

# Voltage Controlled Oscillator

## ROS-765+ ROS-765

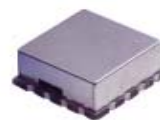
### Linear Tuning 485 to 765 MHz

#### Features

- wide octave band tuning
- low phase noise
- linear tuning
- excellent harmonic suppression, -27 dBc typ.

#### Applications

- test instruments-signal generators
- digital cordless phone



CASE STYLE: CK605  
PRICE: \$15.95 ea. QTY (5-49)

**+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)**

See our web site for RoHS Compliance methodologies and qualifications.

#### Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE dBc/Hz SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dBc (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
	Min.	Max.		Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz				Typ.	Max.		Vcc (volts)	Current (mA)
ROS-765(+)	485	765	+6.0	1	16	-74	-95	-115	-135	2	0.5	10-40	-27	-14	0.1	12	22

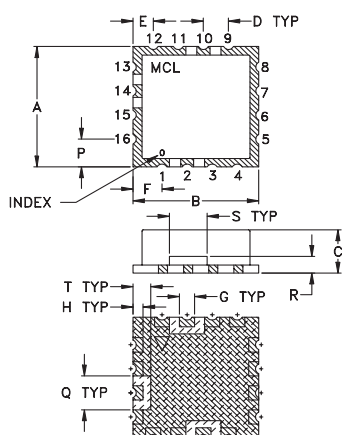
#### Pin Connections

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

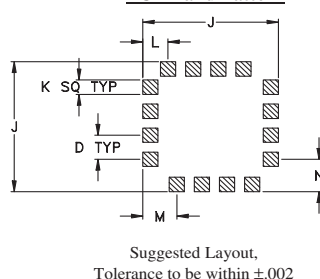
#### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+13V
Absolute Max. Tuning Voltage (Vtune)	+18V
all specifications: 50 ohm system	

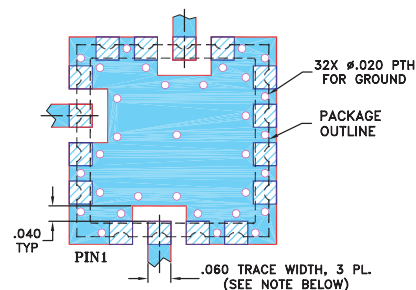
#### Outline Drawing



#### 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.

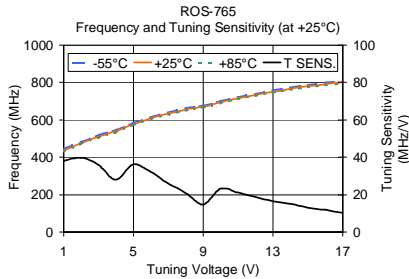
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

#### Outline Dimensions (inch)

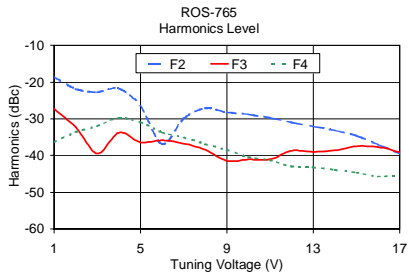
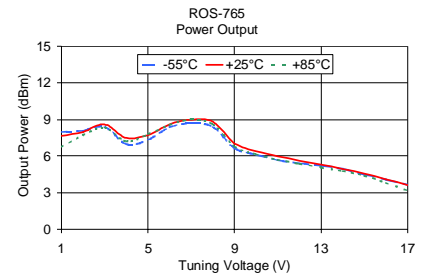
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

# Performance 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
1.00	38.08	444.48	436.03	429.50	7.97	7.65	6.74
2.00	39.81	481.98	475.84	471.10	8.08	7.99	7.72
3.00	35.90	517.76	511.74	506.24	8.39	8.60	8.34
4.00	28.03	545.98	539.78	533.82	6.98	7.48	7.20
5.00	36.29	582.59	576.06	571.20	7.34	7.72	7.80
6.00	32.26	614.91	608.32	603.14	8.36	8.61	8.54
7.00	26.11	640.90	634.43	629.18	8.70	8.98	9.02
8.00	20.99	661.38	655.42	649.47	8.39	8.80	8.60
9.00	14.85	675.58	670.27	666.05	6.65	7.05	6.78
10.00	23.30	699.39	693.57	689.02	6.11	6.40	6.15
11.00	21.18	721.09	714.75	709.82	5.67	5.99	5.71
12.00	18.88	740.03	733.63	728.26	5.40	5.61	5.37
13.00	16.64	757.44	750.27	744.96	5.22	5.27	5.06
14.00	15.17	772.80	765.44	759.87	4.94	4.95	4.77
15.00	13.25	786.24	778.69	773.12	4.49	4.58	4.40
16.00	11.97	798.34	790.66	784.45	4.07	4.11	3.81
17.00	10.30	808.83	800.96	794.69	3.63	3.62	3.15



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-18.55	-27.29	-36.35	0.77
2.00	-21.89	-32.31	-33.63	-0.13
3.00	-22.69	-39.40	-31.97	0.51
4.00	-21.77	-33.74	-29.75	0.96
5.00	-26.48	-36.37	-30.93	-0.51
6.00	-36.88	-35.81	-33.65	0.00
7.00	-29.91	-36.72	-35.05	0.32
8.00	-27.19	-38.42	-36.84	0.96
9.00	-28.24	-41.45	-38.44	-0.64
10.00	-28.77	-41.03	-40.34	-0.51
11.00	-29.79	-41.02	-41.26	-0.19
12.00	-30.94	-38.70	-42.96	-0.13
13.00	-32.06	-39.00	-43.19	-0.13
14.00	-33.14	-38.59	-43.91	0.06
15.00	-34.60	-37.44	-44.61	0.13
16.00	-36.99	-37.64	-45.65	0.19
17.00	-39.48	-39.00	-45.31	0.13

