

Voltage Controlled Oscillator

ROS-1410+ ROS-1410

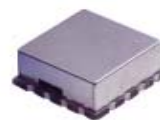
Linear Tuning 850 to 1410 MHz

Features

- wide bandwidth, 850-1410 MHz
- low noise, -99 dBc/Hz at 10kHz offset
- linear tuning, 50-80 MHz/V typ.
- aqueous washable

Applications

- cellular
- instrumentation
- fast tuning



CASE STYLE: CK605
PRICE: \$19.95 ea. QTY (5-49)

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

See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE dBc/Hz SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
	Min.	Max.		Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz				Typ.	Max.		Vcc (volts)	Current (mA)
ROS-1410(+)	850	1410	7.0	0.5	11	-73	-99	-119	-138	15	1.0	50-80	-8	—	1.0	12	25

Pin Connections

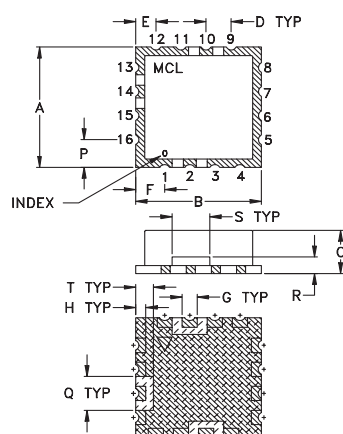
RFOUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

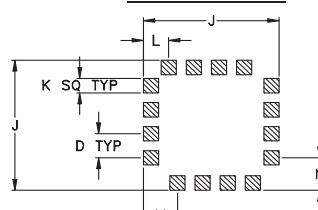
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+13V
Absolute Max. Tuning Voltage (Vtune)	+13V

all specifications: 50 ohm system

Outline Drawing

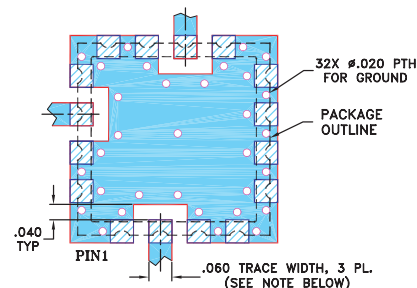


PCB Land Pattern



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 PCB IS CONTINUOUS GROUND PLANE.

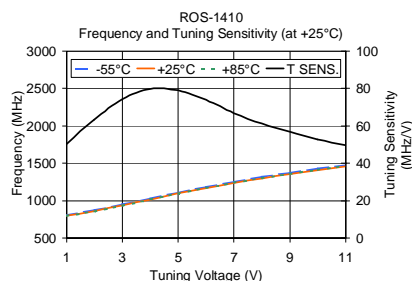
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch)

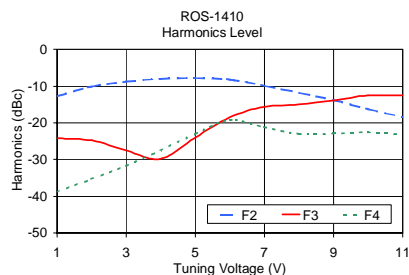
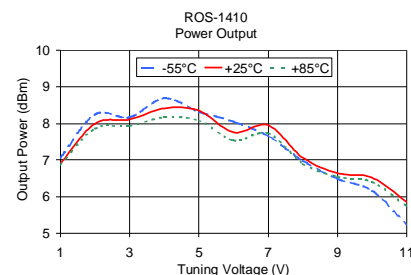
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

Performance Curves

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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.0	50.40	807.72	801.40	796.23	7.06	6.91	6.88
2.0	63.50	873.09	864.86	860.66	8.25	8.00	7.86
3.0	74.30	949.34	939.17	936.08	8.17	8.11	7.93
4.0	79.80	1030.94	1018.98	1017.08	8.69	8.42	8.17
5.0	78.90	1111.03	1097.86	1097.10	8.32	8.35	8.08
6.0	73.80	1185.85	1171.66	1172.04	8.05	7.76	7.54
7.0	66.90	1253.22	1238.55	1240.14	7.66	7.95	7.73
8.0	61.20	1315.49	1299.71	1302.25	6.98	7.06	6.90
9.0	57.00	1373.25	1356.73	1360.05	6.49	6.64	6.54
10.0	52.80	1427.15	1409.55	1413.71	6.16	6.52	6.40
11.0	49.60	1477.46	1459.17	1464.05	5.23	5.86	5.74



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.0	-12.80	-24.20	-38.80	1.50
2.0	-10.10	-24.80	-35.30	1.47
3.0	-8.80	-27.50	-31.70	1.24
4.0	-8.00	-29.80	-27.50	1.04
5.0	-7.80	-24.00	-23.00	0.55
6.0	-8.20	-18.50	-19.20	0.30
7.0	-9.90	-15.60	-21.20	0.04
8.0	-11.80	-15.00	-23.00	0.26
9.0	-13.80	-13.90	-22.90	0.35
10.0	-16.30	-12.50	-22.60	0.54
11.0	-18.40	-12.60	-23.20	0.65

