

Surface Mount

Voltage Controlled Oscillator

ROS-3000-819+

Wide Band 2000 to 3000 MHz

Features

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



CASE STYLE: CK605

PRICE: \$24.95 ea. QTY (5-49)

Applications

- Wireless communications
- Test equipment
- Satellite systems

+ 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)	SENSITIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Typ.	Max.	Typ.	Typ.	Vcc (volts)	Current (mA)
ROS-3000-819+	2000	3000	+5.5	-71	-96	-117	-138	1	13	84	-125	20	140	-90	-22	-10	13.5	1.5	12	35		

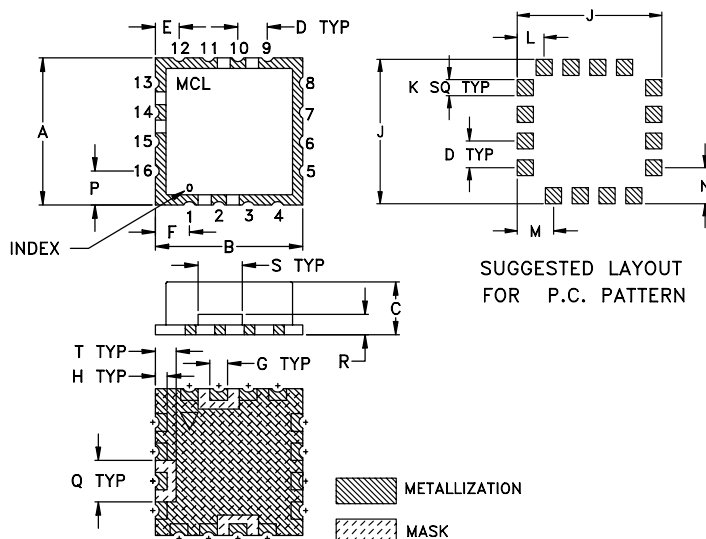
Pin Connections

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

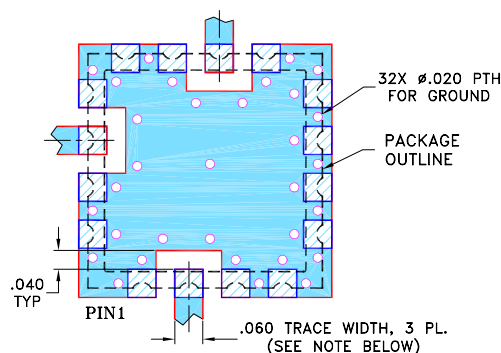
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	14V
Absolute Max. Tuning Voltage (Vtune)	15V
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.
- 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	.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

Mini-Circuits®

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

INTERNET <http://www.minicircuits.com>



REV. OR
M104902
EDR-7891
ROS-3000-819+
RAV
060427
page 1 of 2

Performance Data & Curves*

ROS-3000-819+

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 2500 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	203.38	1822.8	1798.7	1771.3	6.38	5.89	5.10	26.43	-16.0	-32.8	-33.3	0.87	9.47	-65.0	-91.8	-112.7	-132.8	1.0	-71.08
0.50	160.72	1919.8	1900.4	1879.7	6.34	5.92	5.17	26.46	-15.2	-32.0	-32.2	0.00	15.59	-68.0	-93.8	-114.7	-134.6	1.3	-74.49
1.00	136.93	1997.8	1980.8	1962.5	6.24	5.88	5.19	26.49	-16.9	-30.4	-32.1	0.36	15.11	-68.4	-95.0	-115.6	-135.8	1.6	-76.34
1.50	124.80	2065.2	2049.2	2032.9	6.22	5.89	5.32	26.52	-19.1	-30.8	-31.7	0.57	13.33	-69.6	-95.5	-116.4	-136.6	2.5	-83.69
2.00	113.13	2126.3	2111.6	2096.2	6.25	5.90	5.41	26.54	-22.3	-28.0	-32.1	0.74	8.55	-68.4	-95.7	-116.9	-136.7	4.0	-88.31
2.50	106.52	2183.0	2168.2	2153.1	6.18	5.85	5.48	26.56	-23.2	-24.6	-31.9	0.86	7.72	-68.9	-95.5	-117.1	-137.1	10.0	-96.66
3.00	101.03	2235.0	2221.5	2207.5	6.30	6.01	5.58	26.60	-21.7	-25.0	-31.1	0.91	13.82	-72.7	-97.1	-117.7	-138.1	16.2	-101.82
3.50	96.19	2285.7	2272.0	2257.9	6.28	5.99	5.63	26.61	-21.1	-25.3	-32.2	0.98	9.86	-70.8	-97.1	-117.5	-137.8	20.4	-103.20
4.00	93.78	2332.7	2320.1	2306.9	6.29	6.03	5.64	26.64	-19.7	-25.5	-33.2	1.05	8.85	-71.9	-96.6	-117.8	-138.2	25.8	-105.50
5.00	89.02	2425.5	2412.8	2399.4	6.21	5.93	5.57	26.65	-19.7	-23.7	-35.1	1.17	9.86	-73.5	-96.7	-118.1	-138.4	32.5	-108.13
6.00	85.76	2515.0	2502.1	2488.6	6.17	5.83	5.45	26.66	-21.0	-23.3	-34.4	1.30	13.91	-71.1	-96.9	-118.1	-138.3	100.0	-118.11
7.00	84.42	2601.2	2589.0	2575.5	6.11	5.73	5.35	26.66	-22.3	-24.3	-34.6	1.40	9.34	-71.7	-96.6	-117.9	-137.8	130.7	-120.54
8.00	86.44	2686.3	2674.4	2661.5	5.84	5.53	5.20	26.65	-22.6	-24.2	-32.7	1.51	10.01	-71.4	-95.8	-117.4	-137.6	167.8	-122.51
9.00	87.26	2771.4	2760.5	2748.3	5.78	5.48	5.16	26.66	-23.5	-23.3	-30.4	1.46	14.60	-70.5	-96.8	-117.6	-138.1	211.6	-124.65
10.00	89.84	2857.8	2847.1	2835.8	5.52	5.23	4.92	26.62	-25.3	-25.5	-31.0	1.45	9.60	-71.1	-95.6	-117.3	-137.6	271.7	-126.52
11.00	92.15	2946.3	2936.8	2926.1	5.26	4.96	4.61	26.58	-24.3	-24.7	-31.5	1.28	9.38	-70.7	-96.7	-117.2	-137.6	342.7	-128.80
11.50	91.56	2992.6	2982.9	2971.0	4.92	4.61	4.33	26.54	-25.0	-24.4	-31.7	1.25	14.30	-69.4	-95.5	-116.3	-136.2	440.0	-130.97
12.00	92.41	3038.1	3028.7	3017.5	4.83	4.52	4.20	26.53	-22.3	-24.6	-31.0	1.15	16.16	-70.0	-96.1	-116.6	-136.8	554.9	-132.75
12.50	93.35	3085.0	3074.9	3063.7	4.54	4.22	3.95	26.49	-23.1	-25.1	-31.5	1.02	10.87	-69.6	-94.6	-116.0	-136.1	712.4	-135.37
13.00	93.19	3130.5	3121.6	3111.1	4.31	4.04	3.74	26.49	-23.4	-26.0	-32.2	0.77	15.32	-67.9	-94.8	-115.9	-136.0	1000.0	-137.98

*at 25°C unless mentioned otherwise

