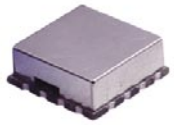
Surface Mount

Voltage Controlled Oscillator

ROS-1900+
ROS-1900

Linear Tuning 1450 to 1900 MHz



CASE STYLE: CK605
PRICE: $17.95 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.

Features

- wide frequency range, 1450 to 1900 MHz
- low phase noise, -106 dBc/Hz at 10 kHz offset, typ.
- linear tuning, 22-34 MHz/V typ.
- wide modulation bandwidth, 100 MHz typ.
- aqueous washable

Applications

- instrumentation
- PCN

Electrical Specifications

FREQUENCY (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE (dBc/Hz) SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dBr (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
1450	1900	7.0	0.5	20	-80	-106	-126	-146	7	0.7	22-34	-15	-7	100	10	25

Pin Connections

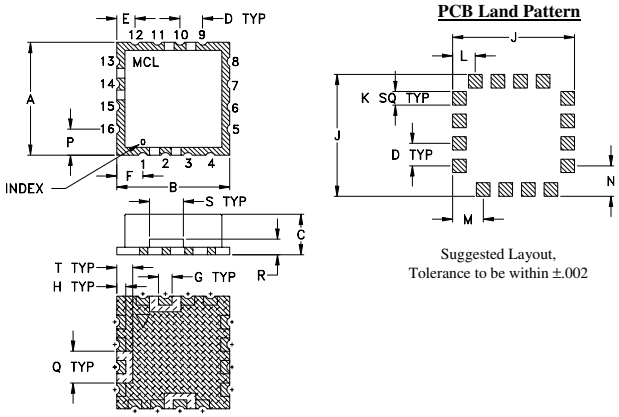
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

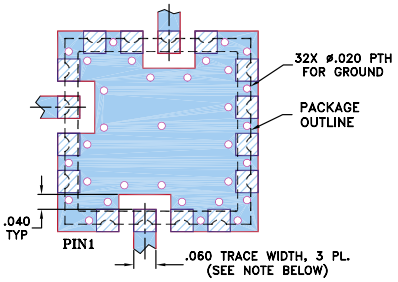
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+11V
Absolute Max. Tuning Voltage (Vtune)	+22V

all specifications: 50 ohm system

Outline Drawing



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

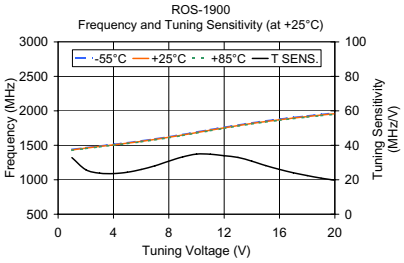
Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52

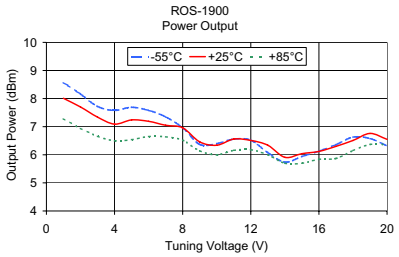
L	M	N	P	Q	R	S	T	wt.
.100	.135	.135	.115	.140	.070	.150	.070	grams
1.50	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

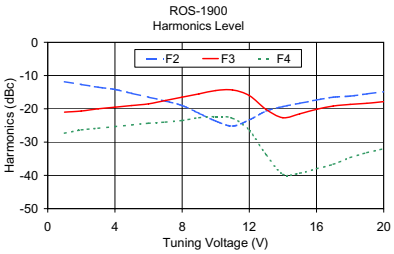
Performance Data & Curves

ROS-1900+
ROS-1900



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	32.84	1441.05	1433.36	1427.06	8.57	8.01	7.28
2.00	25.83	1466.54	1459.20	1453.15	8.16	7.70	6.94
3.00	23.84	1490.34	1483.04	1477.10	7.72	7.34	6.66
4.00	23.60	1514.03	1506.64	1500.66	7.58	7.09	6.50
5.00	24.36	1538.50	1531.00	1524.93	7.69	7.24	6.54
6.00	25.98	1564.72	1556.97	1550.66	7.58	7.19	6.65
7.00	28.10	1593.12	1585.08	1578.61	7.35	7.05	6.64
8.00	30.78	1624.18	1615.85	1609.17	6.96	6.96	6.52
9.00	33.25	1657.76	1649.10	1642.25	6.37	6.46	6.14
10.00	34.89	1692.92	1683.99	1677.01	6.40	6.34	6.00
11.00	34.83	1727.99	1718.82	1711.85	6.56	6.56	6.16
12.00	33.94	1761.88	1752.76	1745.97	6.52	6.51	6.18
13.00	32.95	1794.61	1785.71	1778.80	6.08	6.34	6.00
14.00	30.80	1825.84	1816.51	1809.21	5.74	5.91	5.70
15.00	28.22	1854.43	1844.73	1837.19	5.94	6.04	5.70
16.00	25.99	1880.63	1870.72	1863.02	6.13	6.12	5.84
17.00	24.02	1904.72	1894.74	1886.92	6.36	6.30	5.87
18.00	22.41	1927.17	1917.15	1909.21	6.63	6.51	6.15
19.00	20.93	1948.17	1938.08	1930.09	6.58	6.76	6.37
20.00	19.74	1967.93	1957.82	1949.72	6.32	6.55	6.36





V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-11.83	-21.00	-27.33	0.59
2.00	-12.67	-20.67	-26.33	0.62
3.00	-13.50	-20.00	-25.83	0.66
4.00	-14.17	-19.50	-25.33	0.67
5.00	-15.33	-19.00	-24.83	0.66
6.00	-16.50	-18.50	-24.33	0.70
7.00	-17.67	-17.50	-24.00	0.73
8.00	-19.00	-16.50	-23.50	0.73
9.00	-21.34	-15.50	-22.67	0.66
10.00	-23.67	-14.50	-22.33	0.46
11.00	-25.17	-14.33	-22.83	0.23
12.00	-23.33	-16.00	-26.50	0.03
13.00	-20.67	-20.17	-33.83	0.01
14.00	-19.33	-22.67	-39.67	0.09
15.00	-18.33	-21.50	-39.33	0.17
16.00	-17.33	-20.16	-38.00	0.23
17.00	-16.50	-19.16	-36.66	0.32
18.00	-16.17	-18.67	-34.67	0.35
19.00	-15.50	-18.33	-33.17	0.40
20.00	-14.83	-17.83	-32.00	0.46