

Surface Mount Voltage Controlled Oscillator

JCOS-1100LN

Low Noise 1079 to 1114 MHz



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

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

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.	Voltage (V)
Min.	Max.	Typ.	Min.	Max.	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Max.	Typ.			
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

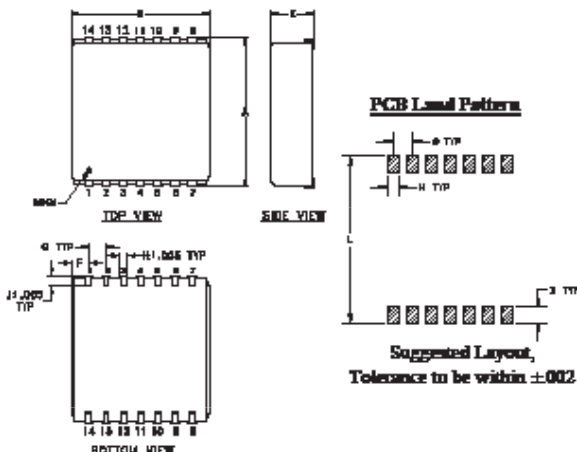
RF OUT	7
VCC	8
V-TUNE	1
GROUND	2,3,4,5,6,9,10,11,12,13,14

Maximum Ratings

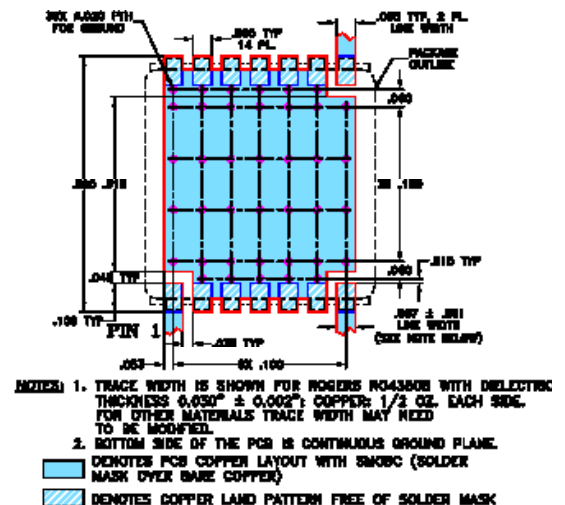
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+24V

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

Outline Drawing



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



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

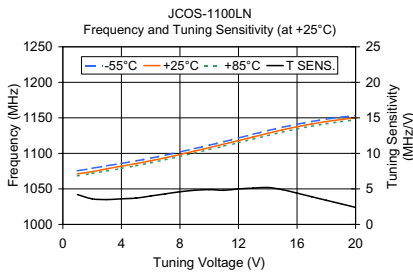
Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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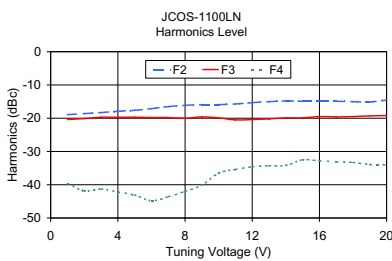
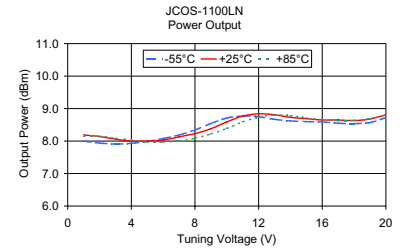


Performance Curves

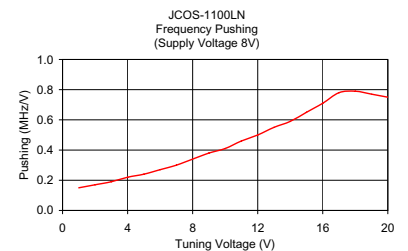
JCOS-1100LN



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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