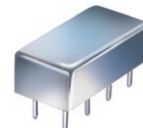


# Plug-In Voltage Controlled Oscillator

## POS-2000A+

### Linear Tuning 1370 to 2000 MHz



CASE STYLE: A06  
PRICE: \$14.95 ea. QTY (5-49)

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

*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

#### Features

- wide frequency range
- linear tuning characteristics
- low phase noise, -137 dBc/Hz at 1 MHz offset
- hermetically sealed
- protected by US patent 6,549,084

#### Applications

- wideband frequency synthesizers
- PLL circuitry
- measurement instrumentation

#### Electrical Specifications

FREQUENCY (MHz)		POWER OUTPUT (dBm)	TUNING VOLTAGE (V)		PHASE NOISE (dBc/Hz) SSB at offset frequencies: Typ.				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.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
1370	2000	+11.8	1	20	-73	-97	-117	-137	12	3	30-45	-24	-12	4.0	8	30

#### Pin Connections

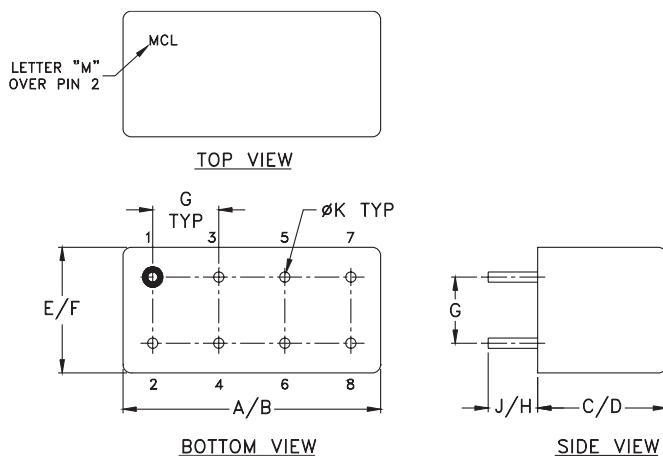
RF OUT	2
VCC	1
V-TUNE	8
GROUND	3,4,5,6,7
CASE GROUND	3,4,5,6,7

#### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+10V
Absolute Max. Tuning Voltage (Vtune)	+25V

all specifications: 50 ohm system

#### Outline Drawing



#### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	wt
.770	.800	.285	.310	.370	.400	.200	.20	.14	.031	grams
19.558	20.32	7.239	7.874	9.398	10.16	5.08	5.08	3.556	0.7874	5.2



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



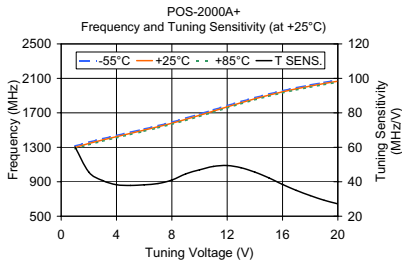
The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS

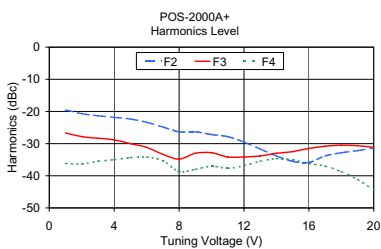
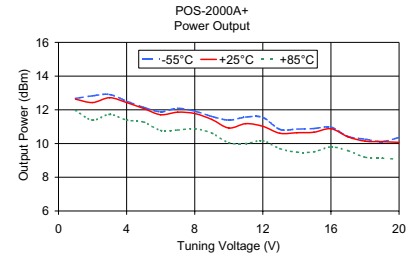
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Page 1 of 2

# Performance Data & Curves

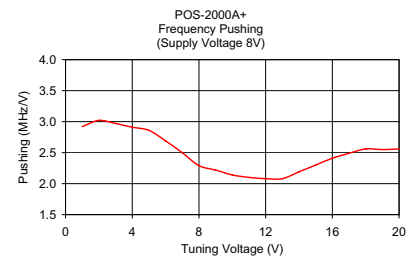
# POS-2000A+



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	60.22	1315.76	1298.69	1282.39	12.68	12.63	11.97
2.00	45.61	1360.30	1344.30	1329.07	12.83	12.43	11.39
3.00	40.69	1400.13	1384.99	1370.50	12.91	12.72	11.73
4.00	38.28	1438.08	1423.27	1409.23	12.52	12.43	11.39
5.00	37.88	1475.67	1461.15	1447.41	12.15	12.08	11.28
6.00	38.21	1513.49	1499.36	1485.93	11.89	11.71	10.78
7.00	38.97	1552.21	1538.33	1525.27	12.09	11.86	10.80
8.00	40.98	1593.01	1579.31	1566.39	11.92	11.78	10.88
9.00	44.58	1639.49	1623.89	1610.31	11.61	11.43	10.62
10.00	46.93	1686.88	1670.81	1656.97	11.39	10.92	10.05
11.00	48.90	1735.04	1719.71	1705.77	11.57	11.18	10.00
12.00	49.42	1784.37	1769.13	1755.29	11.55	11.02	10.16
13.00	48.15	1831.94	1817.28	1803.71	10.84	10.61	9.70
14.00	45.61	1877.13	1862.89	1849.52	10.86	10.64	9.49
15.00	42.30	1919.10	1905.19	1891.96	10.89	10.67	9.51
16.00	38.45	1957.47	1943.64	1930.56	10.97	10.88	9.80
17.00	35.00	1992.45	1978.64	1965.61	10.42	10.40	9.58
18.00	31.99	2024.60	2010.62	1997.48	10.26	10.14	9.19
19.00	29.29	2054.18	2039.91	2026.75	10.12	10.11	9.13
20.00	27.14	2081.17	2067.06	2053.70	10.36	10.07	9.07



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-19.50	-26.67	-36.17	2.92
2.00	-20.66	-27.83	-36.33	3.02
3.00	-21.33	-28.33	-35.50	2.97
4.00	-21.84	-28.84	-35.00	2.91
5.00	-22.34	-30.00	-34.34	2.86
6.00	-23.34	-31.17	-34.17	2.69
7.00	-24.84	-33.34	-35.34	2.50
8.00	-26.33	-34.83	-38.66	2.29
9.00	-26.33	-33.00	-38.00	2.22
10.00	-27.16	-32.83	-37.00	2.14
11.00	-27.83	-34.16	-37.66	2.10
12.00	-29.50	-34.16	-36.83	2.08
13.00	-31.67	-33.83	-35.50	2.08
14.00	-33.83	-33.00	-34.66	2.19
15.00	-35.50	-32.50	-35.00	2.30
16.00	-35.84	-31.50	-36.17	2.41
17.00	-33.83	-30.83	-37.00	2.49
18.00	-32.83	-30.50	-38.66	2.56
19.00	-32.16	-30.66	-41.16	2.55
20.00	-31.33	-31.16	-44.50	2.56



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