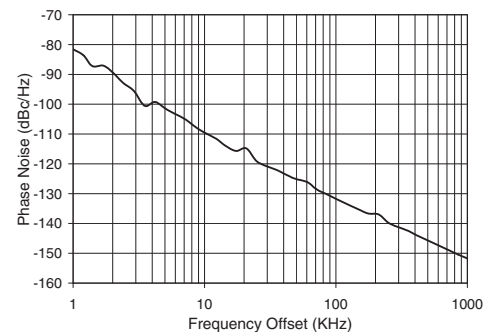
MOS-810-119+
Frequency Pulling & Pushing (Vcc ± 5%)



MOS-810-119+
Phase Noise Vs. Tuning Voltage



MOS-810-119+
Phase Noise



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