

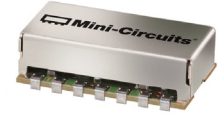
# Voltage Controlled Oscillator

# JTOS-1000W+

Wide Band 500 to 1000 MHz

## Features

- wide frequency range, 500 to 1000 MHz typ.
- 3dB modulation bandwidth 100 kHz offset, typ.
- octave, linear tuning.
- low phase noise, -134 dBc/Hz at 1 MHz offset, typ.
- excellent harmonic suppression, -26 dBc typ.
- aqueous washable



CASE STYLE: BK377

## Applications

- test instruments-signal generators
- wideband frequency synthesizers
- agile communications systems
- catv distribution and set-top converters
- cellular up and down converters
- digital cordless phones

**+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)	SENSI-TIVITY (MHz/V)	PORT CAP (pF)		3 dB MODULATION BANDWIDTH (MHz)	Typ.			Max.	Typ.	Max.
JTOS-1000W+	500	1000	+9.5	-73	-94	-114	-136	1.0	18	30-50	160	0.1	-90	-26	-19	3	1.0	12	25

## 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)	15V
Absolute Max. Tuning Voltage (Vtune)	25V
All specifications	50 ohm system

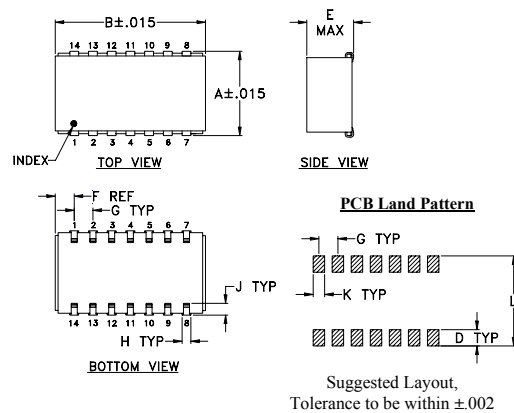
Permanent damage may occur if any of these limits are exceeded.

## Tape & Reel: F107

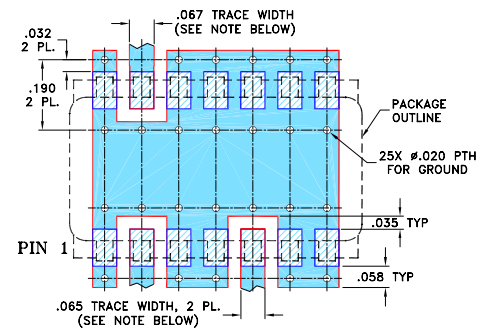
13" Reels with 20, 50, 100, 200 devices

## Environmental Ratings: ENV65

## 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
.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

### Notes

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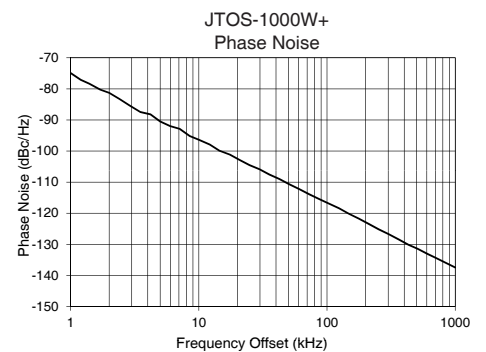
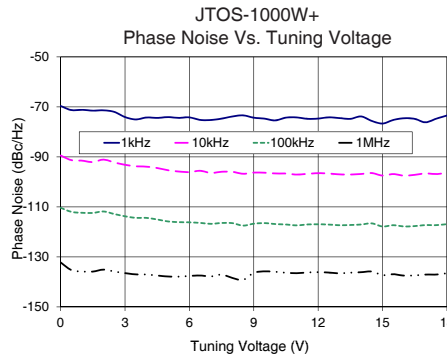
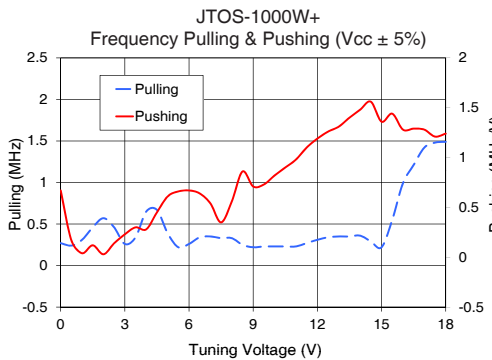
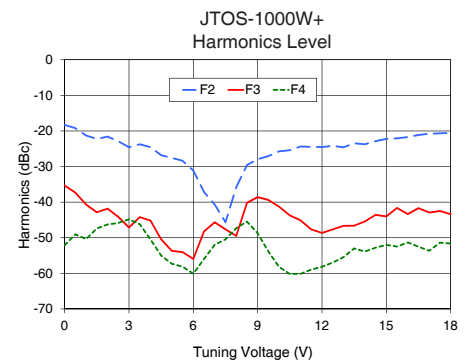
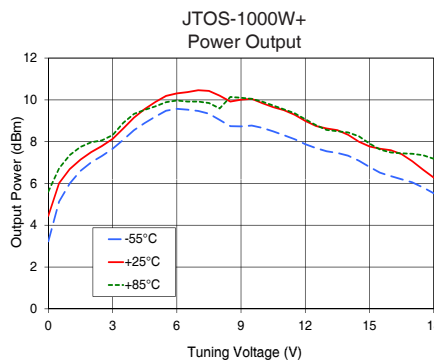
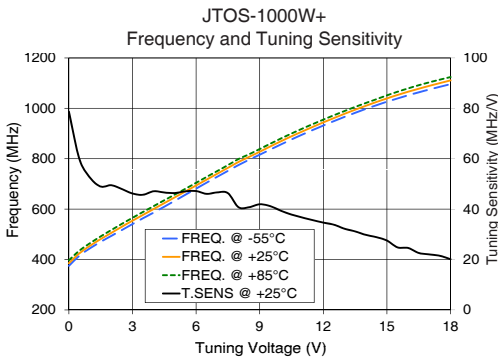


# Performance Data & Curves\*

# JTOS-1000W+

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 750 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	78.68	375.1	385.6	397.3	3.23	4.45	5.61	20.16	-18.3	-35.3	-52.1	0.67	0.27	-69.65	-89.5	-110.4	-132.2	1.0	-74.89
1.00	52.47	444.9	454.9	465.2	6.00	6.69	7.36	20.17	-21.3	-40.7	-50.4	0.04	0.31	-71.19	-91.5	-112.4	-135.8	2.0	-81.27
2.00	49.49	493.7	505.6	517.1	7.01	7.50	7.97	20.20	-21.6	-41.8	-46.3	0.03	0.57	-71.38	-91.1	-111.8	-135.1	3.5	-87.44
3.00	46.21	540.8	554.3	565.6	7.66	8.13	8.31	20.29	-24.6	-47.1	-44.8	0.23	0.26	-74.07	-93.2	-113.8	-136.5	6.0	-92.00
4.00	47.11	586.4	600.3	612.0	8.55	9.15	9.33	20.38	-24.6	-45.2	-50.5	0.28	0.65	-74.25	-93.9	-114.4	-137.1	8.5	-95.16
5.00	46.40	633.5	647.1	658.0	9.20	9.90	9.69	20.51	-27.6	-53.7	-57.3	0.61	0.39	-74.09	-95.3	-115.8	-137.8	10.0	-96.36
6.00	47.18	681.3	693.9	704.5	9.57	10.31	9.97	20.62	-31.1	-55.9	-60.1	0.67	0.26	-74.19	-96.1	-116.2	-137.6	20.8	-102.87
7.00	46.65	728.6	740.5	751.2	9.47	10.46	9.92	20.72	-40.7	-45.7	-51.9	0.54	0.35	-75.24	-96.4	-116.8	-137.8	35.5	-107.54
8.00	40.76	774.9	787.0	798.9	9.04	10.20	9.59	20.80	-35.8	-49.5	-47.3	0.56	0.33	-73.84	-96.0	-116.5	-138.4	60.7	-112.23
9.00	41.93	816.0	827.8	838.6	8.73	10.01	10.10	20.87	-27.9	-38.6	-48.7	0.71	0.22	-74.32	-96.3	-116.7	-136.4	86.7	-115.40
10.00	39.36	856.7	869.3	880.4	8.66	9.84	9.91	20.91	-25.7	-41.3	-58.2	0.82	0.23	-75.41	-96.6	-116.9	-136.0	100.0	-116.61
11.00	36.71	895.5	907.9	919.1	8.31	9.51	9.55	20.95	-24.4	-45.1	-60.1	0.98	0.23	-74.22	-97.1	-117.4	-136.5	148.1	-120.16
12.00	34.65	931.6	944.1	955.2	7.88	8.99	9.07	20.98	-24.5	-48.7	-58.2	1.19	0.31	-74.68	-96.5	-117.0	-136.1	177.0	-121.73
13.00	32.22	966.0	978.3	989.4	7.54	8.63	8.56	21.00	-24.6	-46.7	-55.5	1.31	0.35	-74.49	-97.0	-117.3	-136.6	211.6	-123.43
13.50	31.17	982.1	994.4	1005.6	7.46	8.55	8.50	21.01	-23.5	-46.6	-53.0	1.40	0.35	-74.79	-97.0	-117.2	-136.3	302.4	-126.72
14.00	29.79	997.5	1010.0	1021.1	7.33	8.33	8.44	21.03	-23.7	-45.4	-53.9	1.48	0.36	-73.83	-96.8	-117.1	-136.1	361.5	-128.40
15.00	27.53	1026.2	1039.3	1051.6	6.79	7.77	7.91	21.04	-22.2	-44.0	-52.0	1.36	0.22	-76.65	-97.5	-117.8	-137.3	507.5	-131.39
16.00	24.59	1051.8	1065.5	1079.2	6.35	7.59	7.48	21.04	-21.7	-43.4	-51.3	1.28	0.99	-74.54	-97.5	-117.8	-137.5	606.7	-133.06
17.00	22.04	1074.8	1089.1	1103.3	6.05	7.06	7.42	21.04	-20.8	-42.9	-53.7	1.28	1.42	-76.18	-96.6	-117.3	-137.1	851.6	-136.02
18.00	20.12	1095.8	1110.9	1124.1	5.53	6.28	7.18	21.03	-20.5	-43.4	-51.6	1.24	1.49	-73.45	-96.4	-116.9	-136.6	1000.0	-137.43

\*at 25°C unless mentioned otherwise



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