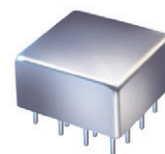


# Plug-In Voltage Controlled Oscillator

## POSA-158+ POSA-158

Low Noise 138 to 158 MHz



### Features

- low phase noise, -163 dBc/Hz at 1 MHz offset, typ.
- linear tuning
- excellent harmonic suppression, -40 dBc typ.
- load insensitive
- hermetic metal case

### Applications

- aircraft
- transmitters
- military hi-rel applications

CASE STYLE: C07  
PRICE: \$46.95 ea. QTY (1-9)

**+ 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 dB (MHz)	PUSHING (MHz/V)	TUNING SENSITIVITY (MHz/V)	HARMONICS (dBc)		3 dB MODULATION BANDWIDTH (MHz)	DC OPERATING POWER	
Min.	Max.	Typ.	Min.	Max.	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Vcc (volts)	Current (mA) Max.
138	158	+5	1	16	-72	-100	-125	-145	-163	0.07	0.03	2.4	-40	-25	2.0	12	25

### Pin Connections

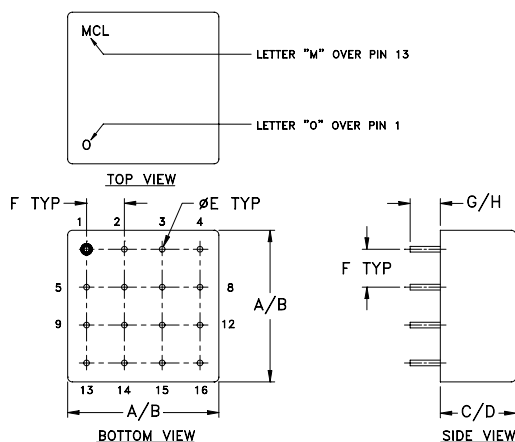
RF OUT	9
VCC	12
V-TUNE	3
GROUND	1,2,4,5,6,7,8,10,11,13,14,15,16
CASE GROUND	2,5,6,7,8,10,11,13,14

### 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)	+24V

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	wt
.770	.810	.380	.410	.030	.200	.20	.14	grams

**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](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

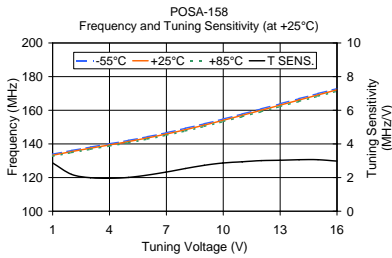
For detailed performance specs  
& shopping online see web site

**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](http://www.minicircuits.com/MCLStore/terms.jsp).

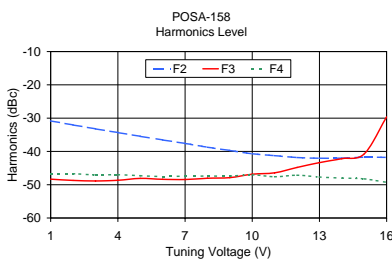
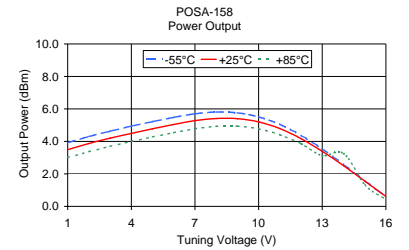
REV. B  
M98898  
POSA-158  
WD/TD/CP/AM  
091223

# Performance Curves

# POSA-158+ POSA-158



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	2.87	133.90	133.26	132.69	3.92	3.49	3.01
2.00	2.19	136.10	135.45	134.87	4.30	3.87	3.37
3.00	1.99	138.10	137.44	136.85	4.63	4.20	3.70
4.00	1.96	140.08	139.40	138.78	4.94	4.49	4.00
5.00	2.01	142.11	141.41	140.76	5.22	4.78	4.28
6.00	2.15	144.29	143.56	142.87	5.48	5.04	4.54
7.00	2.33	146.66	145.89	145.17	5.70	5.28	4.78
8.00	2.54	149.30	148.43	147.69	5.81	5.41	4.93
9.00	2.73	151.96	151.17	150.41	5.76	5.40	4.94
10.00	2.87	154.83	154.04	153.28	5.51	5.20	4.77
11.00	2.94	157.78	156.98	156.21	5.05	4.79	4.41
12.00	3.01	160.81	159.99	159.20	4.37	4.17	3.86
13.00	3.03	163.86	163.03	162.21	3.54	3.39	3.13
14.00	3.06	166.92	166.09	165.26	2.58	2.51	3.26
15.00	3.06	169.97	169.15	168.34	1.58	1.56	1.34
16.00	2.98	172.93	172.14	171.34	0.62	0.61	0.41



V TUNE	HARMONICS (dBc)			FREQ. PUSHING (MHz/V)
	F2	F3	F4	
1.00	-30.83	-48.33	-46.67	0.01
2.00	-32.04	-48.70	-46.70	0.02
3.00	-33.20	-48.87	-47.03	0.02
4.00	-34.32	-48.66	-46.99	0.03
5.00	-35.45	-48.11	-47.28	0.03
6.00	-36.54	-48.37	-47.54	0.04
7.00	-37.59	-48.43	-47.43	0.04
8.00	-38.72	-48.06	-47.39	0.04
9.00	-39.71	-47.88	-47.38	0.03
10.00	-40.68	-46.85	-47.01	0.02
11.00	-41.26	-46.43	-47.59	0.02
12.00	-41.81	-44.81	-47.14	0.02
13.00	-42.03	-43.36	-47.69	0.03
14.00	-42.00	-42.17	-48.00	0.03
15.00	-41.72	-40.72	-48.22	0.01
16.00	-41.77	-29.60	-49.27	0.03

