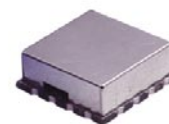


# Surface Mount Voltage Controlled Oscillator

# ROS-1000PV+ ROS-1000PV

5V Tuning for PLL IC's 900 to 1000 MHz



## Features

- low phase noise, -144 dBc/Hz at 1 MHz, typ.
- linear tuning, 27-38 MHz/V typ.
- aqueous washable

## Applications

- cellular
- instrumentation
- fast tuning
- PLL circuitry

CASE STYLE: CK605  
PRICE: \$19.95 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.	Voltage (V)	Current (mA) Max.
900	1000	6	0.5	5.0	-80	-104	-124	-144	2.0	0.7	27-38	-33	-20	1.0	5	22

## Pin Connections

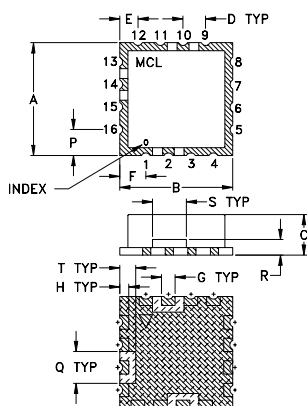
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

## Maximum Ratings

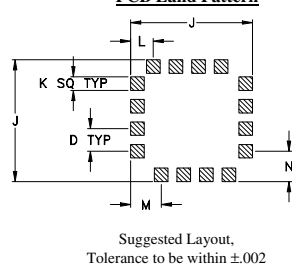
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6V
Absolute Max. Tuning Voltage (Vtune)	+6V

all specifications: 50 ohm system

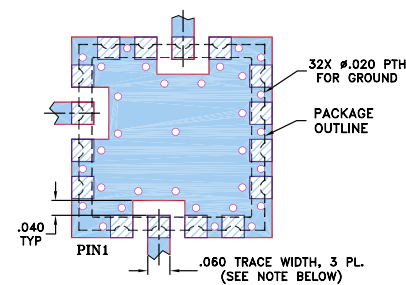
## Outline Drawing



## PCB Land Pattern



## 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	
1.50	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0	



INTERNET <http://www.minicircuits.com>

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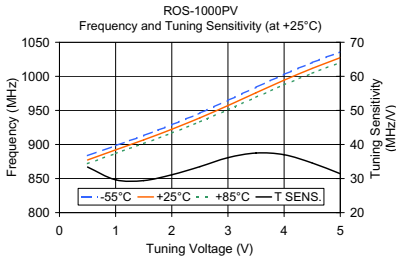
Mini-Circuits ISO 9001 & ISO 14001 Certified



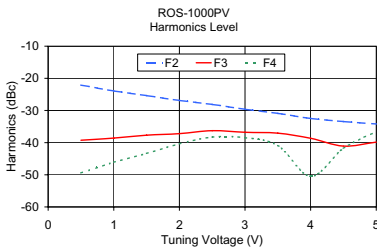
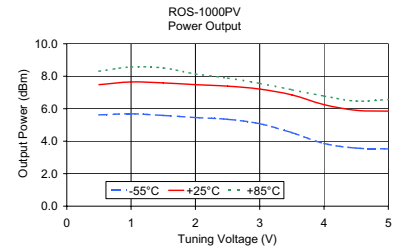
REV. B  
M98898  
ED-6448A/1  
ROS-1000PV  
MM/TD/CP/AM  
061027  
Page 1 of 2

# Performance Data & Curves

# ROS-1000PV+ ROS-1000PV



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	33.38	883.62	877.27	871.87	5.62	7.48	8.31
1.00	29.63	898.34	892.08	886.86	5.69	7.65	8.57
1.50	29.41	913.14	906.78	901.47	5.59	7.59	8.51
2.00	31.11	928.99	922.34	916.79	5.46	7.48	8.14
2.50	33.50	946.22	939.08	933.18	5.35	7.39	7.89
3.00	36.13	964.78	957.15	950.93	5.08	7.21	7.56
3.50	37.49	983.97	975.89	969.35	4.53	6.85	7.17
4.00	36.99	1002.83	994.39	987.52	3.86	6.25	6.78
4.50	34.57	1020.29	1011.67	1004.57	3.58	5.90	6.47
5.00	31.42	1036.01	1027.38	1020.23	3.53	5.85	6.57



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-22.09	-39.25	-49.42	0.29
1.00	-23.91	-38.58	-46.08	0.25
1.50	-25.35	-37.69	-43.35	0.21
2.00	-26.87	-37.20	-40.37	0.21
2.50	-28.10	-36.27	-38.27	0.36
3.00	-29.62	-36.79	-38.45	0.77
3.50	-30.89	-37.05	-40.89	1.21
4.00	-32.47	-38.64	-50.47	1.39
4.50	-33.42	-41.08	-41.75	1.31
5.00	-34.18	-39.85	-36.51	1.17

