

Voltage Controlled Oscillator

ROS-1500+ ROS-1500

Linear Tuning 1000 to 1500 MHz

Features

- wide frequency range, 1000-1500 MHz
- low phase noise, -104 dBc/Hz at 10 kHz offset, typ
- linear tuning, 25-40 MHz/V typ.
- wide modulation bandwidth, 100 MHz typ.
- aqueous washable

Applications

- instrumentation
- satellite TV receivers



CASE STYLE: CK605

PRICE: \$16.95 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-1500(+)	1000	1500	8.0	0.5	20	-79	-104	-124	-144	10	1.2	25-40	-13	—	100	10	26

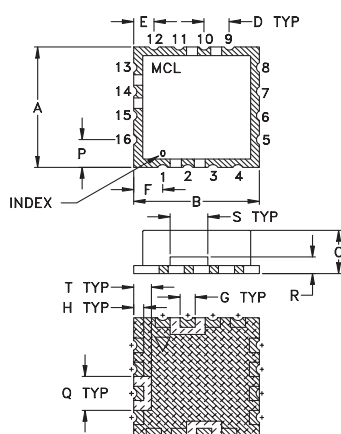
Pin Connections

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

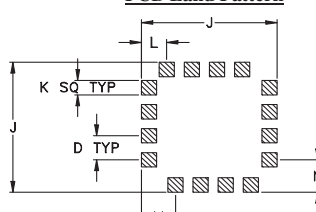
Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+11V
Absolute Max. Tuning Voltage (Vtune)	+22V
all specifications: 50 ohm system	

Outline Drawing

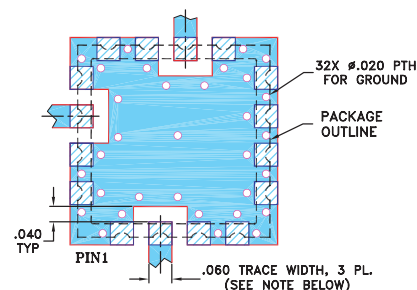


PCB Land Pattern



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.

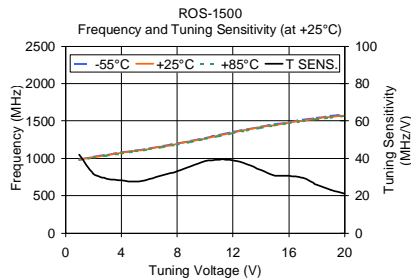
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch)

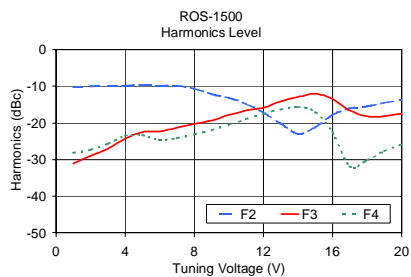
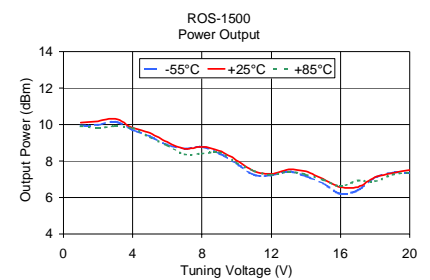
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

Performance Curves

ROS-1500+ ROS-1500



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	42.02	990.22	982.48	972.73	9.95	10.11	9.92
2.00	31.87	1021.64	1014.36	1005.33	9.99	10.19	9.81
3.00	29.16	1050.64	1043.52	1034.68	10.16	10.31	9.90
4.00	28.12	1078.59	1071.64	1063.04	9.71	9.82	9.80
5.00	27.57	1106.13	1099.21	1090.87	9.35	9.53	9.30
6.00	28.79	1134.98	1128.00	1119.69	8.88	9.04	8.85
7.00	30.94	1166.04	1158.94	1150.55	8.68	8.67	8.36
8.00	33.02	1199.24	1191.96	1183.49	8.77	8.78	8.41
9.00	35.74	1235.35	1227.70	1219.01	8.41	8.56	8.47
10.00	38.43	1273.94	1266.14	1257.23	7.86	8.05	7.92
11.00	39.35	1313.61	1305.49	1296.40	7.25	7.45	7.46
12.00	39.09	1353.06	1344.58	1335.22	7.22	7.30	7.24
13.00	36.92	1390.14	1381.50	1372.08	7.43	7.53	7.41
14.00	33.72	1424.01	1415.22	1405.79	7.17	7.43	7.26
15.00	30.83	1454.49	1446.05	1437.24	6.77	7.00	6.96
16.00	30.53	1483.66	1476.58	1468.08	6.20	6.58	6.62
17.00	29.56	1515.16	1506.14	1496.29	6.40	6.58	6.92
18.00	25.93	1542.21	1532.07	1521.52	7.09	7.11	6.88
19.00	23.12	1565.45	1555.19	1544.39	7.37	7.33	7.26
20.00	21.03	1586.27	1576.22	1565.46	7.34	7.52	7.37



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-10.33	-31.16	-28.16	1.15
2.00	-10.00	-29.00	-27.33	1.19
3.00	-9.83	-27.00	-25.66	1.22
4.00	-9.84	-24.34	-23.50	1.27
5.00	-9.66	-22.50	-23.33	1.32
6.00	-9.83	-22.33	-24.66	1.33
7.00	-9.83	-21.33	-24.17	1.33
8.00	-10.66	-20.33	-23.16	1.36
9.00	-12.16	-19.33	-22.00	1.38
10.00	-13.16	-17.83	-20.50	1.34
11.00	-14.83	-16.67	-19.00	1.22
12.00	-17.17	-15.84	-17.50	1.04
13.00	-20.16	-14.16	-16.33	0.84
14.00	-23.00	-13.00	-15.67	0.61
15.00	-21.17	-12.00	-17.00	0.37
16.00	-17.84	-13.50	-22.50	0.20
17.00	-16.00	-16.67	-31.83	0.94
18.00	-15.50	-18.17	-30.17	2.01
19.00	-14.50	-18.17	-27.67	2.01
20.00	-13.84	-17.50	-25.84	2.10

