

# Surface Mount Voltage Controlled Oscillator

# JTOS-765+ JTOS-765

## Linear Tuning 485 to 765 MHz

### Features

- wide frequency range, 485 to 765 MHz
- linear tuning characteristics
- excellent harmonic suppression, -30 dBc typ.
- low phase noise, -138 dBc/Hz at 1 MHz offset
- aqueous washable

### Applications

- measurement instrumentation
- catv distributor
- VHF



CASE STYLE: BK377  
PRICE: \$16.95 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)				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.		Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz				Typ.	Max.		Typ.	Max.
485	765	+8.0	1	16	-75	-98	-118	-138	2.0	0.5	20-30	-30	-20	0.1	12	20

### Pin Connections

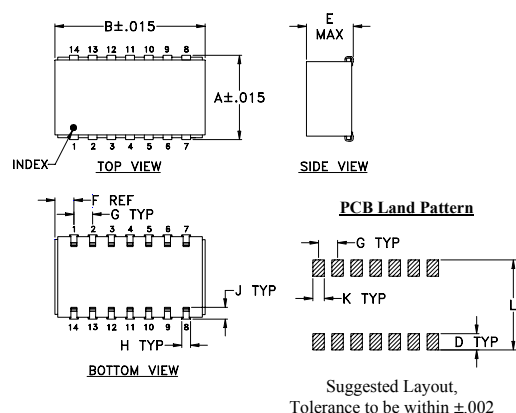
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

### Maximum Ratings

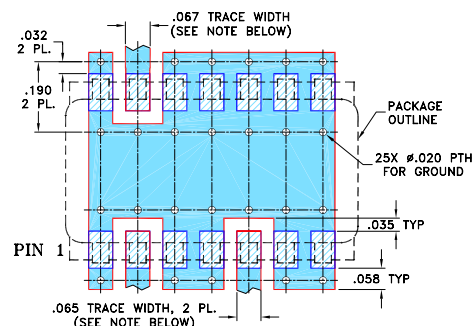
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+18V

all specifications: 50 ohm system  
Permanent damage may occur if any of these limits are exceeded.

### Outline Drawing



### Demo Board MCL PIN: TB-04 Suggested PCB Layout (PL-005)



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt
.505	.800	--	.100	.250	.100	.100	.047	.065	.065	.525	grams
12.83	20.32	--	2.54	6.35	2.54	2.54	1.19	1.65	1.65	13.34	3.0

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ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

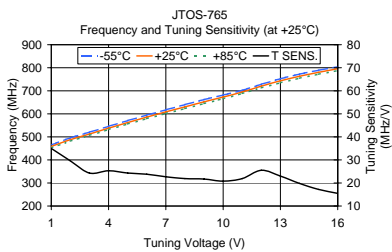
For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

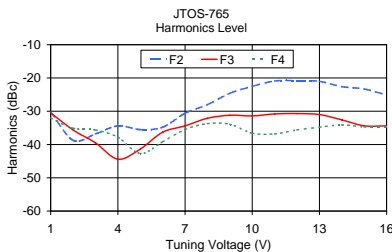
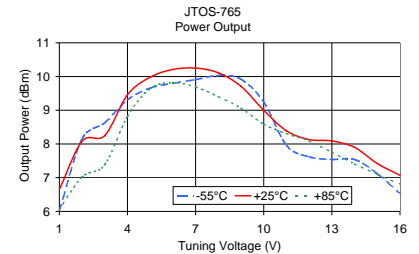
REV. E  
M102713  
JTOS-765  
ED-3892/3  
MM/TD/CP  
091223  
Page 1 of 2

# Performance Data & Curves

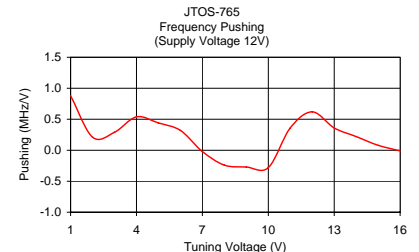
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V TUNE	TUNING SENS. (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)		
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C
1.00	35.00	465.25	458.58	452.66	6.03	6.65	6.07
2.00	29.60	495.97	488.18	481.77	8.15	8.08	7.02
3.00	24.30	520.33	512.46	506.55	8.63	8.25	7.39
4.00	25.30	545.93	537.73	531.95	9.31	9.46	8.82
5.00	24.30	570.77	562.06	556.06	9.66	9.98	9.64
6.00	23.80	594.83	585.85	579.35	9.80	10.21	9.82
7.00	22.70	617.68	608.52	601.52	9.91	10.25	9.69
8.00	21.90	640.03	630.40	623.18	10.03	10.11	9.41
9.00	21.70	661.98	652.12	644.62	9.92	9.71	9.06
10.00	20.80	681.98	672.95	665.68	9.24	9.00	8.59
11.00	21.90	702.20	694.83	688.36	7.96	8.39	8.31
12.00	25.50	728.47	720.38	712.66	7.62	8.13	8.09
13.00	23.00	752.52	743.41	734.83	7.54	8.09	7.76
14.00	19.80	772.63	763.22	754.73	7.54	7.90	7.41
15.00	17.20	789.40	780.43	772.20	7.12	7.42	7.10
16.00	15.50	804.72	795.96	787.93	6.53	7.07	6.81



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-30.20	-30.50	-32.00	0.88
2.00	-38.70	-35.60	-35.10	0.21
3.00	-36.80	-39.50	-35.60	0.29
4.00	-34.40	-44.40	-37.80	0.54
5.00	-35.50	-41.40	-42.70	0.44
6.00	-34.80	-36.30	-39.20	0.32
7.00	-30.60	-34.40	-35.50	-0.02
8.00	-28.00	-32.10	-33.70	-0.24
9.00	-24.60	-31.20	-33.90	-0.27
10.00	-22.50	-31.40	-36.60	-0.28
11.00	-20.90	-30.80	-36.80	0.36
12.00	-20.80	-30.70	-35.60	0.62
13.00	-21.00	-31.00	-34.80	0.36
14.00	-22.60	-32.60	-34.10	0.22
15.00	-23.30	-34.40	-34.70	0.08
16.00	-25.10	-34.40	-34.80	-0.01



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