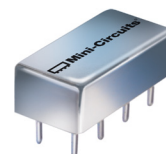


Plug-In

# Voltage Controlled Oscillator

## POS-1025+

Linear Tuning 685 to 1025 MHz



Generic photo used for illustration purposes only  
CASE STYLE: A06

### Features

- wide band
- low phase noise, -136 dBc/Hz typ. @ 1 MHz offset
- high power output, +8.5 dBm typ.
- hermetically sealed

### Applications

- cellular up and down converters
- wideband frequency synthesizers
- signal generators

### +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.	Typ.				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Typ.	Typ.	Typ.	Max.			Vcc	Current (mA)
					1	10	100	1000												
POS-1025+	685	1025	+8.5	-68	-90	-112	-136	1	16	19	58	47	1.2	-90	-23	-17	5	0.6	12	22

### Pin Connections

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

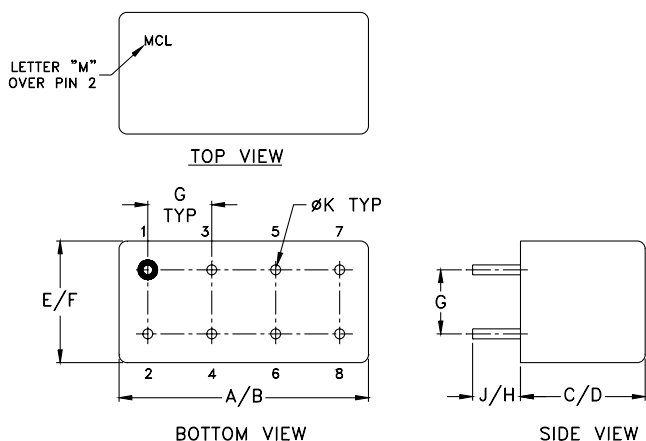
### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	16V
Absolute Max. Tuning Voltage (Vtune)	18V
All specifications	50 ohm system

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

### Outline Drawing

### Environmental Ratings: ENV01



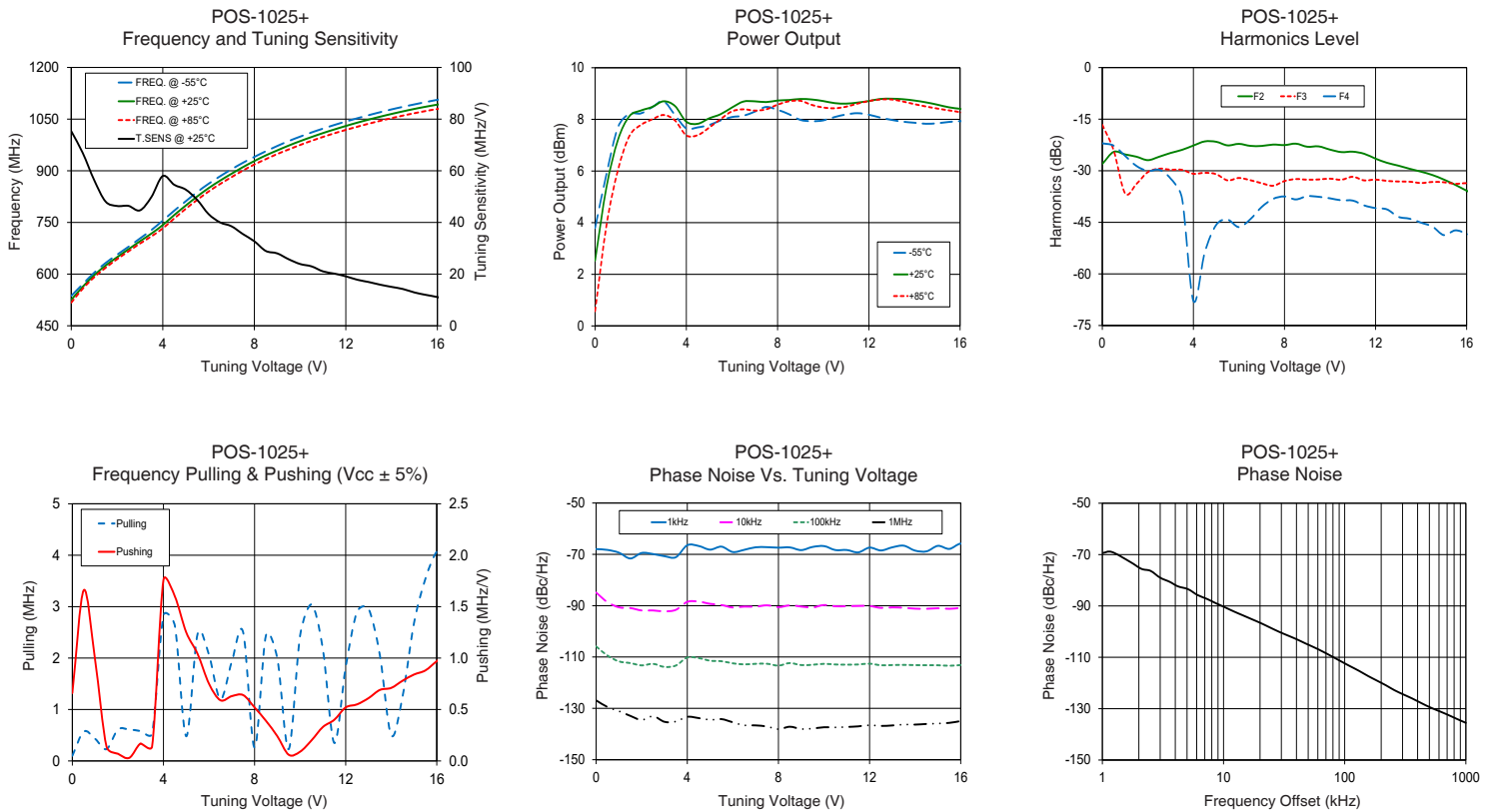
### Outline Dimensions (inch/mm)

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



V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			I <sub>cc</sub> (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 855 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	75.32	536.9	525.5	517.2	3.79	2.53	0.57	17.50	-28.0	-16.6	-22.0	0.66	0.10	-67.95	-84.9	-105.9	-126.9	1.0	-69.42
1.00	56.42	603.9	596.7	590.8	7.69	7.20	6.03	17.71	-25.3	-36.6	-25.7	0.98	0.43	-69.34	-90.6	-111.7	-131.1	2.5	-76.35
2.00	46.38	656.2	648.9	643.2	8.23	8.34	7.78	17.58	-26.9	-30.4	-30.1	0.07	0.61	-69.46	-91.9	-113.3	-134.5	4.2	-82.37
3.00	44.68	703.3	695.3	688.5	8.70	8.70	8.17	17.17	-24.8	-29.7	-32.3	0.17	0.58	-70.72	-92.2	-113.9	-135.2	7.3	-87.27
4.00	57.98	755.5	742.6	732.7	7.65	7.91	7.38	16.63	-22.7	-30.9	-67.9	1.76	2.83	-66.45	-88.5	-110.2	-133.3	10.0	-90.28
5.00	52.72	811.4	798.8	789.4	7.78	8.04	7.68	16.54	-21.6	-31.0	-45.8	1.25	0.48	-68.17	-89.3	-111.4	-134.5	12.2	-92.18
6.00	43.25	862.1	849.6	839.7	8.09	8.46	8.31	16.52	-22.2	-32.1	-46.4	0.75	2.06	-69.10	-90.7	-112.5	-135.4	24.0	-98.33
7.00	38.52	904.2	891.2	881.4	8.30	8.70	8.34	16.48	-22.8	-33.6	-40.5	0.63	1.93	-67.25	-90.4	-112.7	-136.6	40.2	-102.99
8.00	32.71	940.2	928.2	918.2	8.37	8.73	8.57	16.46	-22.5	-33.0	-37.5	0.52	0.26	-67.40	-90.6	-113.3	-138.1	66.3	-107.84
8.50	28.97	956.5	944.6	933.7	8.20	8.75	8.70	16.46	-22.1	-32.4	-38.3	0.39	2.44	-67.30	-89.9	-112.4	-137.2	100.0	-112.36
9.50	25.76	986.2	973.1	961.8	7.93	8.77	8.56	16.44	-22.9	-32.5	-37.6	0.06	0.23	-67.12	-90.7	-113.0	-137.9	111.3	-113.52
10.00	23.91	999.1	986.0	974.9	7.96	8.71	8.46	16.42	-23.9	-32.3	-38.0	0.09	2.44	-66.79	-89.8	-112.7	-137.4	156.2	-117.31
11.00	21.06	1022.3	1009.4	998.2	8.19	8.61	8.49	16.40	-24.5	-31.8	-38.7	0.33	2.17	-68.31	-90.2	-113.0	-137.2	183.5	-119.02
11.50	20.18	1033.0	1020.0	1008.9	8.24	8.65	8.61	16.39	-25.1	-32.8	-40.1	0.40	0.35	-69.24	-90.1	-112.9	-137.0	219.3	-120.93
12.50	17.82	1052.3	1039.6	1027.8	8.07	8.79	8.77	16.36	-27.7	-33.0	-41.2	0.55	2.90	-68.49	-90.9	-113.2	-136.9	307.9	-124.56
13.00	16.94	1061.4	1048.5	1036.7	7.98	8.80	8.77	16.34	-28.5	-33.1	-43.4	0.61	2.96	-67.26	-90.7	-113.1	-136.7	361.5	-126.06
14.00	15.05	1078.2	1065.0	1052.8	7.87	8.73	8.59	16.31	-30.3	-33.6	-45.1	0.71	0.50	-68.55	-91.2	-113.2	-136.3	507.5	-129.50
14.50	14.22	1085.7	1072.5	1060.3	7.83	8.66	8.50	16.29	-31.3	-33.3	-46.2	0.78	1.26	-68.84	-91.2	-113.2	-136.1	606.7	-131.02
15.50	11.96	1099.5	1086.0	1073.5	7.90	8.47	8.35	16.25	-34.1	-33.8	-47.3	0.88	3.54	-67.88	-91.2	-113.4	-135.7	851.6	-134.09
16.00	11.12	1105.9	1092.0	1079.3	7.93	8.41	8.28	16.22	-35.8	-33.6	-48.3	0.97	4.07	-65.84	-90.8	-113.1	-135.0	1000.0	-135.53

\*at 25°C unless mentioned otherwise



### Additional 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.
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