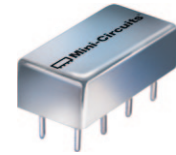


Plug-In

# Voltage Controlled Oscillator

POS-100+

Linear Tuning 50 to 100 MHz



## Features

- excellent harmonic suppression, -23 dBc typ.
- 3 dB modulation bandwidth, 0.1 MHz typ.
- hermetically sealed

## Applications

- test instruments
- agile communications systems

CASE STYLE: A06  
PRICE: \$ 11.95 ea. QTY (5-49)

**+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)<br>SSB at offset frequencies:<br>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. |
| 50              | 100  | +8.3               | 1                  | 16   | -83  | -107   | -130    | -150  | 0.6                         | 0.2             | 4.2-4.8                    | -23             | -18  | 0.1                             | 12                 | 20                |

## Pin Connections

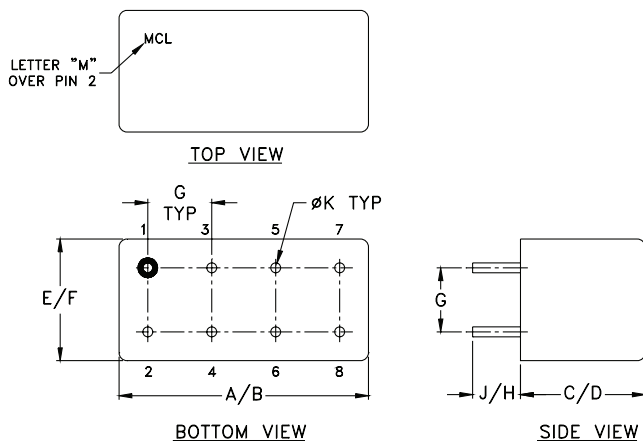
|             |           |
|-------------|-----------|
| RF OUT      | 2         |
| VCC         | 1         |
| V-TUNE      | 8         |
| GROUND      | 3,4,5,6,7 |
| CASE GROUND | 3,4,5,6,7 |

## Maximum Ratings

|                                      |                |
|--------------------------------------|----------------|
| Operating Temperature                | -55°C to 85°C  |
| Storage Temperature                  | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc)   | +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



## 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   |

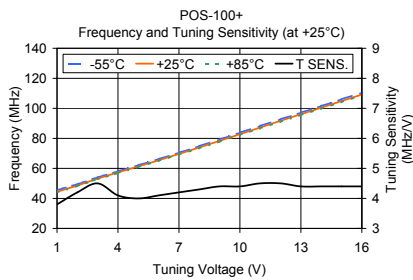
### Notes

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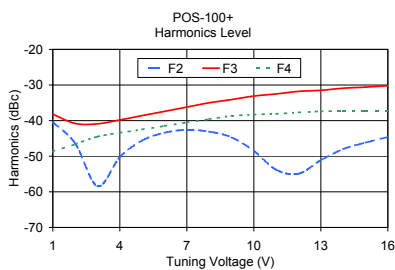
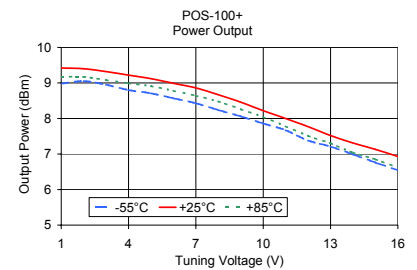


# Performance Data & Curves

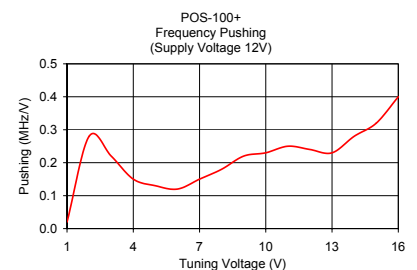
# POS-100+



| 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   | 3.80                 | 45.55           | 44.40  | 43.93  | 8.98               | 9.42  | 9.17  |
| 2.00   | 4.20                 | 49.41           | 48.60  | 48.31  | 9.05               | 9.40  | 9.17  |
| 3.00   | 4.50                 | 53.98           | 53.15  | 52.83  | 8.95               | 9.32  | 9.08  |
| 4.00   | 4.10                 | 58.08           | 57.27  | 56.90  | 8.80               | 9.22  | 8.99  |
| 5.00   | 4.00                 | 62.10           | 61.31  | 60.88  | 8.71               | 9.12  | 8.91  |
| 6.00   | 4.10                 | 66.20           | 65.43  | 64.96  | 8.57               | 8.99  | 8.78  |
| 7.00   | 4.20                 | 70.43           | 69.62  | 69.13  | 8.43               | 8.86  | 8.64  |
| 8.00   | 4.30                 | 74.80           | 73.93  | 73.43  | 8.24               | 8.67  | 8.48  |
| 9.00   | 4.40                 | 79.26           | 78.33  | 77.81  | 8.06               | 8.46  | 8.26  |
| 10.00  | 4.40                 | 83.78           | 82.77  | 82.25  | 7.86               | 8.22  | 8.04  |
| 11.00  | 4.50                 | 88.26           | 87.23  | 86.68  | 7.67               | 8.00  | 7.78  |
| 12.00  | 4.50                 | 92.73           | 91.69  | 91.10  | 7.38               | 7.77  | 7.51  |
| 13.00  | 4.40                 | 97.13           | 96.06  | 95.46  | 7.21               | 7.52  | 7.30  |
| 14.00  | 4.40                 | 101.53          | 100.45 | 99.81  | 6.99               | 7.31  | 7.04  |
| 15.00  | 4.40                 | 105.98          | 104.84 | 104.18 | 6.76               | 7.13  | 6.85  |
| 16.00  | 4.40                 | 110.43          | 109.22 | 108.55 | 6.54               | 6.93  | 6.61  |



| V TUNE | HARMONICS (dBc) |        |        | FREQ. PUSHING (MHz/V) |
|--------|-----------------|--------|--------|-----------------------|
|        | F2              | F3     | F4     |                       |
| 1.00   | -40.40          | -38.20 | -48.70 | 0.02                  |
| 2.00   | -46.40          | -40.80 | -46.60 | 0.28                  |
| 3.00   | -58.40          | -40.90 | -44.50 | 0.22                  |
| 4.00   | -50.30          | -39.80 | -43.40 | 0.15                  |
| 5.00   | -45.60          | -38.60 | -42.50 | 0.13                  |
| 6.00   | -43.40          | -37.40 | -41.50 | 0.12                  |
| 7.00   | -42.60          | -36.20 | -40.50 | 0.15                  |
| 8.00   | -43.10          | -35.00 | -39.60 | 0.18                  |
| 9.00   | -44.70          | -34.10 | -38.70 | 0.22                  |
| 10.00  | -48.50          | -33.10 | -38.30 | 0.23                  |
| 11.00  | -53.80          | -32.50 | -38.10 | 0.25                  |
| 12.00  | -54.90          | -31.80 | -37.70 | 0.24                  |
| 13.00  | -51.10          | -31.50 | -37.40 | 0.23                  |
| 14.00  | -48.00          | -30.90 | -37.30 | 0.28                  |
| 15.00  | -46.20          | -30.60 | -37.30 | 0.32                  |
| 16.00  | -44.60          | -30.20 | -37.30 | 0.40                  |



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