

PRECISION OCXO MV172

Features:

- High stability vs. temperature - up to $\pm 1 \times 10^{-9}$
- Low aging - up to $\pm 1 \times 10^{-8}$ /year
- Low phase noise
- 5V or 12V power supply
- Available as RoHS
- Frequency range 4.096-20.0 MHz

| | |
|--------------|-----------------|
| Output type | |
| SIN | HCMOS |
| Power Supply | |
| 12V | 5V |
| Package type | |
| Z25 | 50.8x50.8x25 mm |
| Z19 | 50.8x50.8x19 mm |

ORDERING GUIDE: MV172 - B 1 E - SIN - 5V - Z25 - 5.0 MHz

| Availability of certain stability vs. operating temperature range | | $\pm 1 \times 10^{-8}$ | $\pm 5 \times 10^{-9}$ | $\pm 2 \times 10^{-9}$ | $\pm 1 \times 10^{-9}$ |
|---|---------------|------------------------|------------------------|------------------------|------------------------|
| | | 10 | 5 | 2 | 1 |
| A | 0...+55 °C | A | A | A | A |
| B | - 10...+60 °C | A | A | A | A* |
| C | - 20...+70 °C | A | A | A* | C* |
| D | - 40...+70 °C | A | A* | C* | C* |
| EX | - 40...+85 °C | A* | C | C | NA |

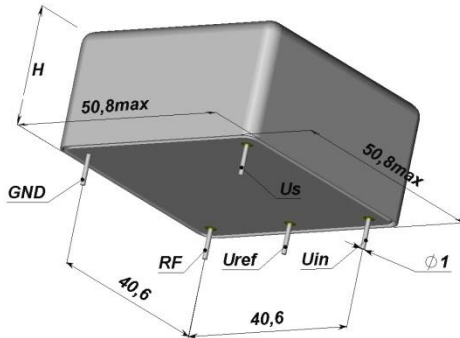
* for 25mm height

| Availability of certain aging values for certain frequencies | | Standard frequencies | |
|--|------------------------------|------------------------|------------------------------|
| | | 5.0 MHz (5 x k) MHz | 4.096 MHz (4.096 x k) MHz |
| E | $\pm 3 \times 10^{-8}$ /year | A | A |
| D | $\pm 2 \times 10^{-8}$ /year | A | A |
| C | $\pm 1 \times 10^{-8}$ /year | A | A |

A – available, NA – not available, C – consult factory

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For other temperature ranges see designation at the end of Data Sheet.

Package drawing:



H=25 mm for Z25; H=19 mm for Z19.

| | |
|---|----------------------------|
| Short term stability per 1 sec (for 5MHz) | $< 2 \times 10^{-12}$ |
| Frequency stability vs. load changes | $< \pm 5 \times 10^{-10}$ |
| Frequency stability vs. power supply changes | $< \pm 5 \times 10^{-10}$ |
| Warm-up time within accuracy of $< \pm 2 \times 10^{-8}$ @ 25°C | < 8 min |
| Power supply (Us) | 5V \pm 5% 12V \pm 5% |
| Steady state current consumption @ 25°C | < 500mA < 200mA |
| Peak current consumption during warm-up (for "C" temp. range) | < 1.2 A < 0.6 A |
| Frequency pulling range | $> \pm 3.0 \times 10^{-7}$ |
| with external voltage range (Uin) | 0...+4.5 V 0...+5 V |
| with external potentiometer | 20 kOhm |
| Reference voltage (Uref) | +4.5 V +5 V |
| Slope | Negative (positive) |

| | |
|---------------------------|--------------|
| Vibrations: | |
| Frequency range | 10-500 Hz |
| Acceleration | 5g |
| Shock: | |
| Acceleration | 75 g |
| Duration | 3 \pm 1 ms |
| Storage temperature range | -55...+85 °C |

| | |
|-------------------------|----------------------------------|
| Output | SIN |
| Level | >300 mV |
| Load | 50 Ohm \pm 5% |
| Harmonic suppression | >30dBc (standard) (>50 optional) |
| Phase noise (for 5 MHz) | |
| @ 1 Hz | <-100 dBc/Hz |
| 10 Hz | <-130 dBc/Hz |
| 100 Hz | <-145 dBc/Hz |
| 1000 Hz | <-150 dBc/Hz |
| 10000 Hz | <-155 dBc/Hz |

Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging (after 30 days of operation) to aging per year is as following: $\pm 3 \times 10^{-8}$ /year - $\pm 3 \times 10^{-10}$ /day; $\pm 2 \times 10^{-8}$ /year - $\pm 2 \times 10^{-10}$ /day; $\pm 1 \times 10^{-8}$ /year - $\pm 1 \times 10^{-10}$ /day.
- Please mention RoHS requirement (if any) while requesting for quote or while placing PO.
- For non standard operating temperature ranges please use the following two letters designations (first letter for the lower limit, second letter for the upper limit), °C:

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | U | W | X |
| -60 | -55 | -50 | -45 | -40 | -30 | -20 | -10 | 0 | +10 | +30 | +40 | +45 | +50 | +55 | +60 | +65 | +70 | +75 | +80 | +85 |