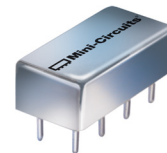


Plug-In

# Voltage Controlled Oscillator

## POS-1000W+

Wideband 500 to 1000 MHz



CASE STYLE: A06

### Features

- octave linear tuning
- 3 dB modulation bandwidth, 0.1 MHz typ.
- low phase noise
- excellent harmonic suppression, -26 dBc typ.
- output suitable for LO drive to 7 dBm mixers
- hermetically sealed

### Applications

- test instruments-signal generators
- wideband frequency synthesizers
- agile communications systems
- CATV distribution and set-top converters
- cellular up and down converters
- HDTV

**+RoHS Compliant**  
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			
			SSB at offset frequencies: Typ.							Typ.	Typ.		Typ.	Max.	Vcc (volts)	Current (mA) Max.
Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.				
500	1000	+7.0	1	16	-73	-93	-113	-133	6.0	1.5	30-42	-26	-20	0.1	12	20

### Pin Connections

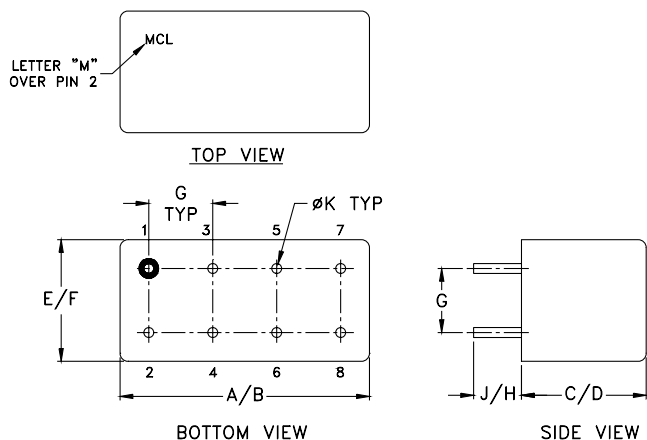
RF OUT	2
VCC	1
V-TUNE	8
GROUND	3,4,5,6,7
CASE GROUND	3,4,5,6,7

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	+15V
Absolute Max. Tuning Voltage (Vtune)	+20V

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

### 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

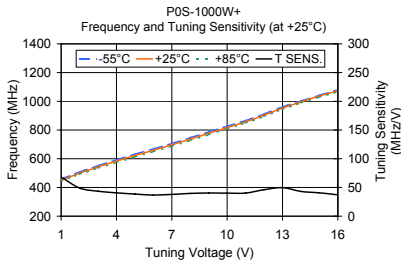
#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document 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](http://www.minicircuits.com/MCLStore/terms.jsp)

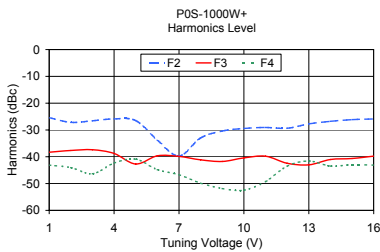
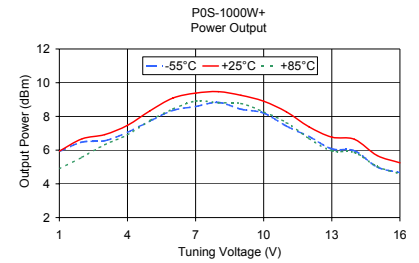


# Performance Data & Curves

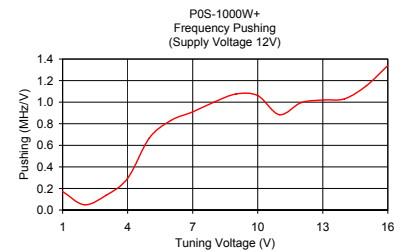
# POS-1000W+



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	68.09	459.29	450.47	443.70	5.92	5.94	4.89
2.00	48.97	508.38	499.44	492.29	6.48	6.67	5.58
3.00	43.41	551.74	542.85	534.72	6.56	6.92	6.32
4.00	40.67	593.09	583.52	574.39	7.06	7.47	6.91
5.00	38.57	632.14	622.09	612.62	7.73	8.34	7.76
6.00	36.83	669.03	658.92	649.90	8.36	9.09	8.44
7.00	37.89	706.90	696.80	687.98	8.59	9.38	8.91
8.00	39.57	746.75	736.37	727.51	8.83	9.47	8.81
9.00	40.34	787.31	776.71	767.87	8.43	9.25	8.77
10.00	40.13	827.22	816.84	808.33	8.20	8.90	8.27
11.00	40.19	865.84	857.03	849.39	7.43	8.27	7.63
12.00	46.09	911.52	903.12	895.20	6.81	7.38	6.69
13.00	49.66	961.39	952.78	944.98	6.08	6.77	5.96
14.00	43.13	1002.59	995.90	988.97	5.96	6.64	5.86
15.00	40.58	1042.71	1036.48	1029.46	5.00	5.68	5.03
16.00	37.19	1080.96	1073.67	1066.10	4.67	5.25	4.60



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-25.42	-38.30	-43.11	0.17
2.00	-27.14	-37.65	-44.04	0.05
3.00	-26.57	-37.38	-46.32	0.14
4.00	-25.87	-38.77	-42.35	0.29
5.00	-26.49	-42.71	-40.87	0.67
6.00	-33.79	-39.65	-44.79	0.83
7.00	-39.71	-39.86	-46.69	0.91
8.00	-32.97	-41.14	-49.83	1.00
9.00	-30.38	-41.74	-51.82	1.08
10.00	-29.44	-40.43	-52.47	1.06
11.00	-29.06	-39.80	-49.26	0.88
12.00	-29.35	-42.42	-43.52	1.00
13.00	-27.72	-43.02	-41.58	1.02
14.00	-26.78	-41.02	-43.47	1.03
15.00	-26.13	-40.64	-42.95	1.15
16.00	-25.89	-39.76	-43.10	1.34



**Notes**

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document 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](http://www.minicircuits.com/MCLStore/terms.jsp)

