

Voltage Controlled Oscillator

Linear Tuning 1060 to 1121 MHz

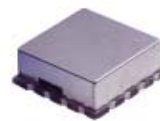
ROS-1121V+
ROS-1121V

Features

- linear tuning characteristics
- low sensitivity, 8-13 MHz/V typ.
- low phase noise, -111 dBc/Hz @ 10 kHz
- 5V power supply
- aqueous washable

Applications

- radio



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)	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.		V _{cc} (volts)	Current (mA)
ROS-1121V(+)	1060	1121	2.5	1	11	-88	-111	-131	-149	0.7	0.7	8-13	-11	—	10.0	5	30

Pin Connections

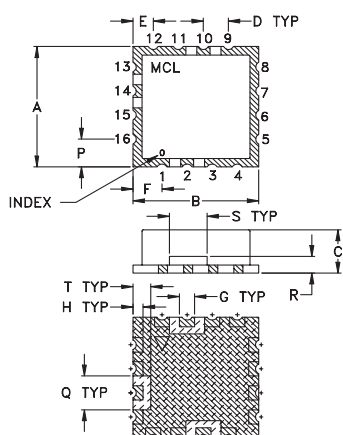
RFOUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

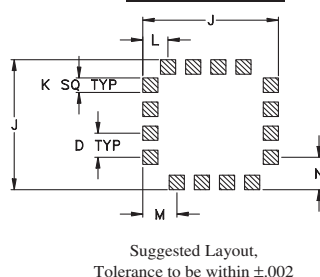
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (V _{cc})	+6V
Absolute Max. Tuning Voltage (V _{tune})	+12V

all specifications: 50 ohm system

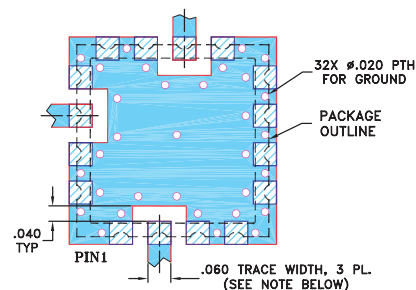
Outline Drawing



PCB Land Pattern



Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR 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.

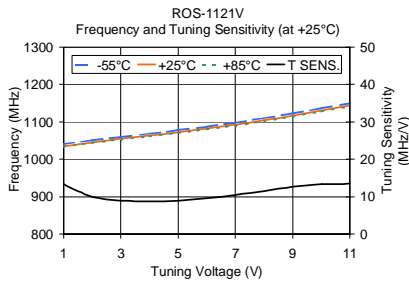
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
□ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch)

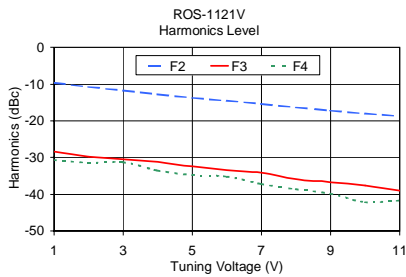
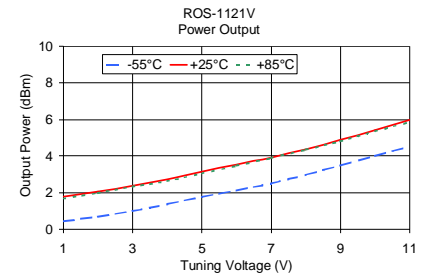
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

ROS-1121V+ ROS-1121V

Performance Curves



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	13.36	1040.92	1035.70	1033.92	0.43	1.78	1.67
2.0	10.02	1050.77	1045.71	1043.96	0.69	2.06	1.98
3.0	9.03	1059.79	1054.75	1052.96	0.99	2.37	2.32
4.0	8.83	1068.66	1063.58	1061.72	1.37	2.73	2.63
5.0	9.03	1077.78	1072.61	1070.68	1.76	3.14	3.04
6.0	9.63	1087.55	1082.23	1080.20	2.12	3.53	3.47
7.0	10.50	1098.23	1092.74	1090.60	2.51	3.93	3.90
8.0	11.59	1110.01	1104.32	1102.06	2.97	4.39	4.35
9.0	12.65	1122.85	1116.97	1114.59	3.48	4.88	4.81
10.0	13.36	1136.40	1130.34	1127.89	4.00	5.41	5.35
11.0	13.51	1150.07	1143.85	1141.35	4.54	5.97	5.86



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.0	-9.69	-28.43	-30.63	0.14
2.0	-10.76	-29.67	-31.40	0.29
3.0	-11.77	-30.42	-31.26	0.41
4.0	-12.77	-31.20	-33.52	0.51
5.0	-13.69	-32.42	-34.73	0.57
6.0	-14.53	-33.37	-35.16	0.65
7.0	-15.38	-34.16	-37.21	0.71
8.0	-16.33	-35.88	-38.59	0.76
9.0	-17.21	-36.65	-39.86	0.73
10.0	-18.00	-37.65	-42.11	0.58
11.0	-18.73	-39.01	-41.72	0.41

