

# Surface Mount Voltage Controlled Oscillator

# ROS-285PV+ ROS-285PV

5V Tuning for PLL IC's 245 to 285 MHz

## Features

- linear tuning, sensitivity ratio 2:1, typ.
- excellent harmonic suppression, -20 dBc typ.
- suitable for use with monolithic PLL chips
- 5V power supply
- aqueous washable

## Applications

- communication receivers
- frequency synthesizers
- VHF
- PLL circuitry



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.

## 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.
245	285	3	0.5	5.0	-80	-100	-120	-140	2.0	0.2	10-20	-20	-10	0.1	5	20

## Pin Connections

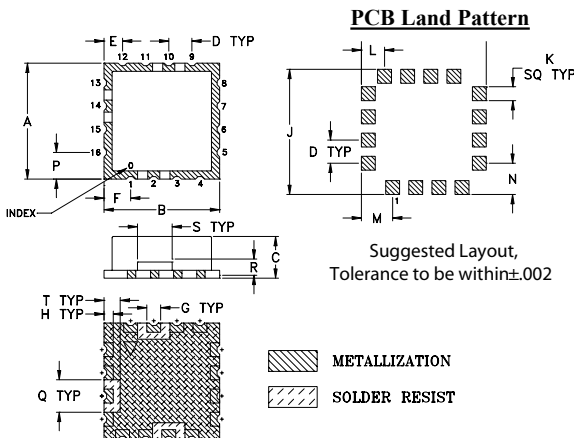
RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

## Maximum Ratings

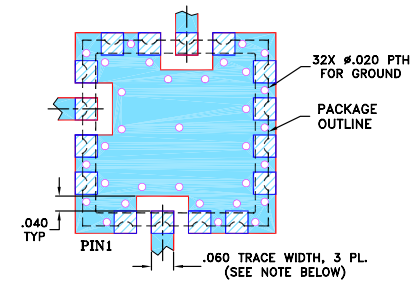
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+8V
Absolute Max. Tuning Voltage (Vtune)	+10V

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.

- 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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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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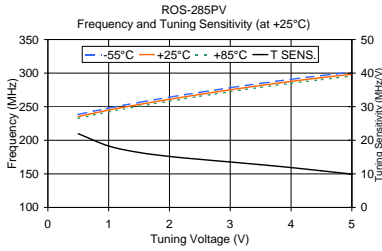
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For detailed performance specs & shipping online see web site

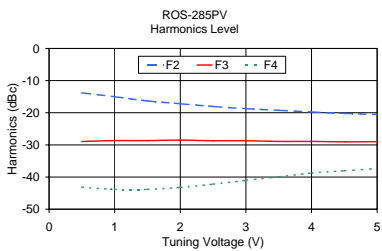
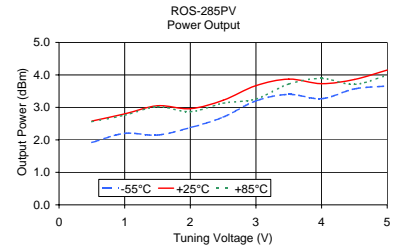
REV. C  
M102713  
ED-6447/3  
ROS-285PV  
MM/TD/CP/AM  
090826  
Page 1 of 2

# Performance Data & Curves

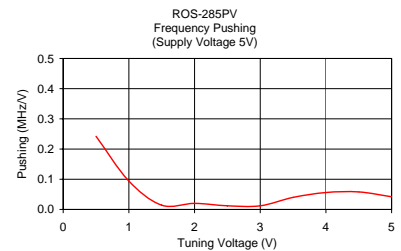
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
0.50	21.97	238.58	235.41	232.77	1.92	2.58	2.56
1.00	18.29	248.02	244.92	242.29	2.20	2.80	2.76
1.50	16.37	256.43	253.32	250.66	2.15	3.05	3.02
2.00	15.19	264.18	261.05	258.35	2.38	2.96	2.87
2.50	14.32	271.45	268.29	265.57	2.70	3.22	3.13
3.00	13.55	278.31	275.15	272.41	3.20	3.67	3.26
3.50	12.75	284.78	281.64	278.86	3.40	3.87	3.72
4.00	11.87	290.82	287.69	284.88	3.27	3.73	3.89
4.50	10.91	296.39	293.27	290.45	3.57	3.86	3.71
5.00	9.93	301.45	298.36	295.53	3.66	4.15	3.99



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-13.78	-28.94	-43.11	0.24
1.00	-15.00	-28.66	-43.83	0.09
1.50	-16.33	-28.67	-43.83	0.01
2.00	-17.18	-28.51	-43.18	0.02
2.50	-18.04	-28.70	-42.20	0.01
3.00	-18.71	-28.71	-41.04	0.01
3.50	-19.24	-28.91	-39.91	0.04
4.00	-19.74	-28.91	-38.74	0.06
4.50	-20.21	-29.04	-38.04	0.06
5.00	-20.51	-29.01	-37.35	0.04



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