

# Crystal oscillator for 5G

## NH25M22TE

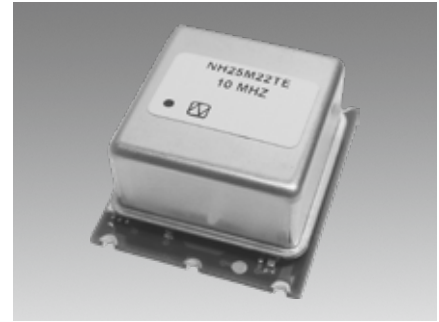
Oven Controlled Crystal Oscillator (OCXO)  
for Fixed Communication Equipment

### Main Application

- Mobile phone base station(5G CU, 4G BBU)
- IEEE1588, synchronous Ethernet clock (SyncE) • Optical transmission system  
Stratum 3E • Frequency Synthesizer • GNSS-DO
- Timing and synchronization measuring equipment

### Features

- Excellent temperature characteristics.
- Excellent Long-term frequency stability.
- Very quick stabilization time.
- Excellent phase noise characteristics.
- Hermetic sealing package for excellent environmental-proof performance.

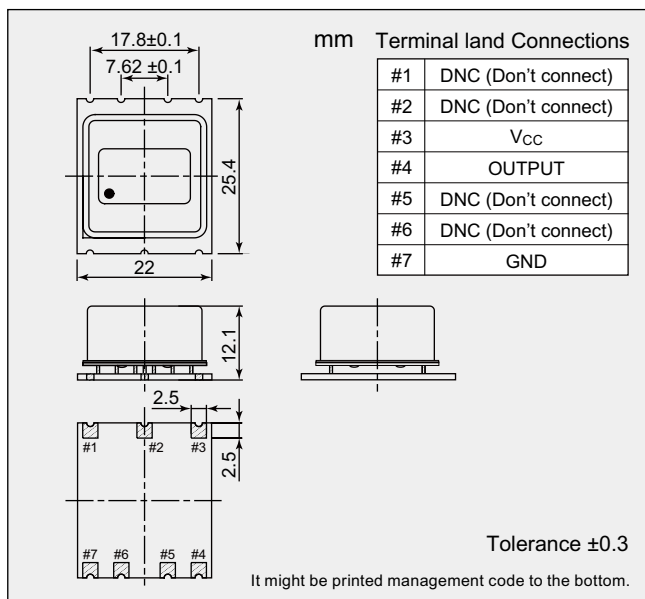


RoHS Compliant  
Directive 2011/65/EU  
Directive (EU) 2015/863

### Specifications

| Item   | Model  | NH25M22TE   |
|--|--|---|
| Nominal Frequency $f_{nom}$ (MHz)                  |  | 10  |
| Supply Voltage $V_{cc}$ (V)                        |  | +3.3  |
| Load Impedance $C_L$ (pF)                          |  | 15  |
| Operating Temperature Range $T_{opr}$ (°C)         |  | -40 to + 85   |
| Storage Temperature Range $T_{str}$ (°C)           |  | -40 to + 85   |
| Power Consumption $P_{cc}$ (W)                     | at start   | Max. 3.3  |
|  | when stable, at +25 °C   | Max. 2.0  |
| Frequency Tolerance $\Delta f/f_{nom}$             | at +25°C, before shipment  | Max. $200 \times 10^{-9}$                                   |
| Frequency/Temperature Characteristics $\Delta f/f$ | at Operating Temperature Range   | Max. $\pm 3 \times 10^{-9}$                                 |
| Frequency/Voltage Coefficient $\Delta f/f$         | $V_{cc} \pm 5\%$   | Max. $\pm 1 \times 10^{-9}$                                 |
| Long-term Frequency Stability $\Delta f/f$         | Based on frequency after 30 days operation   | Max. $\pm 1 \times 10^{-9}$ / day                           |
|  |  | Max. $\pm 50 \times 10^{-9}$ / year                         |
| Stabilization Time (min.)                          | Time within specified frequency tolerance after power on at +25°C, based on frequency after 60minutes operation. | Max. 3 / within $\pm 200 \times 10^{-9}$                    |
| Output Voltage                                     |  | LVC MOS<br>$V_{OL}$ : Max. +0.4 V<br>$V_{OH}$ : Min. +2.4 V |
| Symmetry (%)                                       | at $(V_{OH} + V_{OL}) / 2$   | 40 to 60  |

### Dimensions



### Reference Value

| Phase Noise<br>(at 10 MHz) | Offset Frequency | dBc/Hz    |
|----------------------------|------------------|-----------|
|                            | 1 Hz             | Typ. -100 |
|                            | 10 Hz            | Typ. -125 |
|                            | 100 Hz           | Typ. -142 |
|                            | 1 kHz            | Typ. -152 |
|                            | 10 kHz           | Typ. -155 |
|                            | 100 kHz          | Typ. -155 |

We offer dedicated tool (charge) for evaluation of this product

### Contact Us

Standard catalog specifications are listed for the products listed. Custom is available upon request.  
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