

Surface Mount Voltage Controlled Oscillator

ROS-150+ ROS-150

Linear Tuning 75 to 150 MHz

Features

- octave band tuning
- low phase noise, -103 dBc/Hz at 10 kHz typ.
- linear tuning, 4 - 6.8 MHz/V typ.
- excellent harmonic suppression, -23 dBc typ.
- aqueous washable

Applications

- test instruments-signal generators
- communication systems
- VHF



CASE STYLE: CK605
PRICE: \$12.95 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.
75	150	+9.5	1	18	-80	-103	-127	-144	0.8	0.3	4.0-6.8	-23	-16	0.1	12	20

Pin Connections

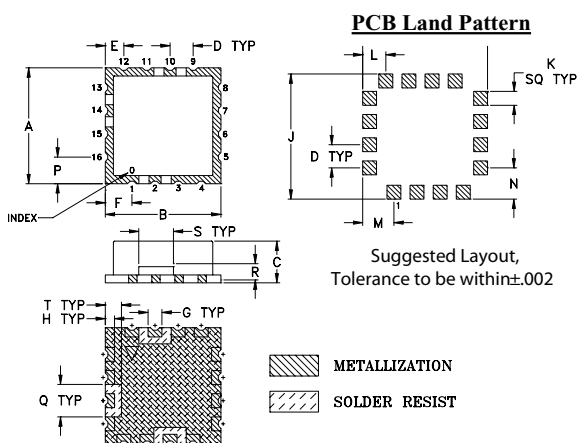
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

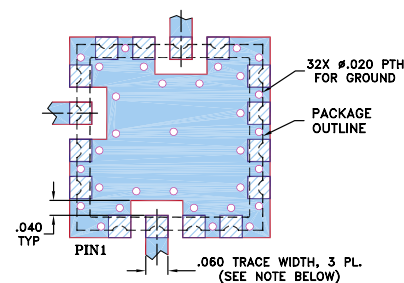
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+13V
Absolute Max. Tuning Voltage (Vtune)	+18V

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.
- Legend:
 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	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

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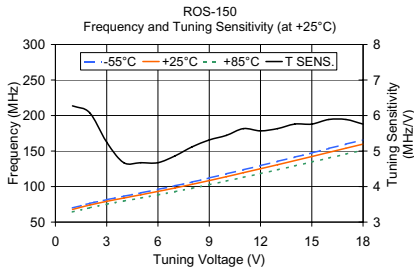
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RF/IF MICROWAVE COMPONENTS

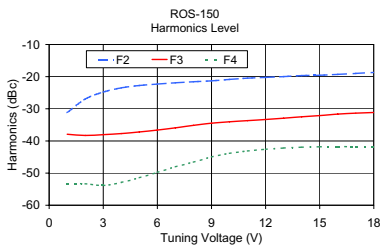
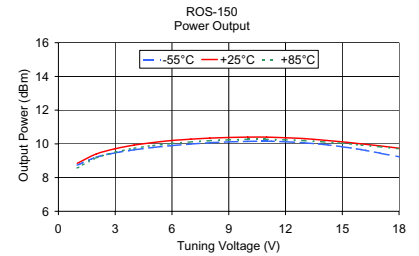
REV. D
M102713
EDR-4402
ROS-150
MM/TD/CP/AM
070705

ROS-150+ ROS-150

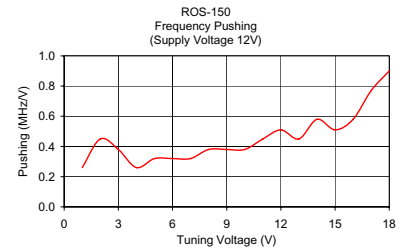
Performance Data & Curves



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	6.27	69.95	67.84	64.32	8.74	8.85	8.57
2.00	6.08	76.29	73.92	70.21	9.21	9.40	9.17
3.00	5.25	81.60	79.17	75.20	9.47	9.71	9.51
4.00	4.67	86.46	83.84	79.62	9.65	9.93	9.74
5.00	4.67	91.20	88.51	83.97	9.79	10.08	9.90
6.00	4.67	96.06	93.18	88.32	9.90	10.20	10.02
7.00	4.86	101.18	98.05	92.86	9.99	10.28	10.12
8.00	5.12	106.50	103.17	97.66	10.07	10.34	10.19
9.00	5.31	112.13	108.48	102.66	10.12	10.38	10.24
10.00	5.44	117.89	113.92	107.78	10.15	10.40	10.27
11.00	5.63	123.71	119.55	113.02	10.16	10.40	10.27
12.00	5.57	129.54	125.12	118.34	10.13	10.36	10.24
13.00	5.63	135.49	130.75	123.65	10.06	10.31	10.19
14.00	5.76	141.44	136.51	129.09	9.97	10.22	10.12
15.00	5.76	147.46	142.27	134.66	9.83	10.12	10.04
16.00	5.89	153.66	148.16	140.22	9.66	10.00	9.93
17.00	5.89	159.81	154.05	145.79	9.45	9.88	9.83
18.00	5.76	165.70	159.81	151.36	9.23	9.74	9.71



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-31.19	-37.91	-53.23	0.26
2.00	-26.97	-38.30	-53.32	0.45
3.00	-24.80	-38.04	-53.83	0.38
4.00	-23.48	-37.71	-52.90	0.26
5.00	-22.75	-37.21	-51.42	0.32
6.00	-22.30	-36.62	-49.78	0.32
7.00	-21.90	-35.92	-48.03	0.32
8.00	-21.57	-35.15	-46.59	0.38
9.00	-21.29	-34.48	-44.97	0.38
10.00	-20.85	-34.03	-43.84	0.38
11.00	-20.46	-33.69	-43.10	0.45
12.00	-20.23	-33.33	-42.58	0.51
13.00	-19.98	-32.92	-42.18	0.45
14.00	-19.67	-32.49	-41.94	0.58
15.00	-19.55	-32.11	-41.82	0.51
16.00	-19.28	-31.64	-41.74	0.58
17.00	-18.99	-31.35	-41.81	0.77
18.00	-18.68	-31.15	-41.79	0.90



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