

Surface Mount Voltage Controlled Oscillator

ROS-3050-519+ ROS-3050-519

Linear Tuning 2570 to 3015 MHz

Features

- High Power, +9 dBm typ.
- Low Phase Noise
- Low Pushing
- Aqueous washable

Applications

- Cable TV
- Satellite systems



CASE STYLE: CK605
PRICE: \$15.95 ea. QTY (5-49)

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

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.	1	10	100	1000	VOLTAGE RANGE (V)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.	Vcc (volts)
ROS-3050-519(+)	2570	3015	+9	-72	-99	-120	-140	0.5	24	30	43	30	60	-90	-14	-	17	0.8	10	35

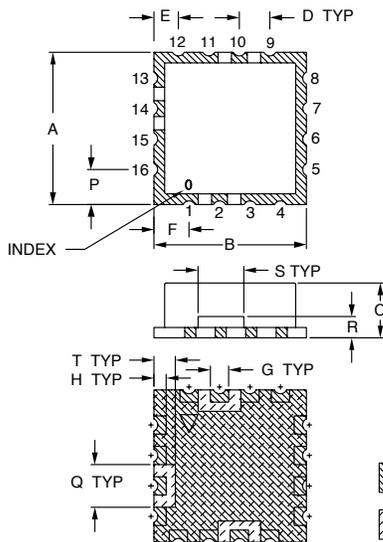
Pin Connections

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

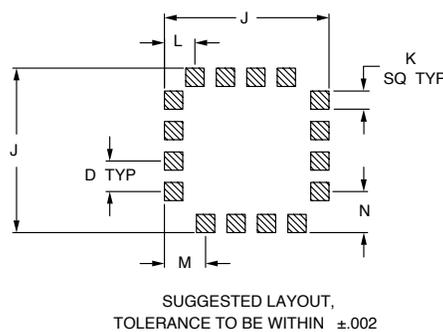
Maximum Ratings

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)	26V
All specifications	50 ohm system

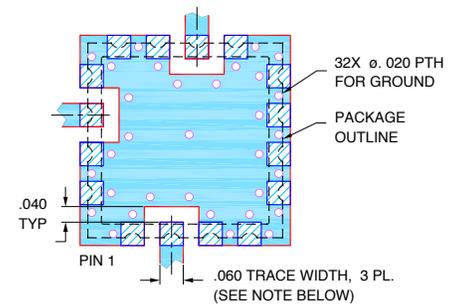
Outline Drawing



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 $.030" \pm .002"$; 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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Performance Data & Curves*

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 2793 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1KHz	10KHz	100KHz	1MHz		
0.00	35.84	2450.6	2426.9	2409.9	8.97	8.98	8.50	29.76	-15.1	-20.4	-42.6	1.65	11.43	-70.3	-98.0	-118.4	-139.1	1.0	-70.41
0.50	32.69	2467.9	2444.8	2427.5	9.22	8.86	8.39	29.75	-14.8	-20.9	-42.7	1.67	16.44	-71.7	-97.8	-118.5	-138.8	2.0	-82.16
2.00	26.01	2512.9	2492.3	2475.2	9.05	8.83	8.24	29.74	-14.4	-21.6	-42.5	1.65	10.56	-73.3	-97.7	-118.5	-138.5	3.5	-87.08
3.00	26.70	2539.1	2518.3	2502.7	8.90	8.89	8.37	29.76	-14.0	-21.7	-42.3	1.46	22.61	-72.6	-98.4	-119.7	-139.9	6.0	-93.41
4.00	28.67	2566.9	2545.0	2527.9	8.90	8.75	8.35	29.73	-13.6	-21.4	-41.2	1.57	22.77	-73.1	-97.3	-118.7	-139.0	8.5	-97.22
5.00	29.72	2595.0	2573.7	2556.5	9.35	8.83	8.32	29.73	-13.2	-21.3	-40.4	1.45	10.19	-72.6	-98.1	-119.0	-139.2	10.0	-98.42
6.00	31.47	2624.7	2603.4	2586.4	9.50	8.93	8.49	29.73	-12.7	-22.5	-40.7	1.37	19.36	-73.3	-98.9	-119.5	-139.2	20.8	-104.95
8.00	35.48	2692.0	2669.4	2651.7	9.05	9.26	8.88	29.74	-12.6	-24.1	-41.7	0.99	22.57	-72.4	-98.9	-119.8	-140.3	35.5	-110.09
10.00	41.15	2764.5	2741.9	2726.8	9.86	9.46	8.86	29.75	-14.0	-29.8	-47.5	0.59	17.01	-71.8	-98.3	-119.8	-139.8	60.7	-114.57
12.00	43.01	2842.1	2824.4	2811.0	9.67	8.85	8.25	29.73	-15.4	-33.6	-54.7	0.54	23.60	-71.4	-98.1	-119.1	-138.8	86.7	-118.34
13.00	40.43	2886.6	2867.5	2852.1	9.19	8.46	8.06	29.71	-15.1	-31.9	-57.1	0.57	20.38	-71.6	-98.3	-119.9	-139.4	100.0	-119.32
14.00	37.42	2926.7	2907.9	2893.0	8.34	8.26	7.94	29.73	-14.7	-32.0	-55.1	0.59	13.81	-70.4	-98.4	-119.3	-139.9	148.1	-123.05
16.00	33.45	3003.4	2981.6	2964.7	8.23	8.04	7.93	29.72	-14.1	-30.7	-54.9	0.69	19.13	-71.1	-99.1	-119.7	-139.1	177.0	-124.26
18.00	28.23	3067.6	3045.2	3028.0	7.90	8.01	8.07	29.74	-13.5	-31.8	-52.8	0.74	18.46	-70.1	-97.9	-119.2	-139.2	211.6	-125.89
19.00	26.37	3097.5	3073.5	3055.7	8.28	8.02	7.90	29.73	-13.9	-32.8	-54.2	0.76	10.31	-69.7	-97.1	-118.8	-139.2	302.4	-129.05
20.00	22.42	3123.4	3099.8	3081.2	8.28	8.12	7.84	29.75	-13.9	-33.9	-53.8	0.77	22.68	-68.6	-97.5	-119.1	-139.3	361.5	-129.93
21.00	18.64	3145.1	3122.3	3103.9	8.34	8.12	8.04	29.77	-13.7	-34.0	-58.1	0.75	18.85	-68.2	-97.6	-119.6	-139.7	507.5	-133.59
22.00	16.81	3164.9	3140.9	3123.3	8.32	8.07	8.16	29.79	-13.9	-35.4	-60.8	0.76	3.81	-72.0	-98.9	-119.7	-139.9	606.7	-135.04
23.00	16.37	3183.7	3157.7	3139.7	7.88	8.06	8.18	29.79	-14.0	-35.7	-59.3	0.79	11.18	-73.3	-98.2	-119.7	-139.3	851.6	-137.77
24.00	15.19	3199.8	3174.1	3154.5	8.27	8.08	8.10	29.78	-14.1	-35.8	-60.5	0.85	16.32	-71.8	-98.5	-118.8	-139.1	1000.0	-139.34

*at 25°C unless mentioned otherwise

