

# Voltage Controlled Oscillator

## ROS-285PV+ ROS-285PV

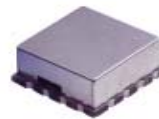
### 5V Tuning for PLL IC's 245 to 285 MHz

#### 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

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	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.		1 kHz	10 kHz	100 kHz	1 MHz				Typ.	Max.		Voltage (V)	Current (mA) Max.
ROS-285PV(+)	245	285	3	-80	-100	-120	-140	2.0	0.2	10-20	-20	-10	0.1	5	20

TUNING VOLTAGE TO COVER FREQUENCY RANGE 0.5V MIN. TO 5V MAX.

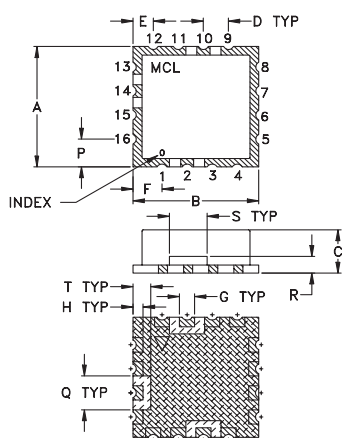
#### Pin Connections

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

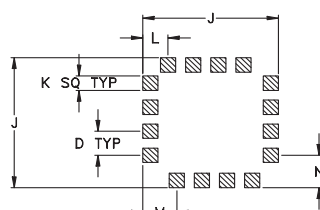
#### Maximum Ratings

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	

#### Outline Drawing

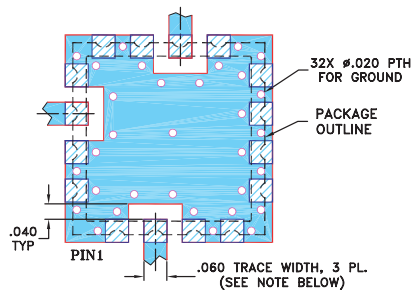


#### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

#### Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)

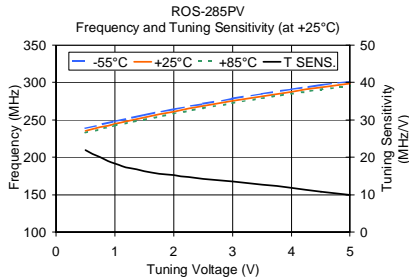


- NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

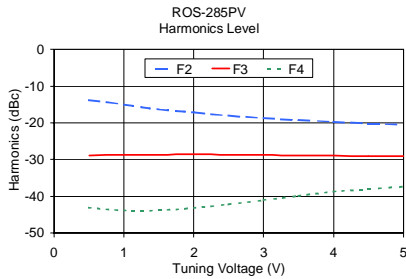
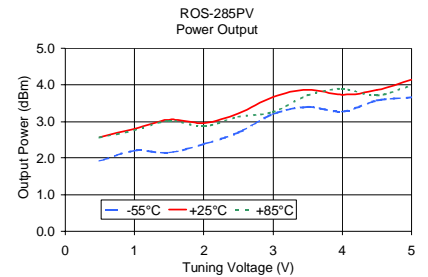
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

#### Outline Dimensions (inch)

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



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

