

Surface Mount Voltage Controlled Oscillator

JTOS-25+ JTOS-25

Linear Tuning 12.5 to 25 MHz

Features

- 3 dB modulation bandwidth 130 kHz typ.
- octave linear tuning
- excellent harmonic suppression, -26 dBc typ.
- low power consumption, 190 mW typ.
- aqueous washable

Applications

- test instruments-signal generators
- wideband frequency synthesizers



CASE STYLE: BK377
PRICE: \$18.95 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) SSB at offset frequencies: Typ.				PULLING pk-pk @ 12 dBz (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
12.5	25	+8.0	1	11	-95	-115	-135	-155	0.03	0.02	1.0-4.0	-26	-13	0.13	12	20

Pin Connections

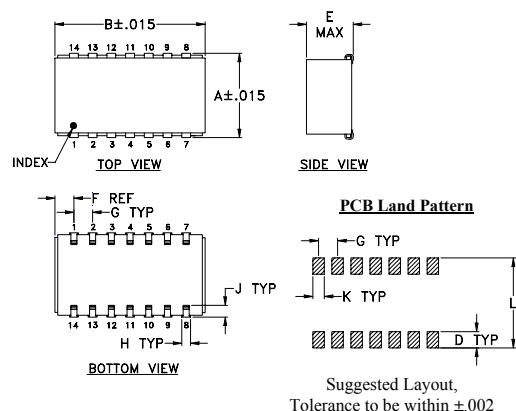
RF OUT	13
VCC	2
V-TUNE	5
GROUND	1,3,4,6,7,8,9,10,11,12,14

Maximum Ratings

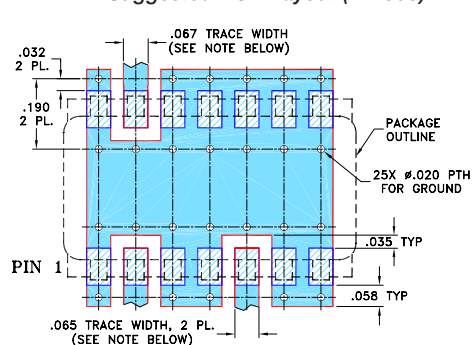
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+12V

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

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

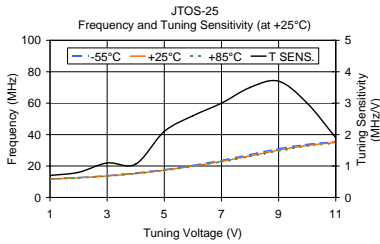
For detailed performance specs & shopping online see web site

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-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

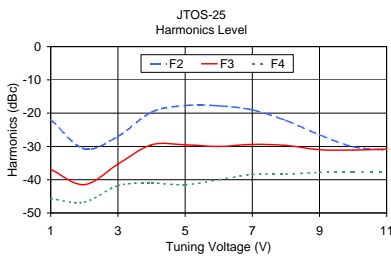
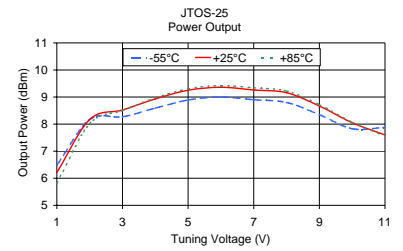
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Performance Data & Curves

JTOS-25+ JTOS-25



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	0.70	11.84	11.72	11.66	6.48	6.21	5.82
2.00	0.80	12.68	12.53	12.45	8.17	8.17	8.02
3.00	1.10	13.88	13.67	13.56	8.27	8.52	8.50
4.00	1.06	15.55	15.26	15.12	8.59	8.93	8.97
5.00	2.10	17.72	17.34	17.15	8.89	9.25	9.30
6.00	2.60	20.39	19.93	19.69	9.00	9.36	9.42
7.00	3.00	23.60	22.96	22.69	8.90	9.26	9.34
8.00	3.50	27.31	26.43	26.09	8.80	9.16	9.22
9.00	3.70	31.02	30.07	29.67	8.35	8.67	8.72
10.00	3.00	33.77	33.07	32.70	7.83	8.05	8.07
11.00	1.90	35.46	34.96	34.64	7.88	7.60	7.56



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-22.00	-36.90	-45.70	0.00
2.00	-30.70	-41.50	-46.70	0.02
3.00	-27.00	-35.30	-41.80	0.02
4.00	-19.70	-29.50	-41.00	0.01
5.00	-17.70	-29.50	-41.50	0.01
6.00	-17.80	-30.00	-40.00	0.01
7.00	-19.00	-29.40	-38.40	0.03
8.00	-22.20	-29.70	-38.30	0.11
9.00	-26.50	-31.00	-37.80	0.18
10.00	-30.10	-31.10	-37.70	0.12
11.00	-31.10	-30.80	-37.60	0.03

