NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

ROS-2404C-119+

Linear Tuning 2267 to 2404 MHz

Features

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

Applications

- point-to-point communication
- services ancillary to programming / broadcasting

CASE STYLE: CK605

+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 Typ.				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dBr (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
								VOLTAGE RANGE (V)		SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)						Vcc (volts)	Current (mA)
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.		Max.
ROS-2404C-119+	2267	2404	+0.5	-80	-106	-128	-148	1	13	19-27	18	120	-90	-26	-14	0.4	0.5	6	40

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)	7V
Absolute Max. Tuning Voltage (Vtune)	15V
All specifications	50 ohm system

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

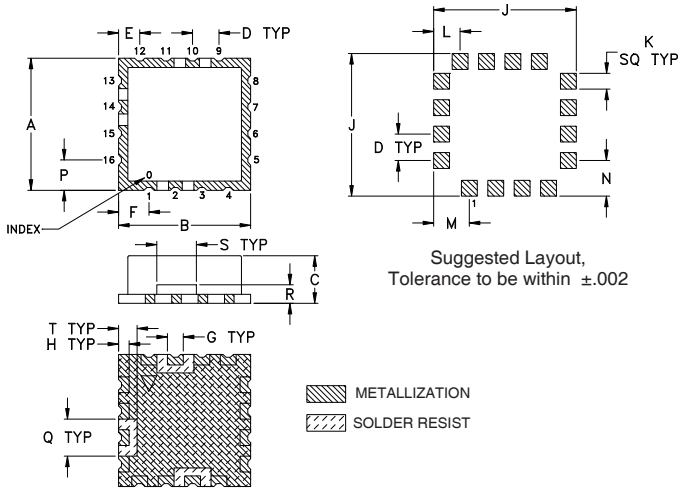
Tape & Reel: F37

7" Reels with 10, 20, 50, 100 devices

13" Reels with 200, 500 devices

Environmental Ratings: ENV65

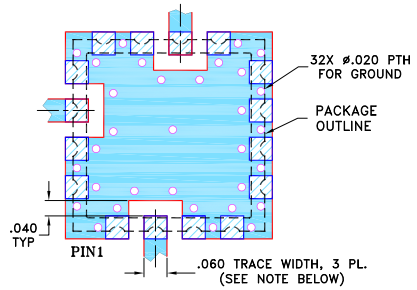
Outline Drawing



PCB Land Pattern

Suggested Layout,
Tolerance to be within ±.002

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



NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4 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 BOTTOM IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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

Notes

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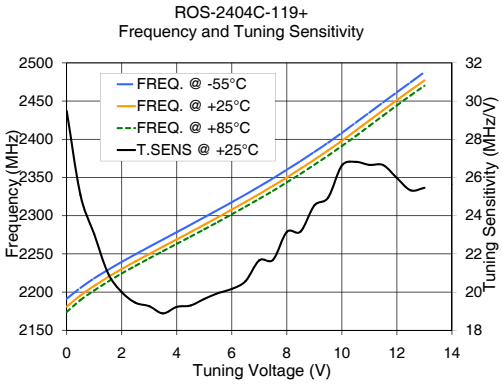
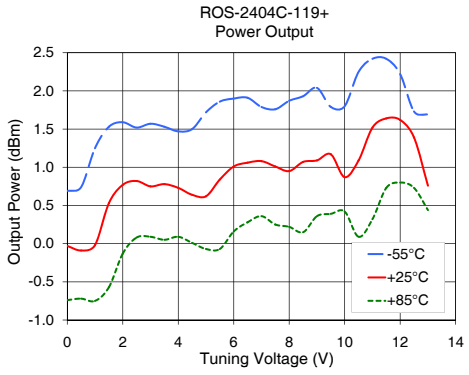
Performance Data & Curves*

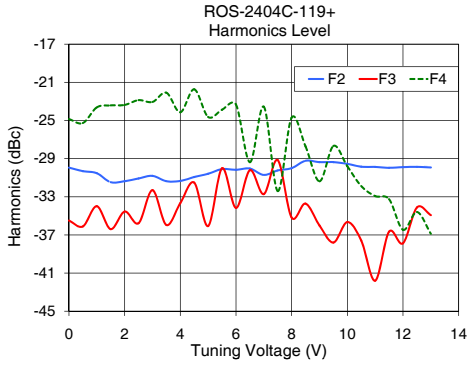
ROS-2404C-119+

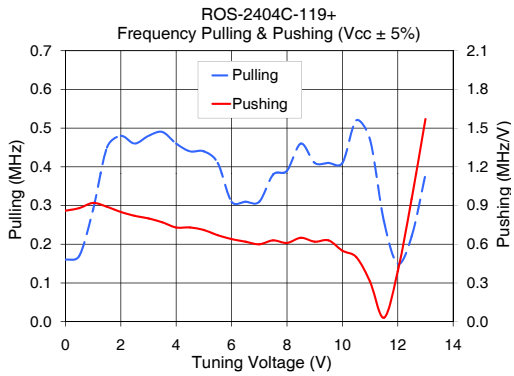
V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 2336 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	29.48	2191.3	2180.9	2174.0	0.69	-0.03	-0.74	28.16	-29.9	-35.5	-24.9	0.86	0.16	-80.08	-105.0	-125.9	-145.9	1.0	-79.97
1.00	23.03	2218.0	2208.1	2202.1	1.25	-0.02	-0.75	28.43	-30.5	-34.0	-23.6	0.92	0.29	-81.29	-104.9	-126.2	-146.6	2.0	-88.57
1.50	20.99	2229.1	2219.7	2213.6	1.53	0.53	-0.57	28.58	-31.5	-36.4	-23.4	0.89	0.45	-80.08	-105.6	-126.9	-146.7	3.5	-95.10
2.00	20.00	2239.5	2230.2	2224.4	1.59	0.77	-0.13	28.72	-31.4	-34.6	-23.4	0.85	0.48	-80.45	-106.2	-127.1	-147.1	6.0	-100.77
2.50	19.44	2249.5	2240.2	2234.4	1.52	0.82	0.08	28.84	-31.1	-35.8	-22.9	0.82	0.46	-80.94	-105.9	-127.4	-147.4	8.5	-104.66
3.00	19.26	2259.3	2249.9	2244.1	1.57	0.75	0.09	28.93	-30.8	-32.3	-23.1	0.80	0.48	-81.72	-106.3	-127.5	-147.7	10.0	-106.59
3.50	18.89	2268.8	2259.5	2253.7	1.53	0.78	0.05	29.04	-31.4	-36.0	-22.1	0.77	0.49	-81.50	-106.2	-127.7	-147.6	20.8	-113.69
4.00	19.22	2278.5	2269.0	2263.2	1.47	0.73	0.09	29.12	-31.3	-33.7	-24.1	0.73	0.46	-81.31	-106.5	-127.7	-147.8	35.5	-118.76
4.50	19.29	2288.1	2278.6	2272.5	1.50	0.64	0.01	29.19	-30.9	-31.5	-21.7	0.73	0.44	-79.65	-106.5	-127.9	-147.6	60.7	-123.41
5.00	19.64	2297.9	2288.2	2282.2	1.72	0.62	-0.07	29.27	-30.6	-36.1	-24.6	0.71	0.44	-80.52	-106.6	-127.8	-148.0	86.7	-127.03
5.50	19.94	2307.7	2298.0	2291.8	1.86	0.84	-0.07	29.36	-30.1	-30.0	-23.9	0.67	0.41	-81.10	-106.6	-128.0	-148.0	100.0	-128.26
6.00	20.16	2317.6	2308.0	2301.8	1.90	1.01	0.16	29.49	-30.2	-34.2	-23.3	0.64	0.31	-80.77	-106.9	-128.6	-148.7	148.1	-131.79
7.00	21.67	2338.3	2328.4	2322.2	1.79	1.08	0.36	29.69	-30.7	-32.7	-23.6	0.60	0.31	-80.49	-107.7	-128.4	-148.8	177.0	-133.41
8.00	23.15	2360.2	2350.0	2343.7	1.87	0.95	0.22	29.88	-30.0	-35.2	-24.7	0.61	0.39	-80.43	-107.4	-128.9	-149.0	211.6	-134.83
9.00	24.53	2383.5	2373.2	2366.7	2.04	1.09	0.36	30.11	-29.4	-36.0	-31.4	0.62	0.41	-80.84	-107.3	-129.0	-149.6	302.4	-138.19
10.00	26.63	2408.5	2397.9	2391.2	1.80	0.87	0.42	30.29	-29.6	-35.7	-29.8	0.55	0.41	-80.48	-107.1	-129.0	-149.8	361.5	-139.45
10.50	26.82	2421.7	2411.3	2404.1	2.25	1.09	0.09	30.41	-29.9	-37.6	-31.9	0.50	0.52	-80.91	-106.7	-128.7	-149.8	507.5	-142.68
11.00	26.66	2435.0	2424.7	2417.6	2.42	1.52	0.32	30.6	-29.9	-41.8	-32.9	0.31	0.47	-80.77	-106.7	-129.1	-149.25	606.7	-144.16
12.00	25.98	2461.6	2451.3	2444.3	2.22	1.62	0.80	30.86	-29.9	-37.9	-36.5	0.39	0.15	-78.26	-106.0	-129.9	-149.6	851.6	-147.10
13.00	25.46	2487.9	2477.0	2470.1	1.69	0.76	0.44	30.98	-29.9	-34.9	-36.9	1.57	0.38	-75.94	-103.8	-126.9	-147.2	1000.0	-148.70

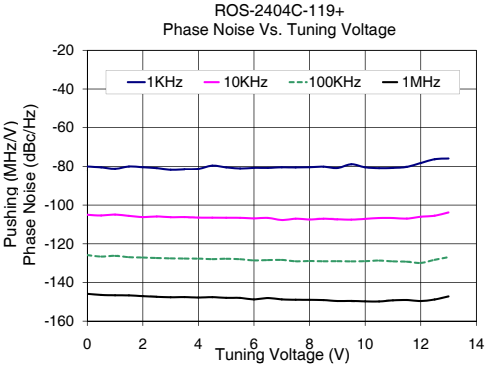
*at 25°C unless mentioned otherwise

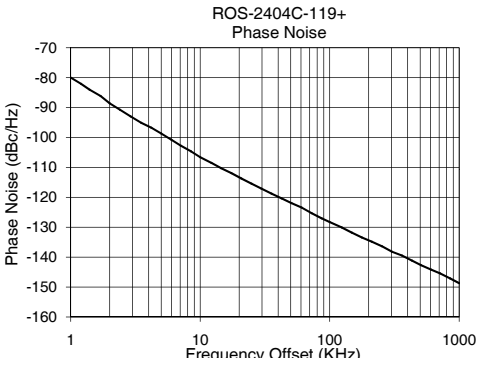












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