

Plug-In

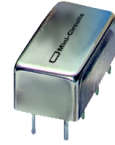
Voltage Controlled Oscillator

POS-1025+ POS-1025

Linear Tuning 685 to 1025 MHz

Features

- octave bandwidth range
- low phase noise, -124 dBc/Hz @ 1MHz offset
- hermetically sealed



CASE STYLE:A06

Applications

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

Electrical Specifications

| MODEL NO. | FREQ. (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. |
| POS-1025 | 685 | 1025 | +9.0 | 1 | 16 | -65 | -84 | -104 | -124 | 5.0 | 0.6 | 21-36 | -23 | -18 | 0.1 | 12 | 22 |

Pin Connections

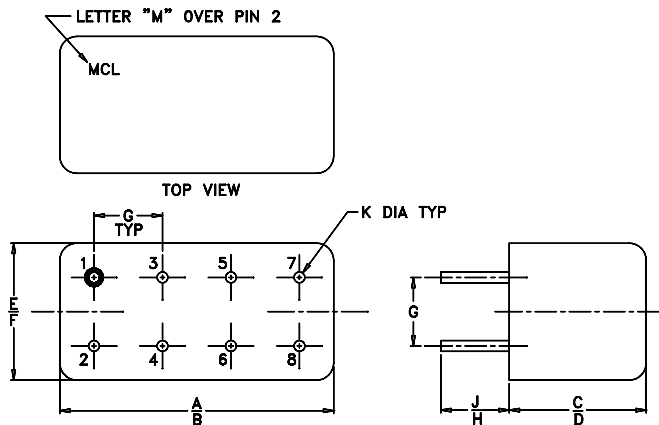
| | |
|-------------|-----------|
| RFOUT | 2 |
| VCC | 1 |
| V-TUNE | 8 |
| GROUND | 3,4,5,6,7 |
| CASE GROUND | 3,4,5,6,7 |

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

Outline Drawing



NOTE: BLUE BEAD INDICATES PIN 1.
PIN NUMBERS DO NOT APPEAR ON UNIT,
FOR REFERENCE ONLY.

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 |
| 19.56 | 20.32 | 7.24 | 7.87 | 9.40 | 10.16 | 5.08 | 5.08 | 3.56 | .79 | 5.2 |



Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

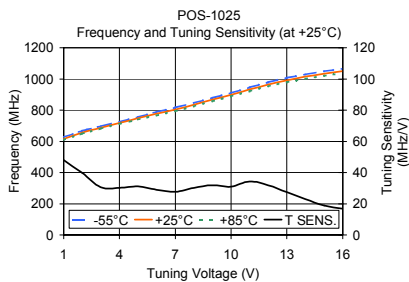
INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

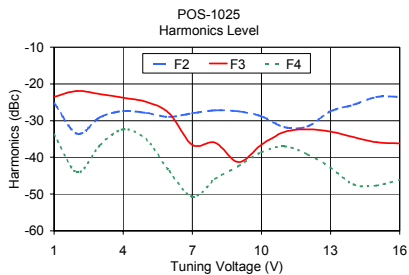
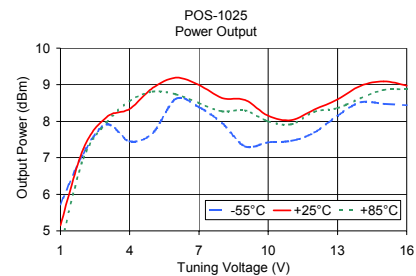
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POS-1025
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Performance Curves

POS-1025+ POS-1025



| V TUNE | TUNING SENS. (MHz/V) | FREQUENCY (MHz) | | | POWER OUTPUT (dBm) | | |
|-----------|----------------------------|-----------------|--------|--------|--------------------|-------|-------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C |
| 1.0 | 48.0 | 626.9 | 616.5 | 609.0 | 5.7 | 5.1 | 4.5 |
| 2.0 | 39.9 | 667.1 | 656.4 | 649.6 | 7.1 | 7.2 | 6.9 |
| 3.0 | 30.6 | 697.2 | 686.9 | 681.6 | 7.9 | 8.1 | 7.9 |
| 4.0 | 30.3 | 725.9 | 717.2 | 711.8 | 7.4 | 8.3 | 8.5 |
| 5.0 | 31.2 | 755.7 | 748.4 | 739.9 | 7.6 | 8.9 | 8.8 |
| 6.0 | 29.0 | 788.7 | 777.4 | 766.4 | 8.6 | 9.1 | 8.7 |
| 7.0 | 27.7 | 816.8 | 805.1 | 793.9 | 8.3 | 8.9 | 8.5 |
| 8.0 | 30.3 | 846.7 | 835.4 | 824.7 | 7.9 | 8.6 | 8.2 |
| 9.0 | 31.9 | 878.9 | 867.3 | 856.7 | 7.3 | 8.5 | 8.3 |
| 10.0 | 31.0 | 910.3 | 898.3 | 888.2 | 7.4 | 8.1 | 8.0 |
| 11.0 | 34.4 | 946.1 | 932.7 | 922.0 | 7.4 | 8.0 | 7.9 |
| 12.0 | 31.9 | 979.2 | 964.6 | 952.7 | 7.6 | 8.3 | 8.2 |
| 13.0 | 27.5 | 1007.0 | 992.1 | 978.8 | 8.1 | 8.6 | 8.3 |
| 14.0 | 23.0 | 1029.6 | 1015.1 | 1001.4 | 8.5 | 8.9 | 8.6 |
| 15.0 | 18.9 | 1048.8 | 1034.0 | 1020.1 | 8.4 | 9.0 | 8.8 |
| 16.0 | 16.9 | 1065.9 | 1050.9 | 1036.6 | 8.4 | 8.9 | 8.8 |



| V TUNE | HARMONICS (dBc) | | | FREQ. PUSHING (MHz/V) |
|-----------|-----------------|-------|-------|--------------------------|
| | F2 | F3 | F4 | |
| 1.0 | -25.2 | -23.5 | -33.8 | 0.51 |
| 2.0 | -33.6 | -21.9 | -44.1 | -0.07 |
| 3.0 | -29.1 | -22.8 | -36.7 | 0.08 |
| 4.0 | -27.4 | -23.8 | -32.4 | 0.60 |
| 5.0 | -27.9 | -24.9 | -35.1 | -0.38 |
| 6.0 | -29.0 | -28.0 | -43.8 | -0.42 |
| 7.0 | -28.0 | -36.6 | -50.7 | -0.27 |
| 8.0 | -27.2 | -36.0 | -45.9 | 0.38 |
| 9.0 | -27.5 | -41.3 | -42.4 | 0.07 |
| 10.0 | -28.8 | -36.6 | -38.7 | 1.33 |
| 11.0 | -31.8 | -33.1 | -37.0 | 0.92 |
| 12.0 | -31.6 | -32.4 | -39.2 | -0.05 |
| 13.0 | -27.5 | -33.0 | -42.8 | -0.90 |
| 14.0 | -25.7 | -34.5 | -47.4 | -1.08 |
| 15.0 | -23.6 | -35.9 | -47.7 | -1.22 |
| 16.0 | -23.5 | -36.2 | -46.1 | -1.32 |

