

HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV136

Features:

- Frequency range: 48.0 – 120.0 MHz
- Low Phase Noise: floor of <-165 dBc/Hz
- Small size package: 36x27x16 mm
- Ideal for PLL, VSAT, Frequency synthesizers

| |
|---|
| Frequency range: 48.0–120.0 MHz |
| Standard Frequencies: 48.0; 56.0; 60.0; 80.0; 100.0 MHz |

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|---------------------|
| Power Supply |
| 5 V |
| 12 V |

ORDERING GUIDE: MV136-B 300 J-5V-B16-3-100.0 MHz

| Availability of certain stability vs. operating temperature range | | $\pm 5 \times 10^{-7}$ | $\pm 3 \times 10^{-7}$ | $\pm 1 \times 10^{-7}$ | $\pm 7.5 \times 10^{-8}$ | $\pm 5 \times 10^{-8}$ |
|---|--------------|------------------------|------------------------|------------------------|--------------------------|------------------------|
| | | 500 | 300 | 100 | 75 | 50 |
| A | 0...+50°C | A | A | A | A | A |
| B | -10...+60°C | A | A | A | A | A |
| C | -20...+70°C | A | A | A | A | A |
| D | -40...+70°C | A | A | A | A | C |
| BT | -55...+70°C* | A | A | C | C | NA |
| BX | -55...+85°C* | A | C | C | NA | NA |

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

*only for 12 V

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

| Phase noise dBc/Hz (typical for 100 MHz, 12 V power supply) | | | | | |
|--|------|------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 10 Hz | -85 | -90 | -95 | -98 | -100 |
| 100 Hz | -115 | -120 | -125 | -128 | -130 |
| 1000 Hz | -140 | -145 | -150 | -150 | -152 |
| 10000 Hz | -160 | -162 | -165* | -165* | -165* |

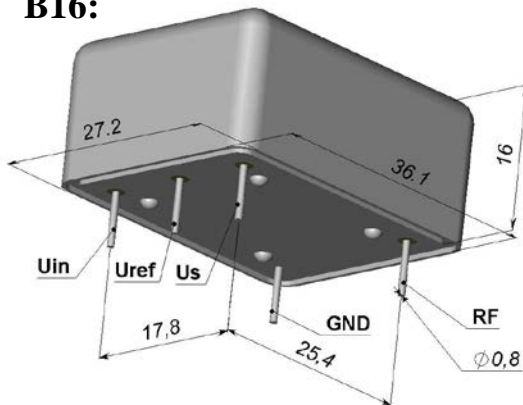
*-162 dBc/Hz for 5V only

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|----------------|
| Package |
| B16 |
| 27x36x16 mm |

| | |
|--------------|------------------------------|
| Aging | |
| K | $\pm 1 \times 10^{-6}$ /year |
| J | $\pm 5 \times 10^{-7}$ /year |
| I | $\pm 3 \times 10^{-7}$ /year |
| H | $\pm 2 \times 10^{-7}$ /year |
| G | $\pm 1 \times 10^{-7}$ /year |

Package drawing:

B16:



| | | |
|---|--------------------------|----------------|
| Frequency stability vs. load changes | < $\pm 5 \times 10^{-8}$ | |
| Frequency stability vs. power supply changes | < $\pm 1 \times 10^{-7}$ | |
| Warm-up time within accuracy of < $\pm 1 \times 10^{-6}$ @ 25°C | <2 min | |
| Power supply (Us) | 5V $\pm 10\%$ | 12V $\pm 10\%$ |
| Steady state current consumption @ 25°C | < 300 mA | < 150 mA |
| Peak current consumption during warm-up | < 950 mA | < 500 mA |
| Frequency pulling range | > $\pm 3 \times 10^{-6}$ | |
| with external control voltage range (Uin) | 0...+4 V | 0...+8 V |
| Reference voltage output (Uref) | +4V | +8 V |

| | |
|---------------------------|-------------------|
| Output | SIN |
| Level | >400 mV |
| Load | 50 Ohm $\pm 10\%$ |
| Harmonics | <-25 dBc |
| Vibrations | 10-500 Hz, 5g |
| Storage temperature range | -55...+80 °C |

Additional notes:

- 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 |