

## Voltage Controlled Oscillator

ROS-1910-419+

5V Tuning for PLL IC's 1855 to 1910 MHz

## Features

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

## Applications

- Wireless communication
- Video on demand



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 <sub>r</sub> (MHz)	PUSHING (MHz/V)	DC OPERATING POWER			
	Min.	Max.		1	10	100	1000	VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Typ.		Typ.	Max.			Typ.	Typ.	V <sub>cc</sub> (volts)	Current (mA)
ROS-1910-419+	1855	1910	+3.5	-83	-107	-127	-147	0.5	5	25 - 29	20	160	-90	-27	-18	0.5	1	5	30		

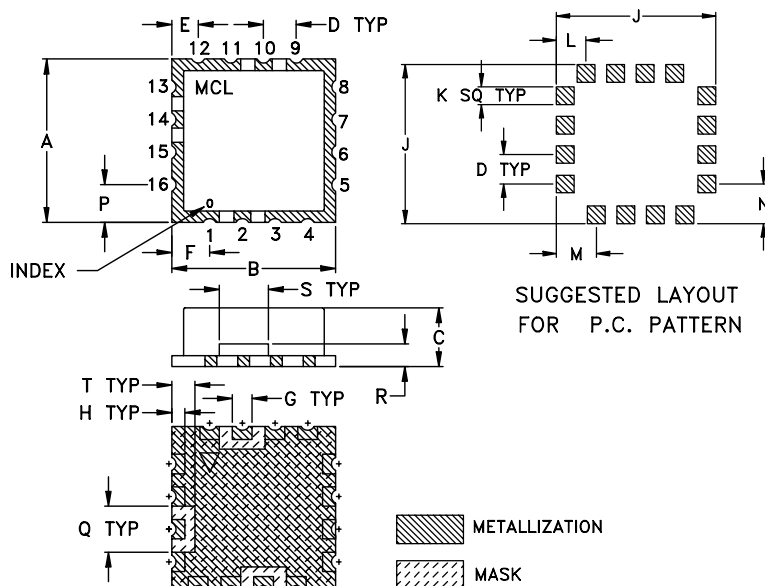
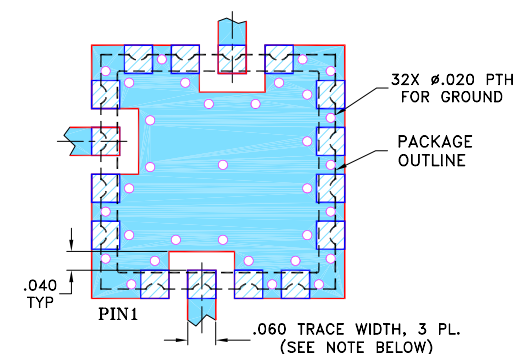
## Pin Connections

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

## Outline Drawing

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 PCB IS CONTINUOUS GROUND PLANE.
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## Outline Dimensions (inches)

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

# Performance Data & Curves\*

# ROS-1910-419+

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 1880 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1KHz	10KHz	100KHz	1MHz		
0.00	27.92	1822.2	1817.4	1813.0	3.87	4.18	4.21	24.29	-27.4	-38.2	-40.7	0.86	0.52	-84.1	-107.5	-127.0	-146.8	1.0	-85.27
0.50	25.37	1835.6	1831.0	1826.7	3.76	4.07	4.13	24.39	-27.5	-38.5	-39.3	0.95	0.38	-83.2	-106.3	-127.2	-146.6	2.0	-90.89
0.75	24.84	1841.9	1837.3	1833.0	3.75	4.02	4.07	24.44	-27.8	-38.7	-38.1	0.98	0.41	-84.3	-106.5	-127.1	-146.9	3.5	-96.20
1.00	24.70	1848.1	1843.5	1839.2	3.72	4.01	4.03	24.49	-28.2	-38.6	-37.9	0.99	0.42	-84.6	-106.2	-127.4	-147.6	6.0	-103.56
1.25	25.34	1854.5	1849.7	1845.3	3.66	3.98	4.02	24.53	-28.4	-39.1	-37.4	1.02	0.41	-83.0	-106.9	-127.6	-147.0	8.5	-106.43
1.50	25.81	1861.0	1856.1	1851.5	3.61	3.93	3.99	24.58	-28.8	-39.5	-37.4	1.05	0.51	-83.2	-106.9	-127.3	-146.7	10.0	-106.55
1.75	26.20	1867.5	1862.5	1857.8	3.58	3.89	3.94	24.63	-29.0	-39.5	-36.2	1.07	0.56	-82.0	-106.9	-127.1	-147.3	20.8	-114.05
2.00	26.28	1874.1	1869.1	1864.3	3.53	3.87	3.91	24.69	-29.1	-39.3	-35.8	1.07	0.56	-83.4	-107.3	-127.5	-147.3	35.5	-118.91
2.25	27.62	1881.0	1875.6	1870.8	3.47	3.82	3.88	24.74	-29.2	-39.6	-34.3	1.09	0.54	-84.8	-106.5	-127.7	-146.8	60.7	-123.45
2.50	28.14	1888.1	1882.5	1877.5	3.44	3.77	3.83	24.78	-29.9	-39.9	-33.5	1.12	0.47	-83.1	-107.4	-127.3	-147.8	86.7	-126.62
2.75	28.21	1895.3	1889.6	1884.4	3.41	3.74	3.80	24.84	-29.9	-39.9	-33.3	1.12	0.42	-83.8	-106.2	-127.4	-147.2	100.0	-127.55
3.00	28.43	1902.4	1896.6	1891.4	3.34	3.71	3.77	24.90	-29.5	-40.1	-32.6	1.09	0.34	-84.0	-107.6	-127.7	-147.4	148.1	-130.85
3.25	29.35	1909.8	1903.7	1898.4	3.30	3.64	3.71	24.94	-29.4	-40.5	-31.6	1.11	0.27	-82.6	-106.4	-127.4	-147.5	177.0	-132.52
3.50	29.03	1917.2	1911.1	1905.5	3.28	3.61	3.66	25.00	-30.1	-40.7	-30.6	1.10	0.29	-81.5	-107.1	-127.7	-147.2	211.6	-133.70
3.75	28.74	1924.5	1918.3	1912.8	3.23	3.58	3.63	25.06	-30.1	-40.8	-28.9	1.07	0.31	-82.8	-107.1	-127.5	-147.2	302.4	-137.10
4.00	29.14	1932.0	1925.5	1919.9	3.20	3.51	3.58	25.12	-29.5	-41.4	-28.3	1.07	0.42	-82.4	-106.5	-127.9	-147.5	361.5	-138.80
4.25	28.56	1939.3	1932.8	1927.1	3.20	3.48	3.51	25.18	-29.4	-41.6	-28.0	1.05	0.50	-83.5	-106.5	-127.6	-147.3	507.5	-141.23
4.50	28.37	1946.4	1939.9	1934.2	3.16	3.44	3.48	25.24	-29.1	-41.4	-28.6	1.04	0.53	-82.0	-107.1	-127.4	-147.1	600.0	-143.02
4.75	28.36	1953.5	1947.0	1941.3	3.12	3.39	3.45	25.29	-29.2	-41.9	-28.4	1.05	0.52	-83.1	-106.7	-127.2	-147.8	851.6	-146.16
5.00	27.83	1960.5	1954.1	1948.3	3.09	3.36	3.40	25.35	-29.2	-42.5	-28.3	1.06	0.46	-84.0	-106.8	-127.1	-147.5	1000.0	-148.19

\*at 25°C unless mentioned otherwise

