

MAS8340

Voltage Controlled Oscillator for Very High Frequency Applications

This is preliminary information on a new product under development. Micro Analog Systems Oy reserves the right to make any changes without notice.

Preliminary

- 90 MHz Center Frequency
- Small Size
- Low Phase Noise
- Low Supply Voltage
- Member of MAS IPC VCO Family

DESCRIPTION

MAS8340 is a 90 MHz voltage controlled oscillator. Its small size has been achieved by utilizing the latest developments in Integrated Passive Technology. In addition to this, the selected surface mounted structure minimizes overhead area consumption on a printed circuit board. MAS8340

has been designed to meet most common analog and digital system requirements. It is especially suitable for wireless battery powered systems, which require low phase noise and low power consumption. The module is shielded against electromagnetic interference with a metal lid.

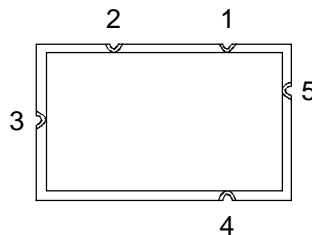
FEATURES

- Low Supply Voltage: 2.8 V
- Low Power Consumption: 8 mA
- Small Size: 6.5 x 9.4 mm
- Low Phase Noise: -114 dBc/Hz

APPLICATIONS

- Mobile Phones
- Cordless Phones
- Portable Receiver / Transmitter Applications

PIN CONFIGURATION



Top View

PIN DESCRIPTION

| Pin Name | Pin | Type | Function |
|----------|-----|------|-------------------------|
| VCC | 1 | P | Positive Power Supply |
| VCONT | 2 | I | Frequency Control Input |
| GND | 3 | G | Ground |
| GND | 4 | G | Ground |
| OUT | 5 | O | VCO Output |

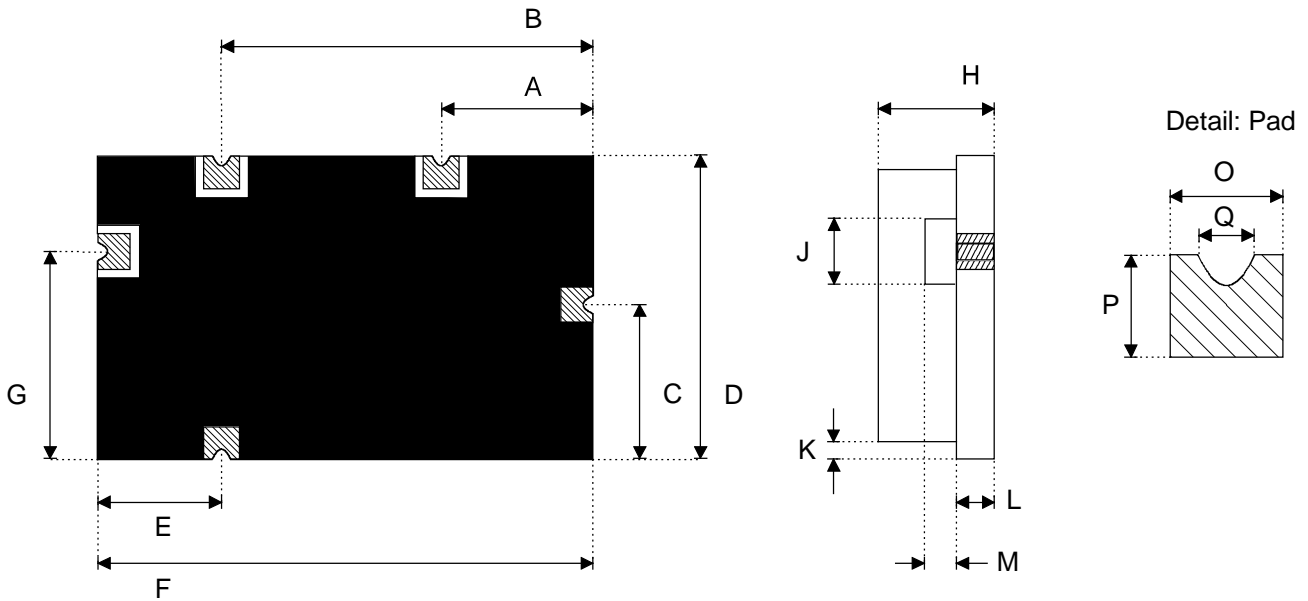
I = Input, O = Output, P = Power, G = Ground

ELECTRICAL CHARACTERISTICS

For typical values $T_A = 27^\circ\text{C}$, for min/max values $T_A = -35^\circ\text{C}$ to $+85^\circ\text{C}$, unless otherwise noted

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--------------------------------|------------|--|-----|------|-----|--------|
| Center Frequency | F_C | | | 90 | | MHz |
| Phase Noise | P/N | 25 kHz offset from carrier | | -114 | | dBc/Hz |
| Current Consumption | I_{CC} | | | 8 | | mA |
| Supply Voltage | V_{CC} | | 2.7 | 2.8 | 2.9 | V |
| Control Voltage | V_{CONT} | | 0.5 | | 5 | V |
| Sensitivity of Control Voltage | K_V | | 1 | | 6 | MHz/V |
| Output Power | P_O | $R_{LOAD} = 50 \text{ Ohms}$ | | 0 | | dBm |
| Harmonics | | | | -3 | | dBc |
| Frequency Pushing Factor | | $V_{CC} = 2.6 \text{ V} \dots 3.2 \text{ V}$ | | | 500 | kHz/V |
| Output Impedance | $ Z_O $ | | | 50 | | Ohm |

PACKAGE OUTLINES



| Dimension | Typical | Unit |
|-----------|---------|------|
| A | 3.38 | mm |
| B | 5.92 | mm |
| C | 3.28 | mm |
| D | 6.53 | mm |
| E | 3.43 | mm |
| F | 9.35 | mm |
| G | 5.00 | mm |
| H | 1.80 | mm |
| J | 1.90 | mm |
| K | 0.18 | mm |
| L | 0.30 | mm |
| M | 0.50 | mm |
| O | 0.80 | mm |
| P | 0.80 | mm |
| Q | 0.60 | mm |

ORDERING INFORMATION

| Product Code | Product | Package | Comments |
|---------------|---------|-----------------|-------------|
| MAS8340AMAA-T | VHF-VCO | Laminate Module | Tape & Reel |

LOCAL DISTRIBUTOR

MICRO ANALOG SYSTEMS OY CONTACTS

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