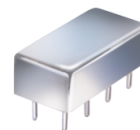


Plug-In Voltage Controlled Oscillator

POS-1000W+ POS-1000W

Wideband 500 to 1000 MHz



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

CASE STYLE: A06

PRICE: \$14.95 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 dBr (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.
500	1000	+7.0	1	16	-73	-93	-113	-133	6.0	1.5	30-42	-26	-20	0.1	12	20

Pin Connections

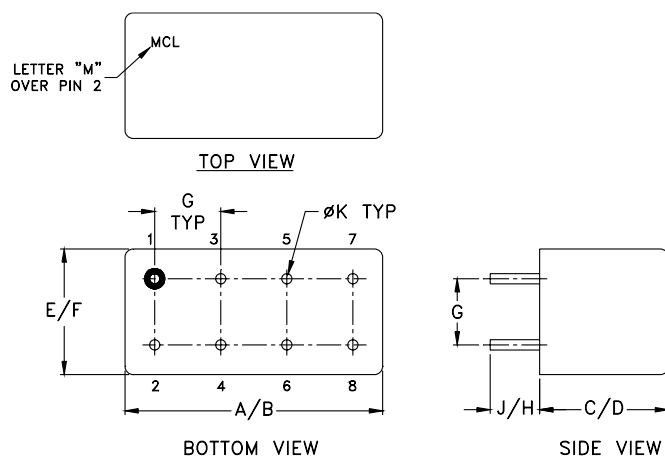
RF OUT	2
VCC	1
V-TUNE	8
GROUND	3,4,5,6,7
CASE GROUND	3,4,5,6,7

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

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F
.770	.800	.285	.310	.370	.400
19.56	20.32	7.24	7.87	9.40	10.16

G	H	J	K	wt
.200	.20	.14	.031	grams
5.08	5.08	3.56	0.79	5.2



INTERNET <http://www.minicircuits.com>

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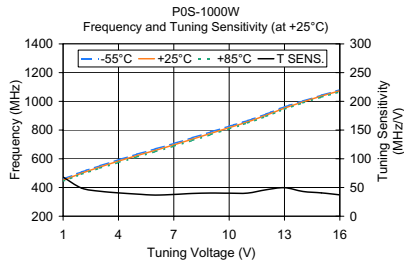
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Mini-Circuits ISO 9001 & ISO 14001 Certified

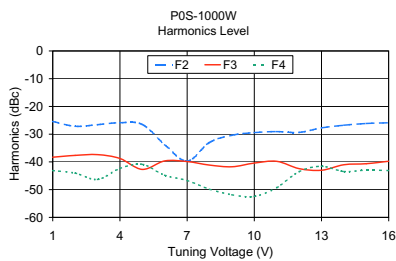
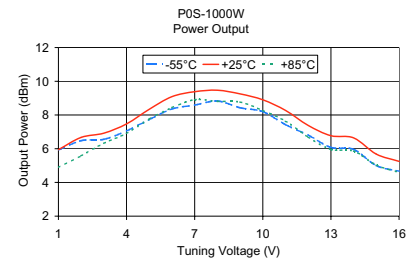
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ED-5634A
POS-1000W
FLTD/CP
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Page 1 of 2

Performance Data & Curves

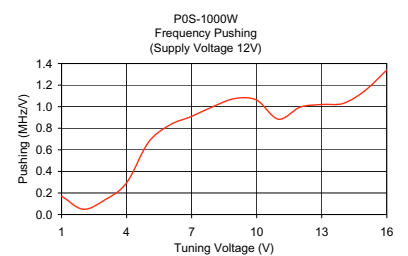
POS-1000W+ POS-1000W



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



Voltage Controlled Oscillator

POS-1000W

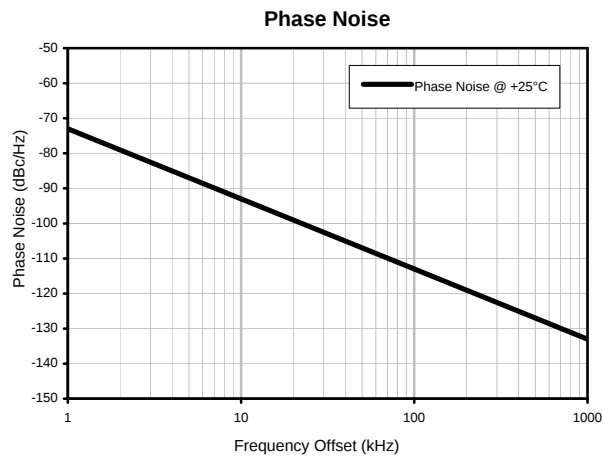
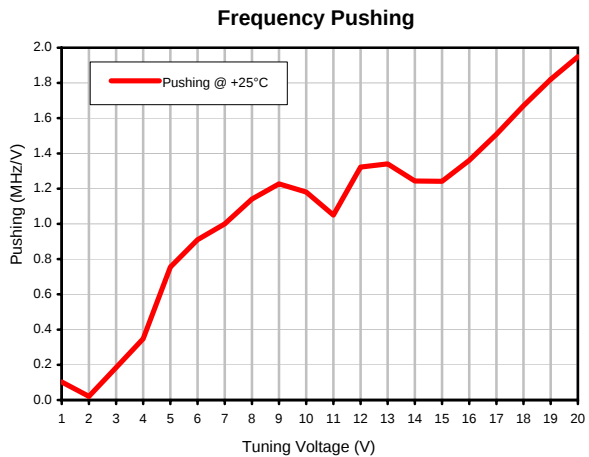
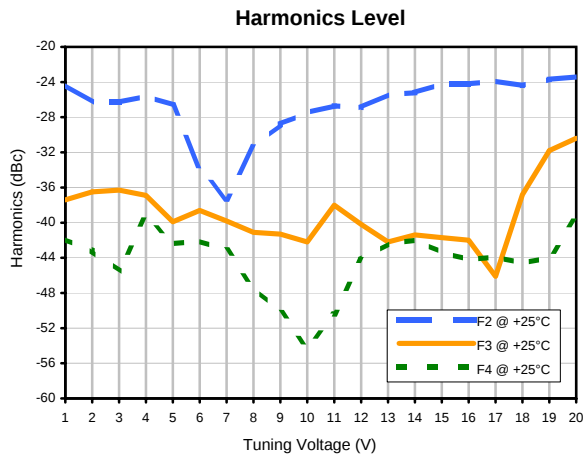
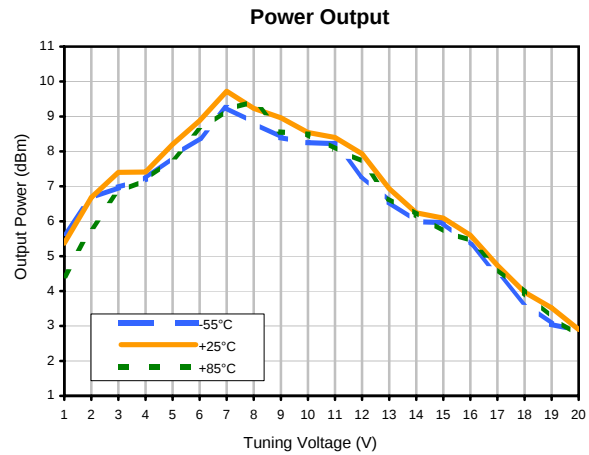
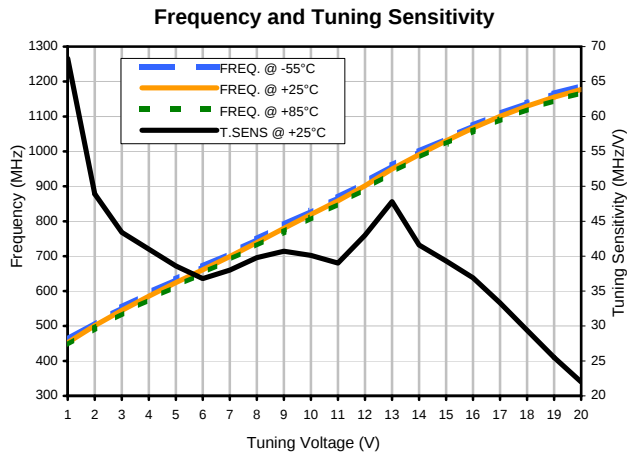
Typical Performance Data

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ OFFSET (KHz)	PHASE NOISE (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C	F2	F3	F4			
1.0	68.30	461.8	452.4	445.1	5.65	5.37	4.44	-24.3	-37.4	-41.9	0.10	1	-73
2.0	48.90	510.6	501.3	493.6	6.66	6.68	5.80	-26.3	-36.5	-43.2	0.02	10	-93
3.0	43.40	553.7	544.6	535.9	6.97	7.40	6.84	-26.3	-36.3	-45.5	0.18	100	-113
4.0	41.00	595.6	585.6	575.7	7.21	7.41	7.18	-25.6	-36.9	-39.2	0.35	1000	-133
5.0	38.60	634.3	624.2	613.9	7.84	8.20	7.79	-26.6	-39.9	-42.4	0.76		
6.0	36.80	671.2	661.0	651.2	8.39	8.88	8.59	-33.8	-38.6	-42.1	0.91		
7.0	38.00	709.1	699.0	689.4	9.25	9.72	9.19	-37.3	-39.8	-43.1	1.00		
8.0	39.80	749.4	738.7	729.1	8.82	9.23	9.44	-31.4	-41.1	-47.4	1.14		
9.0	40.70	790.6	779.5	769.7	8.40	8.96	8.56	-28.8	-41.3	-50.1	1.23		
10.0	40.10	830.7	819.6	809.9	8.25	8.54	8.49	-27.5	-42.2	-54.2	1.18		
11.0	39.00	868.4	858.6	849.6	8.22	8.40	8.07	-26.7	-38.0	-50.4	1.05		
12.0	43.00	912.2	901.6	891.9	7.31	7.93	7.71	-26.9	-40.2	-44.2	1.32		
13.0	47.80	960.6	949.4	939.3	6.56	6.93	6.65	-25.4	-42.2	-42.4	1.34		
14.0	41.60	999.9	990.9	982.0	5.99	6.24	6.19	-25.2	-41.4	-42.0	1.24		
15.0	39.30	1037.7	1030.2	1021.6	5.96	6.09	5.71	-24.2	-41.7	-43.4	1.24		
16.0	36.90	1074.4	1067.1	1058.2	5.32	5.60	5.45	-24.2	-42.0	-44.2	1.36		
17.0	33.30	1108.7	1100.4	1091.1	4.49	4.74	4.64	-23.9	-46.1	-43.9	1.51		
18.0	29.40	1139.4	1129.7	1120.1	3.67	3.97	3.96	-24.4	-36.8	-44.6	1.67		
19.0	25.50	1165.8	1155.2	1145.4	3.05	3.52	3.24	-23.7	-31.8	-44.0	1.82		
20.0	22.00	1188.5	1177.3	1167.4	2.87	2.90	2.73	-23.4	-30.4	-39.4	1.95		

Voltage Controlled Oscillator

POS-1000W

Typical Performance Data



A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01	.770 (19.56)	.800 (20.32)	.385 (9.78)	.400 (10.16)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	5.2
A04			.200 (5.08)	.210 (5.33)							3.7
A05			.240 (6.10)	.250 (6.35)							3.7
A06			.285 (7.24)	.310 (7.87)							5.2

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Header material: C.R.S.
Pin material: #52 alloy.
Cover material: Cupro-Nickel.
- Pin finish: Electro Tin-Silver.
- Insulated spacer available. Request P/N B14-045-01.
- Tolerance on pin diameter $\pm .005$ inch.
- Glass meniscus 0.015 inch max.
- Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.



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Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Moisture Resistance	10 cycles, 24 hours per cycle	MIL-STD-202, Method 106, Condition A, except 50°C and end point electrical test done within 12 hours
Solderability	10X Magnification	J-STD-002, 95% Coverage
Resistance to Solder Heat	260°C for 10 seconds	MIL-STD-202, Method 210, Condition B
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215
Terminal Strength	4 1/2 Pound Pull	MIL-STD-202, Method 211, Condition A



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Gross Leak	125°C Bubble Test	MIL-STD-202, Method 112, Condition D
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D