

# Voltage Controlled Oscillator

# ROS-2432-119+

Wide Band 1662 to 2432 MHz

### Features

- Linear Tuning characteristics
- Low Phase Noise
- Low Pushing
- Aqueous washable

### Applications

- Wireless communications
- Cable TV headend



CASE STYLE: CK605  
PRICE: \$ 24.95 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.	Max.	Typ.
ROS-2432-119+	1662	2432	+5.5	-73	-100	-122	-142	1	28	23 - 49	40	230	-90	-18	-	6.5	1	10	30

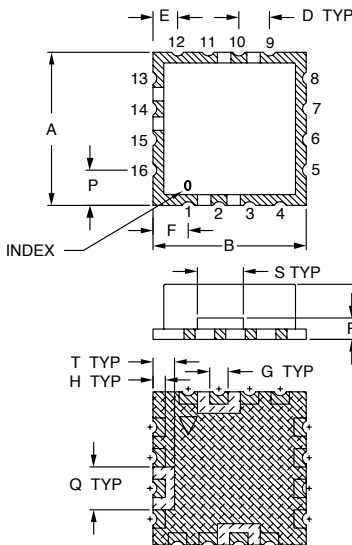
### Pin Connections

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

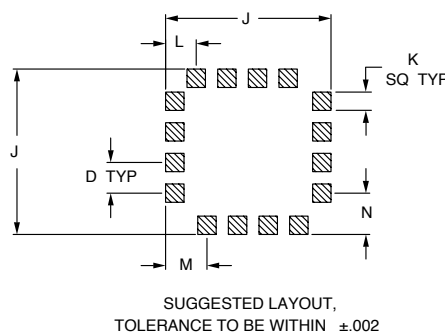
### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	12V
Absolute Max. Tuning Voltage (Vtune)	30V
All specifications	50 ohm system

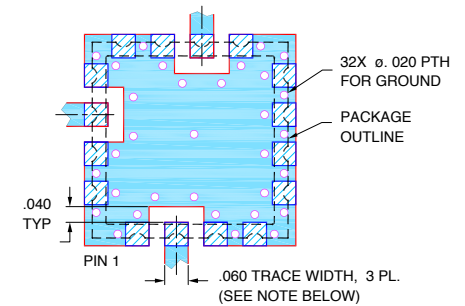
### Outline Drawing



### PCB Land Pattern



### 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.
- 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



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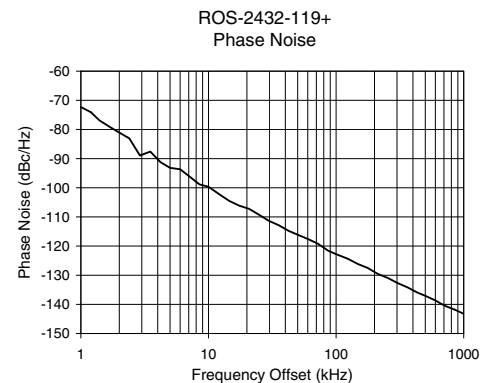
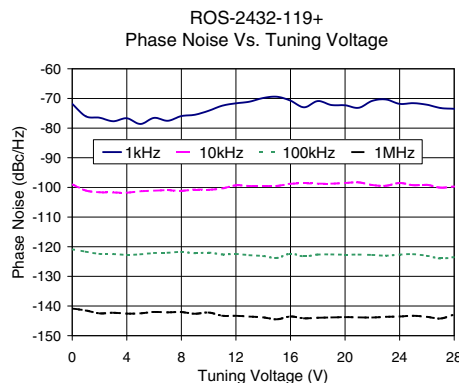
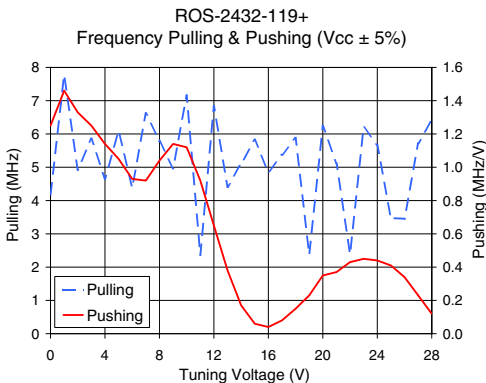
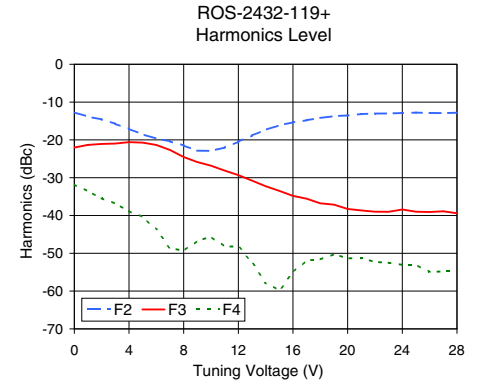
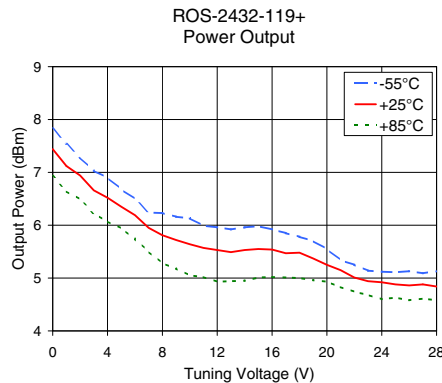
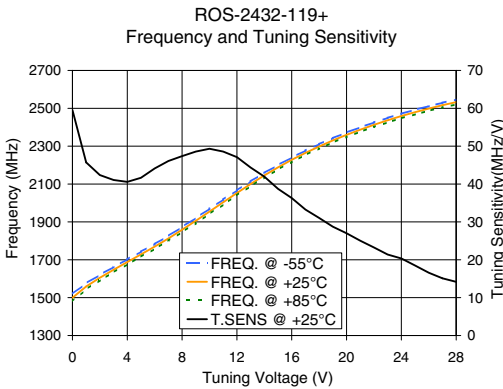
REV. OR  
M104902  
EDR-6240  
ROS-2432-119+  
RAV  
080205  
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# Performance Data & Curves\*

# ROS-2432-119+

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 2047 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	59.55	1519.7	1499.3	1480.6	7.83	7.44	6.93	24.05	-12.7	-22.0	-31.8	1.25	4.18	-71.8	-99.0	-120.9	-140.8	1.0	-72.29
1.00	45.71	1576.2	1559.0	1544.1	7.54	7.12	6.64	23.92	-13.9	-21.3	-33.6	1.46	7.75	-76.0	-101.1	-121.7	-141.5	2.0	-81.07
2.00	42.37	1620.4	1604.8	1591.2	7.28	6.94	6.49	23.83	-14.6	-21.1	-35.4	1.33	4.93	-76.5	-101.6	-122.4	-142.5	3.5	-87.58
3.00	41.06	1662.1	1647.2	1634.0	7.03	6.66	6.22	23.72	-15.8	-21.0	-36.9	1.25	5.86	-77.7	-101.7	-122.5	-142.3	6.0	-93.65
4.00	40.58	1702.3	1688.0	1675.4	6.90	6.52	6.07	23.64	-17.1	-20.6	-38.8	1.14	4.65	-76.7	-101.8	-122.7	-142.6	8.5	-98.84
5.00	41.66	1742.6	1728.4	1716.1	6.68	6.35	5.94	23.52	-18.5	-20.7	-40.4	1.05	6.08	-78.6	-101.3	-122.6	-142.5	10.0	-99.66
6.00	44.11	1783.0	1769.4	1757.6	6.50	6.19	5.74	23.44	-19.7	-21.4	-43.7	0.93	4.40	-76.6	-101.1	-122.1	-142.0	20.8	-107.25
8.00	47.36	1873.3	1858.6	1846.1	6.23	5.81	5.28	23.35	-21.5	-24.5	-49.3	1.04	5.80	-76.0	-101.2	-121.7	-142.0	35.5	-112.84
10.00	49.32	1969.6	1954.6	1941.9	6.13	5.64	5.05	23.36	-22.9	-26.8	-45.6	1.12	7.16	-74.1	-100.8	-122.0	-142.2	60.7	-117.65
12.00	47.11	2066.7	2052.8	2041.0	5.96	5.53	4.93	23.36	-20.5	-29.3	-48.2	0.65	6.84	-71.7	-99.3	-122.5	-143.3	86.7	-121.61
14.00	41.96	2158.6	2145.7	2134.6	5.96	5.53	4.95	23.36	-17.3	-32.3	-57.8	0.17	5.11	-69.9	-99.5	-123.2	-143.8	100.0	-122.79
16.00	36.31	2240.0	2227.7	2217.0	5.92	5.54	5.02	23.35	-15.4	-34.8	-55.0	0.04	4.85	-70.8	-98.8	-122.3	-143.5	148.1	-126.15
18.00	31.05	2310.7	2298.5	2288.8	5.78	5.48	5.00	23.34	-14.2	-36.8	-51.6	0.15	5.88	-70.9	-98.7	-122.7	-144.0	177.0	-127.53
20.00	26.99	2372.0	2359.8	2348.8	5.55	5.25	4.93	23.32	-13.5	-38.3	-51.3	0.35	6.24	-72.3	-98.5	-122.7	-143.8	211.6	-129.53
22.00	23.26	2425.1	2412.9	2401.7	5.25	5.01	4.74	23.30	-13.0	-39.0	-52.3	0.43	2.40	-70.8	-99.2	-122.8	-143.9	302.4	-132.66
24.00	20.35	2471.4	2459.1	2447.8	5.12	4.92	4.60	23.28	-12.9	-38.4	-53.1	0.44	5.67	-71.8	-98.5	-122.6	-143.5	361.5	-134.14
25.00	18.48	2492.3	2479.6	2468.1	5.11	4.88	4.63	23.25	-12.8	-39.0	-53.0	0.41	3.47	-71.6	-99.3	-122.5	-143.3	507.5	-137.18
26.00	16.58	2511.4	2498.8	2487.0	5.13	4.86	4.58	23.23	-12.9	-39.1	-55.0	0.34	3.45	-72.1	-99.1	-123.1	-143.6	600.0	-138.66
27.00	15.10	2529.4	2516.2	2504.4	5.09	4.88	4.61	23.21	-12.9	-38.9	-54.8	0.23	5.72	-73.2	-100.1	-124.0	-144.2	851.6	-141.83
28.00	14.17	2545.7	2532.6	2520.3	5.13	4.84	4.58	23.18	-12.8	-39.4	-54.8	0.12	6.41	-73.5	-99.7	-123.5	-142.9	1000.0	-143.24

\*at 25°C unless mentioned otherwise



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