

Surface Mount

# Voltage Controlled Oscillator

# JTOS-1025+

Linear Tuning 685 to 1025 MHz

## Features

- wide frequency range, 685 to 1025 MHz
- linear tuning characteristics
- excellent harmonic suppression, -32 dBc typ.
- low phase noise, -134 dBc/Hz at 1 MHz offset, typ.
- aqueous washable

## Applications

- cellular
- instrumentation
- catv



Generic photo used for illustration purposes only

CASE STYLE: BK377

### +RoHS Compliant

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, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.
JTOS-1025+	685	1025	+8.5	-70	-94	-114	-134	1	16	15-39	110	0.1	-90	-32	-20	5.0	1	12	22

## Pin Connections

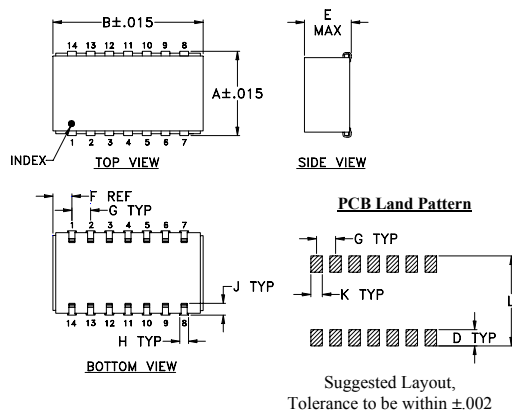
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

## Maximum Ratings

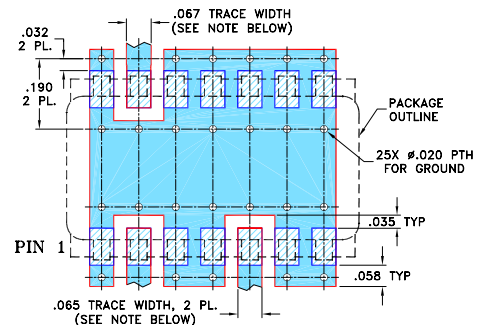
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+16V
Absolute Max. Tuning Voltage (Vtune)	+18V

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

## Outline Drawing



## Demo Board MCL P/N: TB-04 Suggested PCB Layout (PL-005)



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt (max)
.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	2.0

### Notes

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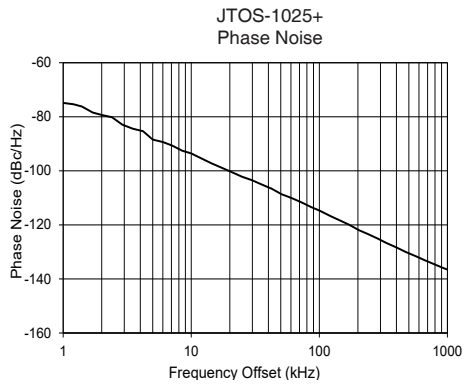
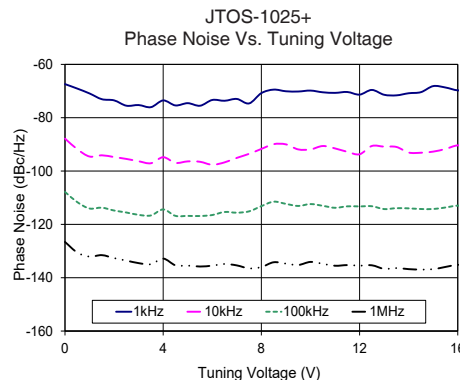
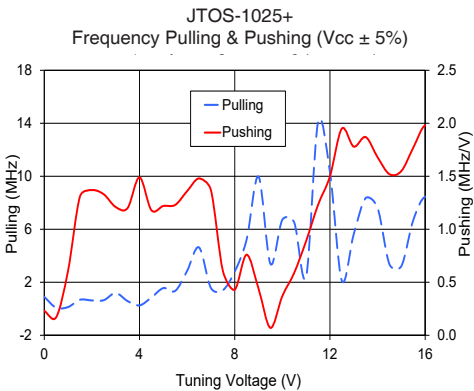
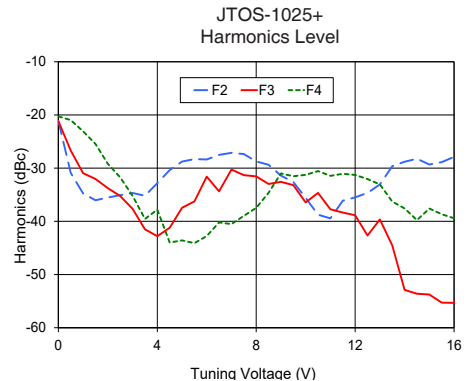
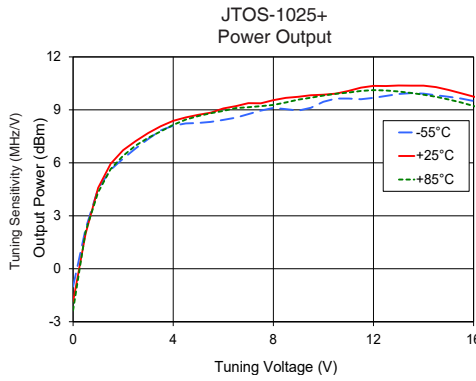
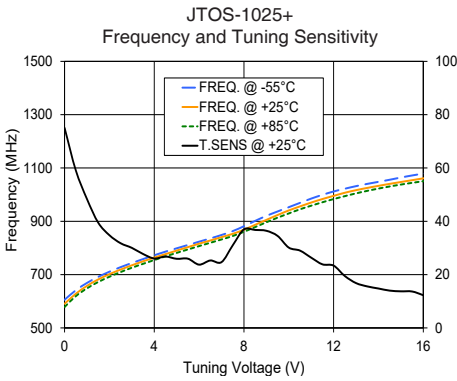


# NON-CATALOG

## Performance Data & Curves

## JTOS-1025+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 855 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	75.07	605.6	590.5	578.3	-1.01	-1.86	-2.36	16.96	-21.1	-21.2	-20.3	0.23	0.90	-67.39	-87.8	-107.8	-126.6	1.0	-74.87
1.00	48.34	668.8	657.6	648.4	4.54	4.58	4.33	17.22	-34.8	-31.0	-23.1	0.61	0.13	-70.90	-94.6	-114.0	-132.1	2.0	-79.32
1.50	39.49	691.5	681.8	672.2	5.61	5.95	5.65	17.32	-36.0	-32.0	-25.5	1.31	0.68	-73.05	-94.1	-113.7	-131.5	3.5	-84.42
2.00	34.78	710.8	701.5	691.9	6.24	6.72	6.40	17.35	-35.5	-33.8	-29.2	1.37	0.63	-73.49	-94.8	-114.8	-132.7	6.0	-89.33
3.00	30.03	743.4	734.8	725.7	7.35	7.69	7.42	17.29	-34.7	-37.7	-35.2	1.21	1.19	-75.25	-96.3	-116.4	-134.5	8.5	-92.55
4.00	26.04	772.4	763.7	754.5	8.10	8.38	8.15	17.18	-32.8	-42.8	-37.8	1.49	0.26	-73.52	-94.8	-114.4	-132.8	10.0	-93.54
5.00	25.93	798.6	790.1	781.5	8.26	8.72	8.65	17.03	-28.8	-37.5	-43.6	1.22	1.56	-74.54	-96.4	-116.8	-135.5	20.8	-100.51
6.00	23.74	823.5	816.0	806.9	8.43	9.08	8.94	16.89	-28.4	-31.6	-42.8	1.36	2.86	-73.34	-97.6	-116.5	-135.5	35.5	-105.05
7.00	24.68	848.6	840.6	831.8	8.76	9.38	9.15	16.71	-27.1	-30.3	-40.5	1.37	1.57	-72.96	-95.1	-115.6	-135.4	60.7	-110.05
8.00	36.96	881.5	868.4	860.6	9.11	9.55	9.28	16.56	-28.7	-31.6	-37.5	0.43	2.81	-70.77	-91.7	-113.2	-136.0	86.7	-113.46
8.50	36.76	901.5	886.9	878.3	9.04	9.68	9.42	16.53	-29.4	-33.0	-34.7	0.76	5.23	-69.46	-89.9	-111.5	-134.2	100.0	-114.68
9.00	36.44	920.3	905.2	896.3	8.96	9.74	9.58	16.53	-31.4	-32.6	-31.0	0.44	9.98	-70.08	-90.0	-112.3	-134.7	145.5	-118.39
10.00	30.13	953.0	940.7	929.5	9.46	9.86	9.81	16.52	-35.6	-36.5	-31.3	0.37	6.72	-69.82	-91.9	-112.4	-134.1	170.8	-119.96
11.00	26.36	985.2	970.3	958.5	9.64	10.07	9.98	16.51	-39.5	-37.7	-31.5	0.89	2.43	-70.68	-91.5	-113.8	-135.5	204.2	-121.97
12.00	23.37	1011.9	995.4	983.4	9.68	10.36	10.12	16.47	-35.5	-38.9	-31.3	1.50	10.31	-71.33	-93.7	-113.3	-135.5	286.7	-125.09
13.00	16.81	1031.9	1016.8	1004.8	9.90	10.38	10.04	16.44	-33.1	-39.6	-33.1	1.78	5.64	-71.39	-90.9	-114.3	-136.7	336.6	-126.78
13.50	15.57	1040.3	1025.2	1014.2	9.95	10.37	9.96	16.41	-29.7	-44.5	-36.3	1.87	8.35	-71.61	-91.0	-113.9	-136.4	472.5	-130.01
14.00	14.78	1048.0	1033.0	1022.8	9.92	10.37	9.86	16.38	-28.8	-52.9	-37.6	1.68	7.62	-70.82	-93.1	-114.0	-136.8	564.9	-131.58
15.00	13.73	1064.3	1047.4	1037.8	9.74	10.13	9.59	16.32	-29.3	-53.8	-37.6	1.55	3.22	-68.14	-92.7	-114.2	-136.8	931.1	-135.98
16.00	12.24	1078.7	1061.1	1050.3	9.50	9.75	9.22	16.29	-27.9	-55.3	-39.4	1.98	8.45	-69.74	-90.4	-113.0	-135.2	1000.0	-136.53



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