

Surface Mount

Voltage Controlled Oscillator

MOS-2220-119+

5V Tuning for PLL IC's 2060 to 2220 MHz

Features

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

Applications

- W-CDMA
- MW & MMW



CASE STYLE: CZ682

+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)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Max.			Typ.	Max.	Vcc (volts)	Current (mA)
					1	10	100	1000													
MOS-2220-119+	2060	2220	+1	-73	-99	-120	-140	0.5	5	55-79	20	50	-90	-35	-20	2.5	4	5	33		

Pin Connections

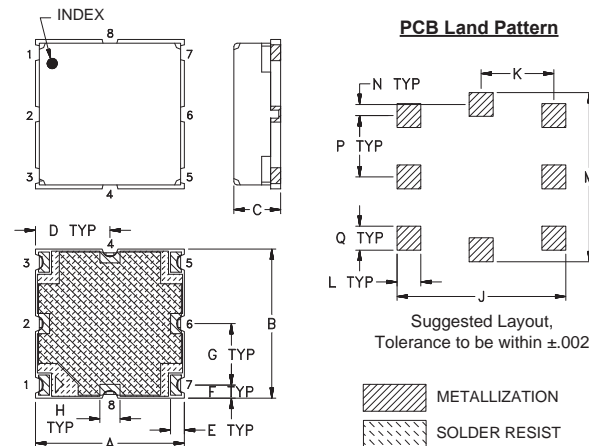
RF OUT	5
VCC	3
V-TUNE	1
GROUND	2,4,6,7,8

Maximum Ratings

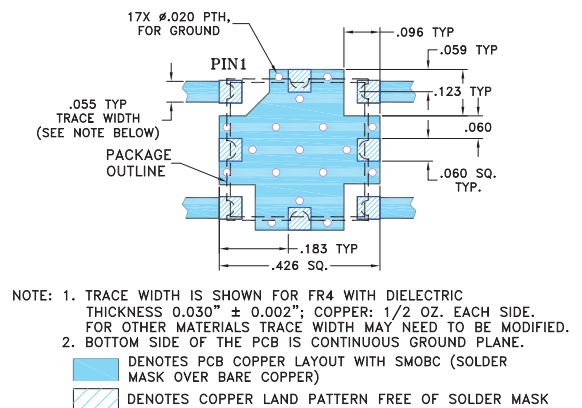
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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

Notes

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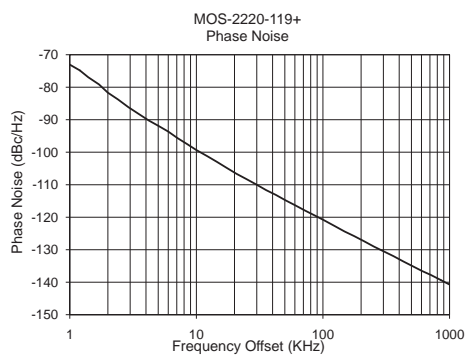
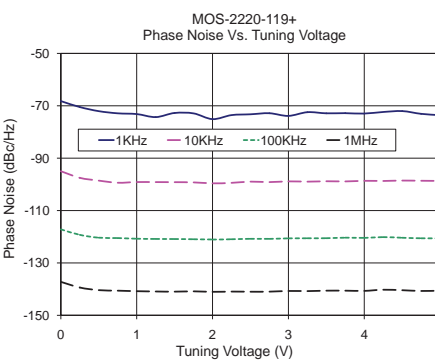
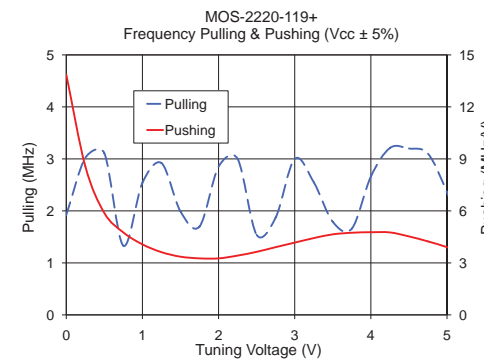
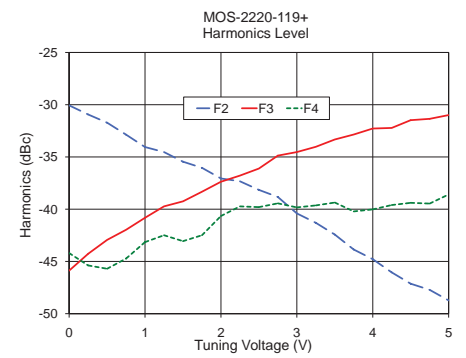
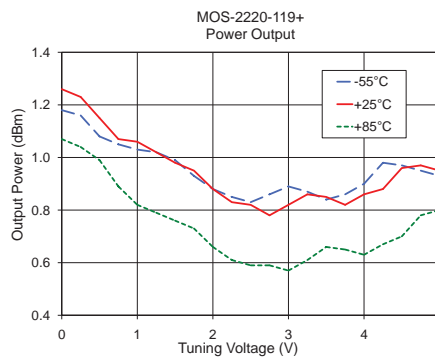
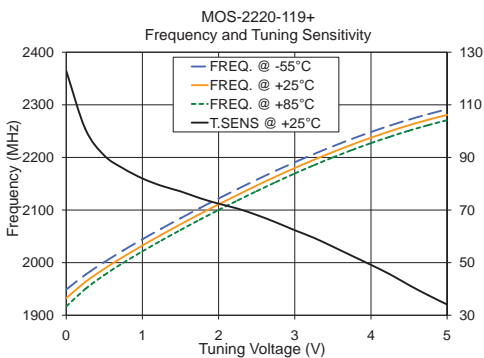
REV. C
 M151108
 EDR-11080MP-
 MOS-2220-119+
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 150512
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Performance Data & Curves*

MOS-2220-119+

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 2140 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	122.90	1948.8	1932.4	1916.6	1.18	1.26	1.07	26.93	-30.1	-45.9	-44.2	13.87	1.92	-68.21	-95.0	-117.2	-137.2	1.0	-73.03
0.50	90.73	2000.9	1988.4	1976.5	1.08	1.15	0.99	27.02	-31.7	-42.9	-45.7	5.88	3.11	-72.05	-98.6	-120.4	-140.4	2.0	-81.67
0.75	85.79	2023.2	2011.1	1999.8	1.05	1.07	0.89	27.04	-32.9	-42.0	-44.7	4.76	1.33	-72.88	-99.4	-120.5	-140.6	3.5	-88.21
1.00	82.03	2044.3	2032.5	2021.4	1.03	1.06	0.82	27.05	-34.1	-40.8	-43.2	4.07	2.54	-73.17	-99.1	-120.8	-140.8	6.0	-93.65
1.25	79.22	2064.6	2053.0	2042.1	1.02	1.02	0.79	27.07	-34.5	-39.7	-42.5	3.62	2.92	-74.31	-99.1	-120.9	-140.9	8.5	-97.56
1.50	77.09	2084.3	2072.8	2062.1	0.99	0.98	0.76	27.09	-35.5	-39.3	-43.1	3.36	1.99	-72.74	-99.2	-120.9	-141.0	10.0	-99.34
1.75	74.56	2103.4	2092.1	2081.4	0.93	0.95	0.73	27.11	-36.0	-38.3	-42.5	3.26	1.70	-72.89	-99.2	-120.9	-140.9	20.8	-106.67
2.00	72.40	2121.9	2110.7	2100.2	0.88	0.88	0.66	27.13	-37.1	-37.4	-40.7	3.26	2.85	-75.09	-99.6	-121.1	-141.0	35.5	-111.65
2.25	70.55	2140.0	2128.8	2118.3	0.85	0.83	0.61	27.14	-37.3	-36.8	-39.7	3.42	3.00	-73.56	-99.4	-121.0	-140.9	60.7	-116.38
2.50	68.12	2157.6	2146.5	2135.9	0.83	0.82	0.59	27.16	-38.2	-36.1	-39.8	3.64	1.54	-73.25	-99.0	-120.8	-141.0	86.7	-119.52
2.75	65.34	2174.5	2163.5	2153.0	0.86	0.78	0.59	27.18	-38.8	-34.9	-39.4	3.91	1.87	-72.84	-99.1	-120.8	-141.0	100.0	-120.76
3.00	62.33	2190.8	2179.8	2169.4	0.89	0.82	0.57	27.21	-40.4	-34.5	-39.8	4.17	3.00	-73.85	-98.9	-120.6	-140.7	148.1	-124.38
3.25	59.46	2206.4	2195.4	2185.1	0.87	0.86	0.61	27.24	-41.3	-34.0	-39.6	4.43	2.55	-72.44	-99.0	-120.6	-140.7	177.0	-125.85
3.50	56.07	2221.2	2210.3	2199.9	0.84	0.85	0.66	27.27	-42.4	-33.3	-39.4	4.65	1.79	-72.88	-98.8	-120.6	-140.6	211.6	-127.41
3.75	52.58	2235.1	2224.3	2214.0	0.86	0.82	0.65	27.30	-43.9	-32.9	-40.2	4.74	1.66	-72.81	-98.9	-120.4	-140.6	302.4	-130.52
4.00	49.14	2248.3	2237.5	2227.2	0.90	0.86	0.63	27.34	-44.8	-32.3	-40.0	4.77	2.66	-72.96	-98.6	-120.4	-140.7	361.5	-132.00
4.25	45.55	2260.6	2249.7	2239.4	0.98	0.88	0.67	27.36	-46.1	-32.2	-39.6	4.76	3.21	-72.36	-98.7	-120.1	-140.2	507.5	-135.02
4.50	41.44	2271.8	2261.1	2250.8	0.97	0.96	0.70	27.40	-47.1	-31.5	-39.4	4.53	3.20	-72.02	-98.5	-120.4	-140.4	606.7	-136.57
4.75	37.63	2282.1	2271.5	2261.3	0.95	0.97	0.78	27.43	-47.7	-31.4	-39.5	4.24	3.10	-73.07	-98.6	-120.6	-140.7	851.6	-139.32
5.00	34.07	2291.5	2280.9	2270.8	0.93	0.95	0.80	27.45	-48.7	-31.0	-38.6	3.91	2.36	-73.57	-98.7	-120.6	-140.6	1000.0	-140.74

*at 25°C unless mentioned otherwise



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