

Surface Mount Voltage Controlled Oscillator

JCOS-1100LN

Low Noise 1079 to 1114 MHz

Features

- very low phase noise, -110 dBc/Hz at 10 kHz offset, typ.
- excellent tuning sensitivity, 4.5 MHz/V typ.
- aqueous washable

Applications

- GPS
- UHF transmitters
- aircraft radios



CASE STYLE: BG419
PRICE: \$49.95 ea. QTY (1-9)

Electrical Specifications

FREQUENCY (MHz)	POWER OUTPUT (dBm)	TUNING VOLTAGE (V)	PHASE NOISE (dBc/Hz)					PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	POWER SUPPLY			
			SSB at offset frequencies: Typ.								Typ.	Typ.		Typ.	Max.	Typ.	Typ.
Min.	Max.	Typ.	Min.	Max.	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Max.	Typ.	Max.		
1079	1114	+8.5	0	20	-60	-88	-110	-130	-150	7.5	0.5	4.5	-15	-10	2.0	8	25

Pin Connections

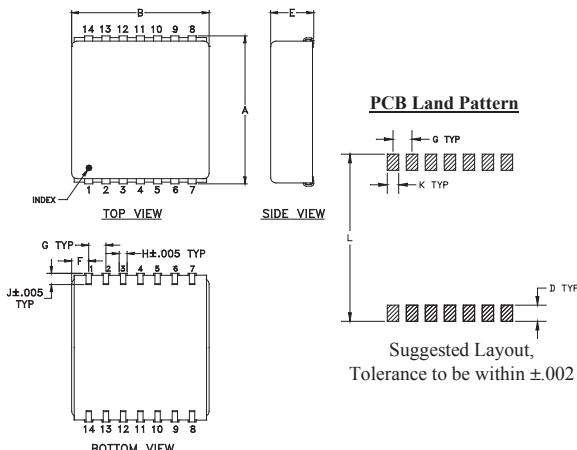
RF OUT	7
VCC	8
V-TUNE	1
GROUND	2,3,4,5,6,9,10,11,12,13,14

Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+24V

all specifications: 50 ohm system
Permanent damage may occur if any of these limits are exceeded.

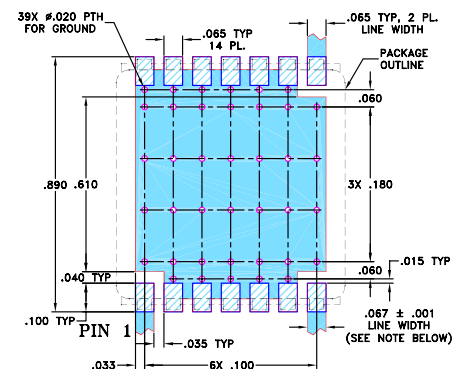
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt
.870	.800	--	.100	.400	.100	.100	.047	.065	.065	.890	grams
22.10	20.32	--	2.54	10.16	2.54	2.54	1.19	1.65	1.65	22.61	6.4

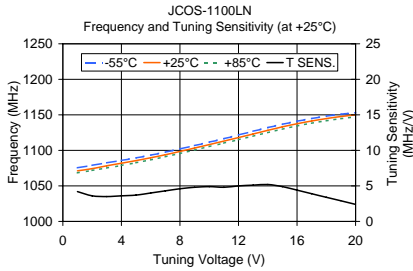
Demo Board MCL PIN: TB-62 Suggested PCB Layout (PL-011)



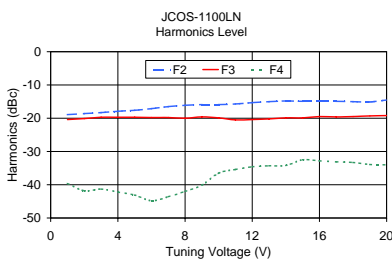
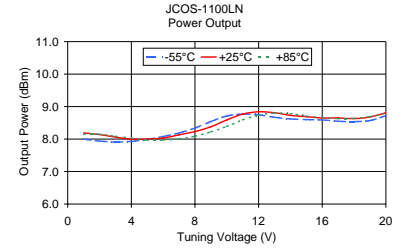
- NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030 ± 0.002 ; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 3. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Performance Curves

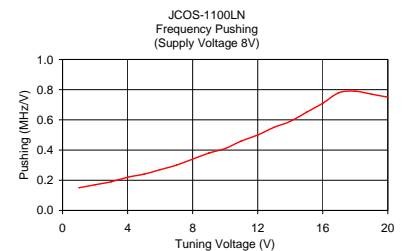
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	4.20	1075.49	1071.24	1068.42	8.00	8.19	8.15
2.00	3.60	1079.06	1074.27	1071.86	7.94	8.14	8.15
3.00	3.50	1082.46	1078.30	1075.24	7.91	8.06	8.09
4.00	3.60	1085.88	1081.87	1078.78	7.93	8.00	8.03
5.00	3.70	1089.45	1085.62	1082.57	7.99	8.00	7.97
6.00	4.00	1093.29	1089.59	1086.67	8.08	8.03	7.97
7.00	4.30	1097.49	1093.85	1091.01	8.19	8.13	8.01
8.00	4.60	1102.04	1098.43	1095.61	8.34	8.23	8.09
9.00	4.80	1106.78	1103.26	1100.42	8.54	8.38	8.22
10.00	4.90	1111.61	1108.17	1105.35	8.71	8.59	8.39
11.00	4.80	1116.51	1113.02	1110.26	8.77	8.77	8.59
12.00	5.00	1121.67	1117.97	1115.16	8.75	8.84	8.74
13.00	5.10	1126.97	1123.06	1120.01	8.67	8.81	8.80
14.00	5.20	1132.08	1128.23	1124.96	8.62	8.73	8.78
15.00	4.90	1136.77	1133.13	1129.85	8.60	8.69	8.71
16.00	4.40	1141.04	1137.50	1134.33	8.59	8.65	8.66
17.00	3.90	1144.88	1141.36	1138.28	8.55	8.65	8.63
18.00	3.40	1148.24	1144.74	1141.69	8.54	8.63	8.64
19.00	2.90	1151.02	1147.64	1144.62	8.57	8.68	8.69
20.00	2.40	1153.13	1150.02	1147.15	8.72	8.81	8.80



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-18.90	-20.40	-39.60	0.15
2.00	-18.60	-20.10	-41.80	0.17
3.00	-18.30	-19.70	-41.30	0.19
4.00	-17.90	-19.70	-42.20	0.22
5.00	-17.60	-19.70	-43.10	0.24
6.00	-17.10	-19.80	-44.80	0.27
7.00	-16.50	-19.80	-43.60	0.30
8.00	-16.10	-20.00	-42.00	0.34
9.00	-15.90	-19.60	-40.10	0.38
10.00	-15.90	-19.90	-36.50	0.41
11.00	-15.70	-20.50	-35.40	0.46
12.00	-15.30	-20.40	-34.60	0.50
13.00	-15.00	-20.20	-34.30	0.55
14.00	-14.80	-19.90	-34.20	0.59
15.00	-14.90	-19.90	-32.50	0.65
16.00	-14.90	-19.50	-32.80	0.71
17.00	-14.90	-19.60	-33.10	0.78
18.00	-15.00	-19.50	-33.30	0.79
19.00	-15.10	-19.30	-33.90	0.77
20.00	-14.50	-19.20	-34.00	0.75



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IF/RF MICROWAVE COMPONENTS

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