

Surface Mount Voltage Controlled Oscillator

ROS-2390+

5V Tuning for PLL IC's 2320 to 2390 MHz

Features

- Linear tuning characteristics
- Low phase noise
- Low pushing
- Low pulling
- Aqueous washable

Applications

- Cellular infrastructure WCDMA
- Defense communications & radar
- Wireless communications
- Satellite digital audio radio service



CASE STYLE: CK605
PRICE: \$19.95 ea. QTY (5-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify 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.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Typ.	Typ.
ROS-2390+	2320	2390	+4.5	-81	-106	-127	-147	0.5	5	31 - 35	20	180	-90	-17	-	1	0.2	5	43

Pin Connections

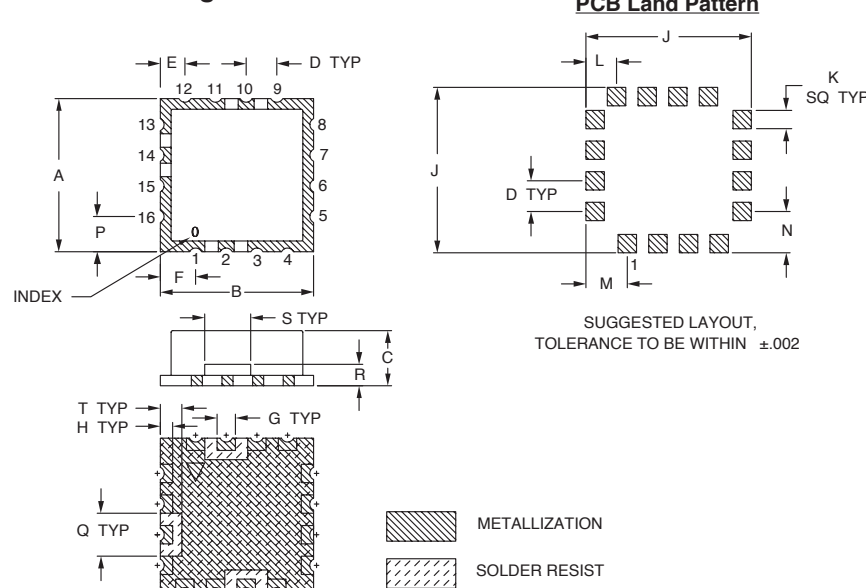
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

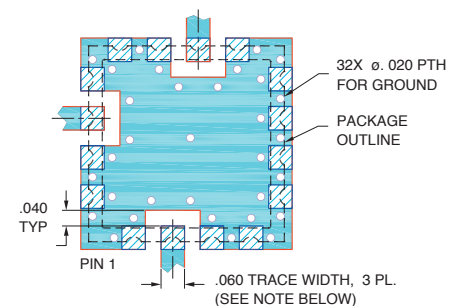
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6.2V
Absolute Max. Tuning Voltage (Vtune)	7.0V
All specifications	50 ohm system

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

Outline Drawing



Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



- NOTES:**
1. TRACE WIDTH IS SHOWN FOR RF4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
-

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

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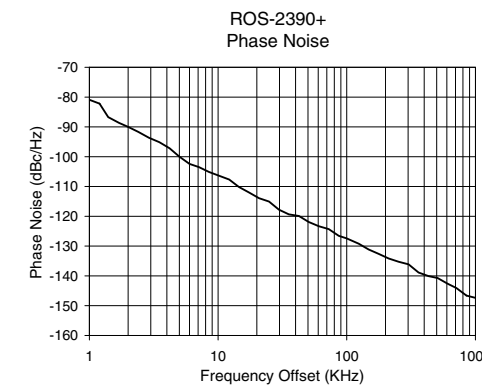
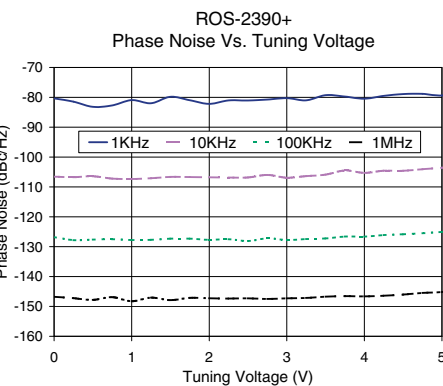
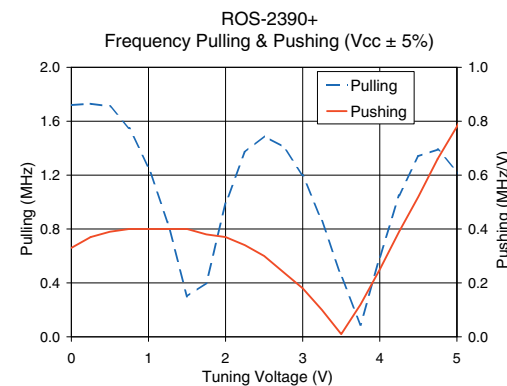
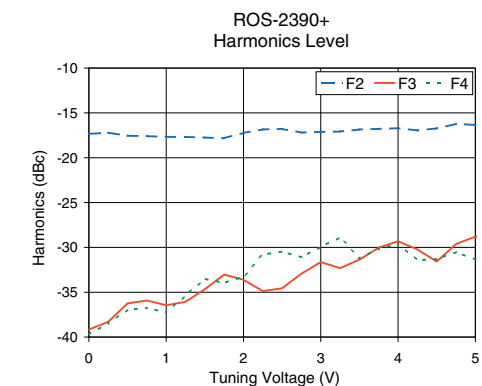
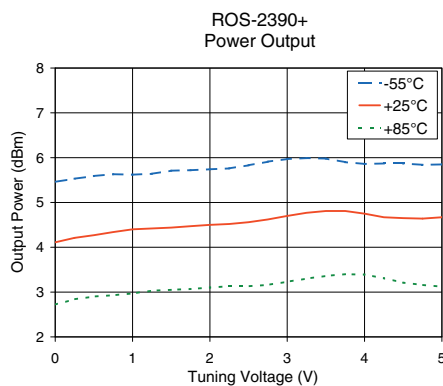
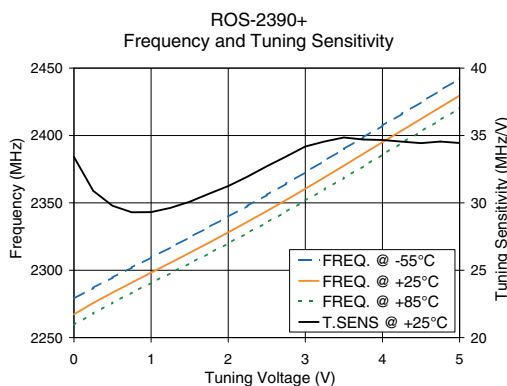
REV. OR
M108350
EDR-8288F1
ROS-2390+
RAV
090818
Page 1 of 2

Performance Data & Curves*

ROS-2390+

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 2355 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	33.41	2278.9	2267.3	2259.4	5.46	4.11	2.72	35.53	-17.3	-39.2	-39.7	0.33	1.72	-80.4	-106.6	-126.8	-146.8	1.0	-80.89
0.50	29.78	2294.6	2283.4	2275.9	5.59	4.27	2.90	35.62	-17.6	-36.2	-37.0	0.39	1.71	-83.2	-106.4	-127.6	-147.8	2.0	-90.01
0.75	29.30	2302.0	2290.8	2283.4	5.63	4.34	2.93	35.66	-17.6	-35.9	-36.8	0.40	1.55	-82.7	-107.2	-127.5	-146.9	3.5	-95.13
1.00	29.31	2309.4	2298.2	2290.6	5.62	4.40	2.97	35.69	-17.7	-36.5	-37.2	0.40	1.26	-80.9	-107.3	-127.8	-148.3	6.0	-102.43
1.25	29.63	2316.9	2305.5	2297.8	5.64	4.42	3.03	35.72	-17.7	-36.1	-35.4	0.40	0.85	-82.0	-107.1	-127.7	-147.0	8.5	-105.11
1.50	30.08	2324.4	2312.9	2305.1	5.71	4.44	3.05	35.75	-17.8	-34.7	-33.5	0.40	0.30	-79.8	-106.6	-127.3	-147.9	10.0	-106.26
1.75	30.68	2332.0	2320.4	2312.4	5.72	4.47	3.07	35.79	-17.8	-33.0	-34.0	0.38	0.40	-81.0	-106.7	-127.3	-147.1	20.8	-113.92
2.00	31.25	2339.8	2328.1	2319.9	5.74	4.50	3.10	35.82	-17.2	-33.6	-33.2	0.37	0.99	-82.2	-106.8	-127.7	-147.3	35.5	-119.35
2.25	31.95	2347.7	2335.9	2327.6	5.76	4.52	3.13	35.86	-16.8	-34.9	-30.8	0.34	1.37	-81.0	-106.8	-127.5	-147.4	60.7	-123.33
2.50	32.72	2355.9	2343.9	2335.5	5.83	4.56	3.13	35.89	-16.8	-34.6	-30.5	0.30	1.49	-81.1	-106.8	-128.1	-147.3	86.7	-126.56
2.75	33.44	2364.2	2352.1	2343.5	5.91	4.62	3.16	35.91	-17.2	-32.9	-31.1	0.24	1.41	-80.7	-106.0	-127.2	-147.5	100.0	-127.43
3.00	34.18	2372.7	2360.4	2351.7	5.97	4.70	3.23	35.94	-17.1	-31.6	-29.9	0.18	1.20	-80.3	-106.9	-127.8	-147.3	148.1	-131.15
3.25	34.55	2381.3	2369.0	2360.0	5.99	4.77	3.30	35.96	-17.1	-32.3	-28.9	0.10	0.86	-81.0	-106.4	-127.5	-147.2	177.0	-132.62
3.50	34.85	2389.9	2377.6	2368.5	5.98	4.81	3.36	35.99	-16.9	-31.4	-31.2	0.01	0.45	-79.3	-105.9	-127.2	-146.8	211.6	-134.17
3.75	34.70	2398.6	2386.3	2377.1	5.90	4.81	3.40	36.03	-16.8	-30.0	-30.2	0.12	0.09	-79.8	-104.5	-126.6	-146.6	302.4	-136.13
4.00	34.67	2407.3	2395.0	2385.8	5.86	4.75	3.39	36.06	-16.7	-29.3	-29.6	0.25	0.59	-80.5	-105.3	-126.6	-146.6	361.5	-138.87
4.25	34.54	2416.0	2403.7	2394.5	5.87	4.67	3.31	36.08	-17.0	-30.2	-31.4	0.39	1.05	-79.5	-104.6	-126.1	-146.4	507.5	-140.71
4.50	34.43	2424.7	2412.3	2403.0	5.87	4.65	3.21	36.11	-16.7	-31.6	-31.3	0.52	1.34	-78.9	-104.6	-125.9	-146.0	606.7	-142.60
4.75	34.55	2433.4	2420.9	2411.6	5.84	4.64	3.16	36.11	-16.2	-29.6	-30.5	0.66	1.39	-78.8	-104.1	-125.5	-145.5	851.6	-146.62
5.00	34.45	2442.1	2429.5	2420.0	5.85	4.67	3.12	36.12	-16.3	-28.8	-31.4	0.78	1.23	-79.4	-103.6	-125.1	-145.2	1000.0	-147.37

*at 25°C unless mentioned otherwise



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