

Surface Mount Voltage Controlled Oscillator

ROS-205PV+

5V Tuning for PLL IC's 180 to 210 MHz

Features

- low phase noise, -110 dBc/Hz at 10 kHz offset, typ.
- low sensitivity, 10-15 MHz/V typ.
- excellent harmonic suppression, -30 dBc typ.
- aqueous washable

Applications

- IF down conversion
- VHF
- PLL circuitry



CASE STYLE: CK605
PRICE: \$17.95 ea. QTY (5-49)

+RoHS Compliant
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.	Voltage (V)	Current (mA) Max.
180	210	2	0.5	5.0	-88	-110	-131	-151	0.4	0.4	10-15	-30	-20	2.0	5	15

Pin Connections

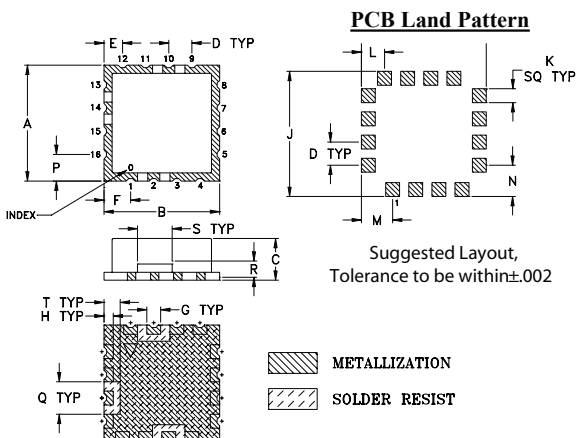
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

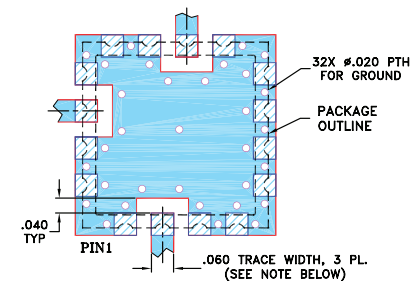
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6V
Absolute Max. Tuning Voltage (Vtune)	+6V

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

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.

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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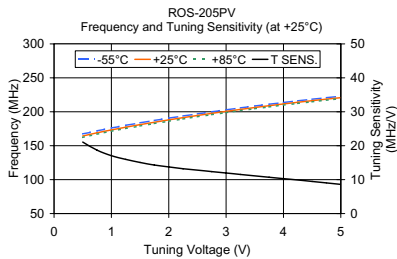
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For detailed performance specs & shipping online see web site

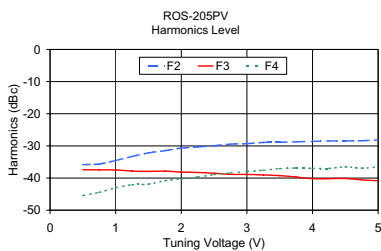
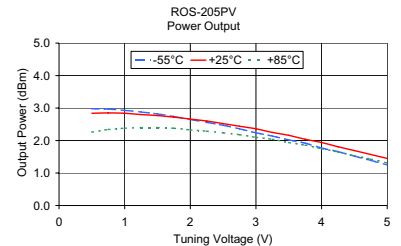
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Performance Data & Curves

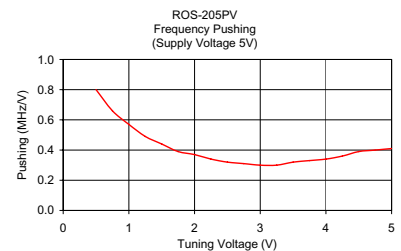
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
0.50	21.07	167.42	164.34	162.20	2.98	2.84	2.26
0.75	18.68	171.96	169.01	166.95	2.97	2.85	2.34
1.00	17.05	176.12	173.27	171.26	2.93	2.84	2.38
1.25	15.96	180.03	177.26	175.28	2.88	2.80	2.40
1.50	15.07	183.71	181.03	179.07	2.82	2.77	2.40
1.75	14.31	187.22	184.61	182.67	2.74	2.72	2.38
2.00	13.75	190.59	188.04	186.13	2.65	2.66	2.33
2.25	13.21	193.82	191.34	189.45	2.56	2.60	2.29
2.50	12.80	196.95	194.54	192.67	2.47	2.52	2.24
2.75	12.36	199.98	197.63	195.79	2.36	2.44	2.18
3.00	11.95	202.91	200.62	198.80	2.24	2.36	2.10
3.25	11.53	205.75	203.50	201.72	2.14	2.25	2.04
3.50	11.11	208.50	206.28	204.53	2.02	2.16	1.94
3.75	10.69	211.15	208.95	207.24	1.92	2.04	1.86
4.00	10.29	213.71	211.53	209.85	1.77	1.94	1.75
4.25	9.89	216.17	214.00	212.35	1.66	1.81	1.65
4.50	9.46	218.54	216.36	214.75	1.52	1.69	1.53
4.75	9.04	220.79	218.62	217.03	1.39	1.57	1.43
5.00	8.60	222.95	220.77	219.20	1.25	1.45	1.31



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-35.81	-37.41	-45.45	0.80
0.75	-35.63	-37.45	-44.44	0.66
1.00	-34.53	-37.49	-43.03	0.57
1.25	-33.27	-37.83	-42.08	0.49
1.50	-32.17	-37.94	-41.89	0.44
1.75	-31.47	-37.85	-40.81	0.39
2.00	-30.68	-38.13	-40.26	0.37
2.25	-30.34	-38.26	-39.66	0.34
2.50	-29.93	-38.51	-38.91	0.32
2.75	-29.45	-38.86	-38.44	0.31
3.00	-29.30	-38.88	-37.95	0.30
3.25	-28.92	-39.05	-37.57	0.30
3.50	-28.89	-39.26	-37.06	0.32
3.75	-28.74	-39.67	-36.89	0.33
4.00	-28.59	-40.22	-36.96	0.34
4.25	-28.45	-40.19	-37.00	0.36
4.50	-28.44	-40.12	-36.50	0.39
4.75	-28.38	-40.58	-36.93	0.40
5.00	-28.12	-40.84	-36.52	0.41



For detailed performance specs & shopping online see web site

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