

Surface Mount Voltage Controlled Oscillator

ROS-1700W+ ROS-1700W

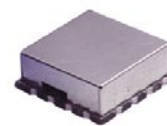
Wide Band 770 to 1700 MHz

Features

- very wide band, 770 to 1700 MHz
- linear tuning sensitivity, 26-60 MHz/V typ.
- low phase noise, -140 dBc/Hz at 1 MHz offset, typ.
- aqueous washable

Applications

- test equipment
- cellular
- instrumentation



CASE STYLE: CK605
PRICE: \$24.95 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

FREQUENCY (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.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
770	1700	8.0	1.0	24	-73	-100	-121	-140	9.0	0.4	26-60	-25	-13	11.0	12	40

Pin Connections

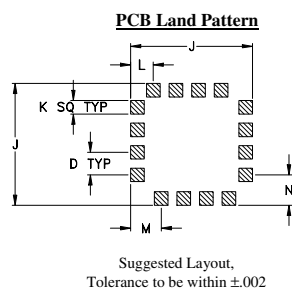
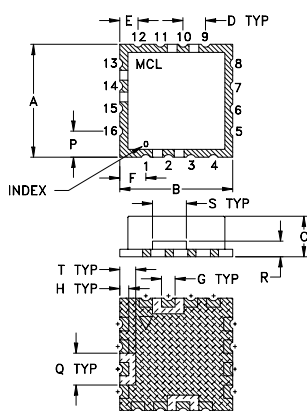
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

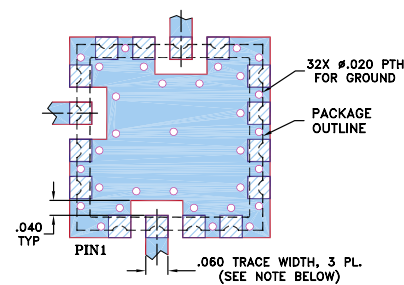
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+30V

all specifications: 50 ohm system

Outline Drawing



Demo Board MCL PIN: 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	
2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0	



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



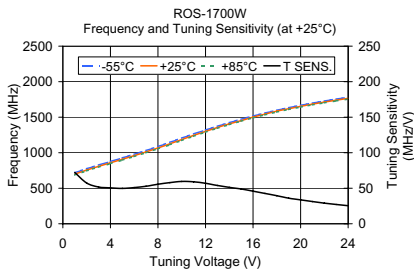
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RF/IF MICROWAVE COMPONENTS

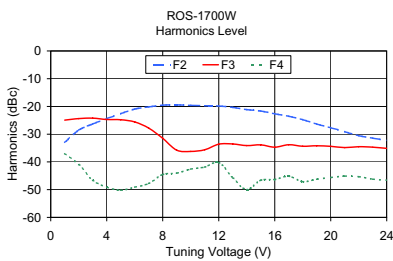
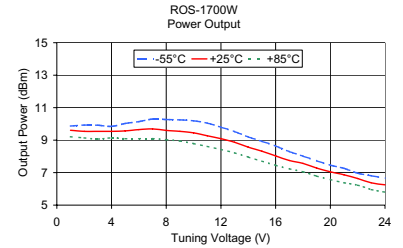
REV. C
M102713
ED-4628
ROS-1700W
MM/TD/CP/AM
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ROS-1700W+ ROS-1700W

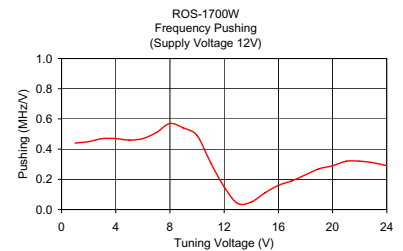
Performance Data & Curves



V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	72.21	717.99	698.31	686.70	9.87	9.61	9.21
2.00	57.41	774.24	755.73	744.68	9.93	9.54	9.14
3.00	51.80	825.68	807.53	796.55	9.92	9.54	9.07
4.00	50.48	876.46	858.01	846.82	9.85	9.54	9.14
5.00	49.81	926.86	907.82	896.43	10.03	9.57	9.09
6.00	50.92	978.23	958.74	946.84	10.14	9.65	9.09
7.00	52.81	1031.26	1011.54	999.24	10.30	9.69	9.10
8.00	55.62	1087.44	1067.16	1054.55	10.27	9.60	9.03
9.00	57.92	1146.06	1125.08	1112.31	10.25	9.54	8.95
10.00	59.59	1205.42	1184.67	1172.03	10.19	9.45	8.79
11.00	59.04	1263.98	1243.71	1231.35	10.05	9.27	8.62
12.00	56.99	1319.63	1300.70	1289.01	9.80	9.09	8.43
13.00	53.96	1372.27	1354.66	1343.65	9.53	8.87	8.22
14.00	51.27	1422.56	1405.93	1395.45	9.20	8.57	7.96
15.00	48.93	1471.01	1451.86	1444.45	8.93	8.32	7.71
16.00	45.89	1516.40	1500.75	1490.55	8.64	8.03	7.45
17.00	42.66	1558.84	1543.41	1533.21	8.30	7.75	7.24
18.00	39.47	1597.98	1585.88	1572.71	8.02	7.57	7.05
19.00	36.01	1633.81	1618.89	1608.74	7.73	7.28	6.79
20.00	33.62	1667.41	1652.51	1642.26	7.46	7.05	6.58
21.00	31.30	1698.53	1683.81	1673.57	7.27	6.87	6.38
22.00	29.01	1727.54	1712.82	1702.64	6.97	6.64	6.23
23.00	27.20	1754.81	1740.02	1729.73	6.81	6.37	5.96
24.00	25.41	1780.22	1765.43	1755.05	6.66	6.25	5.80



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-32.97	-24.94	-37.01	0.44
2.00	-28.53	-24.38	-40.92	0.45
3.00	-26.31	-24.24	-46.58	0.47
4.00	-24.39	-24.70	-49.09	0.47
5.00	-22.59	-24.80	-50.20	0.46
6.00	-20.94	-25.58	-49.09	0.47
7.00	-20.15	-27.83	-47.77	0.51
8.00	-19.53	-31.49	-44.55	0.57
9.00	-19.44	-35.77	-44.03	0.54
10.00	-19.61	-36.21	-42.59	0.49
11.00	-19.74	-35.63	-41.85	0.31
12.00	-19.84	-33.60	-40.22	0.15
13.00	-20.33	-33.52	-45.70	0.04
14.00	-21.14	-34.10	-49.94	0.05
15.00	-21.65	-33.86	-46.61	0.11
16.00	-22.64	-34.68	-46.33	0.16
17.00	-23.53	-33.82	-45.14	0.19
18.00	-24.77	-34.36	-47.10	0.23
19.00	-26.34	-34.18	-46.26	0.27
20.00	-27.68	-34.39	-45.61	0.29
21.00	-29.10	-34.85	-45.12	0.32
22.00	-30.55	-34.50	-45.32	0.32
23.00	-31.41	-34.70	-46.21	0.31
24.00	-32.25	-35.12	-46.58	0.29



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