

LOW PHASE NOISE HIGH STABILITY SMALL SIZE TCXO MV121

Features:

- Excellent phase noise performance
- High frequency stability vs. temperature – up to $\pm 5 \times 10^{-7}$
- Small size 20x20x10 mm
- Frequency range 9.8 – 20.0 MHz

ORDERING GUIDE: MV121 – C 2000 L – 5V – 10.0 MHz

| Availability of certain stability vs. operating temperature range | | $\pm 2 \times 10^{-6}$ | $\pm 1.5 \times 10^{-6}$ | $\pm 8 \times 10^{-7}$ | $\pm 5 \times 10^{-7}$ |
|---|---------------|------------------------|--------------------------|------------------------|------------------------|
| | | 2000 | 1500 | 800 | 500 |
| A | 0...+55 °C | A | A | A | A |
| B | - 10...+60 °C | A | A | A | NA |
| C | - 20...+70 °C | A | A | NA | NA |
| D | - 40...+70 °C | A | NA | NA | NA |

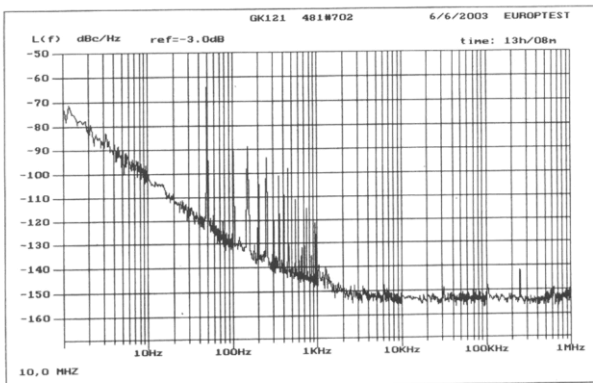
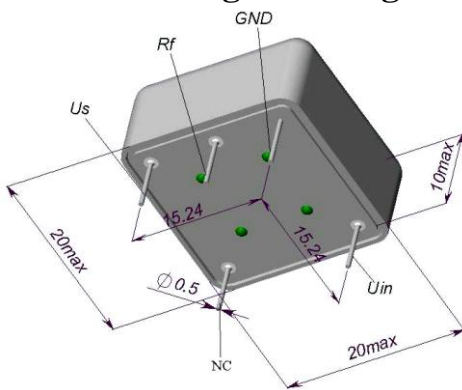
For other temperature ranges see designation at the end of Data Sheet

| Power supply |
|--------------|
| 5V |
| 12V |

| Availability of certain aging values for certain frequencies | | 10.0 MHz | 20.0 MHz |
|--|------------------------------|----------|------------------------------|
| | | L | $\pm 2 \times 10^{-6}$ /year |
| K | $\pm 1 \times 10^{-6}$ /year | A | NA |

A – available, NA – not available

Package drawing:



| | | |
|--|----------------------------|-------------------|
| Short term stability (Allan deviation) per 1 s | $< 1 \times 10^{-9}$ | |
| Frequency stability vs. load changes | $< \pm 2 \times 10^{-7}$ | |
| Frequency stability vs. power supply changes | $< \pm 3 \times 10^{-7}$ | |
| Power supply (Us) | 5V | 12V |
| Current consumption 25°C | $< 15 \text{ mA}$ | $< 6 \text{ mA}$ |
| Output | SIN | |
| Level | 300-500 mV | 500-800 mV |
| Load | 2 kOhm $\pm 10\%$ | |
| Harmonic suppression | $> 30 \text{ dB}$ | |
| Phase noise at offset, dBc/Hz | For 10 – 12.8 MHz | For 13 – 20.0 MHz |
| 1 Hz | -65 | - |
| 10 Hz | -95 | - |
| 100 Hz | -125 | -115 |
| 1000 Hz | -145 | -140 |
| 10000 Hz | -155 | -145 |
| Frequency pulling range | $> \pm 8.5 \times 10^{-6}$ | |
| Vibrations | 1-500 Hz, 10g | |
| Shock | 500g, 2 ms | |

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 |