

Voltage Controlled Oscillator

ROS-675PV

5V Tuning for PLL IC's 655 to 675 MHz

Features

- low phase noise, -107 dBc/Hz at 10 kHz offset
- linear tuning, 10-14 MHz/V typ.
- 5V power supply
- aqueous washable

Applications

- PLL circuitry
- UHF
- instrumentation



CASE STYLE: CK605
PRICE: \$19.95 ea. QTY (5-49)

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.		Typ.	1 kHz	10 kHz	100 kHz				1 MHz	Typ.		Typ.	Typ.
ROS-675PV	655	675	0	-85	-107	-127	-145	1.0	0.5	10-14	-23	-10	5.0	5	15

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

Pin Connections

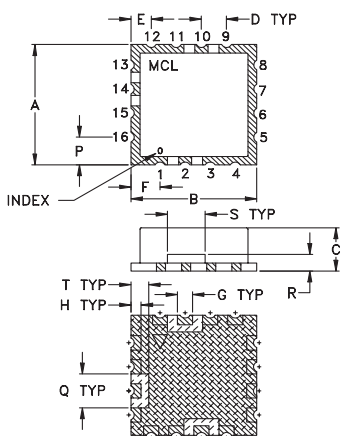
RFOUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

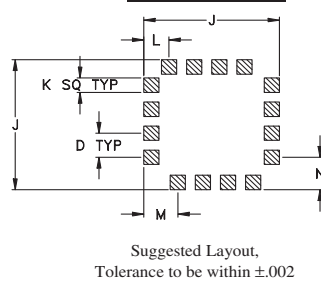
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+6V
Absolute Max. Tuning Voltage (Vtune)	+6V

all specifications: 50 ohm system

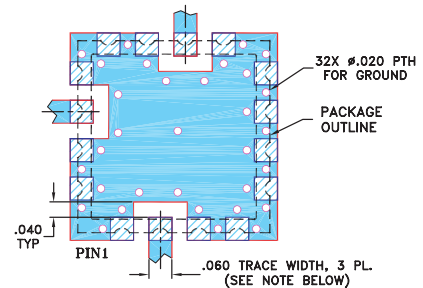
Outline Drawing



PCB Land Pattern



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

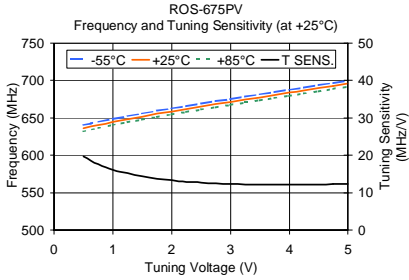


- NOTES: 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

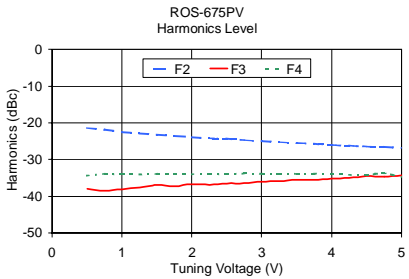
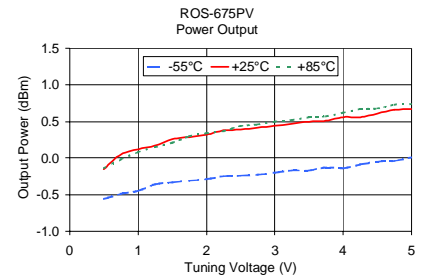
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/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



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	19.66	640.48	636.17	631.77	-0.56	-0.15	-0.14
0.75	17.62	644.72	640.57	636.32	-0.49	0.05	-0.02
1.00	16.11	648.68	644.60	640.44	-0.45	0.12	0.08
1.25	15.21	652.41	648.40	644.29	-0.36	0.17	0.15
1.50	14.40	655.94	652.00	647.94	-0.33	0.26	0.21
1.75	13.77	659.33	655.45	651.40	-0.31	0.29	0.30
2.00	13.35	662.65	658.78	654.75	-0.29	0.32	0.34
2.25	12.94	665.87	662.02	657.99	-0.25	0.38	0.37
2.50	12.77	669.06	665.21	661.18	-0.24	0.39	0.44
2.75	12.51	672.20	668.34	664.31	-0.23	0.42	0.46
3.00	12.39	675.29	671.44	667.39	-0.20	0.44	0.50
3.25	12.22	678.35	674.49	670.44	-0.17	0.47	0.52
3.50	12.17	681.39	677.53	673.47	-0.17	0.50	0.56
3.75	12.15	684.44	680.57	676.49	-0.13	0.51	0.57
4.00	12.14	687.48	683.60	679.51	-0.14	0.56	0.62
4.25	12.19	690.56	686.65	682.53	-0.09	0.56	0.67
4.50	12.17	693.64	689.69	685.56	-0.05	0.61	0.68
4.75	12.29	696.72	692.77	688.61	-0.04	0.66	0.73
5.00	12.29	699.81	695.84	691.67	0.01	0.67	0.74



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
0.50	-21.40	-37.92	-34.38	0.32
0.75	-21.87	-38.49	-33.89	0.29
1.00	-22.46	-38.05	-34.08	0.29
1.25	-22.89	-37.55	-34.08	0.27
1.50	-23.20	-36.92	-33.90	0.26
1.75	-23.59	-37.29	-33.95	0.26
2.00	-23.91	-36.65	-33.97	0.26
2.25	-24.20	-36.80	-33.88	0.24
2.50	-24.30	-36.49	-34.03	0.24
2.75	-24.72	-36.44	-33.77	0.24
3.00	-24.98	-36.03	-33.89	0.24
3.25	-25.21	-35.84	-33.81	0.24
3.50	-25.48	-35.49	-33.95	0.22
3.75	-25.68	-35.57	-33.85	0.22
4.00	-26.05	-35.18	-34.02	0.24
4.25	-26.18	-34.99	-34.10	0.22
4.50	-26.45	-34.56	-34.19	0.24
4.75	-26.53	-34.72	-33.76	0.23
5.00	-26.83	-34.32	-34.69	0.22

