



ROHS-Compliant Product

T-75000 Series



SMD TCXO according to Telcordia GR-1244 and GR-253-Core Stratum 3, ANSI Clock T1.101, ITU-T G.812 Type IV and G.813 Option 1

| 1. Specification | |
|---|--|
| Type: | T-75XYZ |
| Frequency range: | 5.0 ... 26.0 MHz |
| Supply Voltage V_S (nominal values $\pm 5\%$): | X |
| +3.3 V : | 6 |
| +5.0 V : | 7 |
| Initial frequency tolerance ($T_A = +25\text{ }^\circ\text{C}$; $V_C = +1.5\text{ V}$): 24 h after reflow ($T_{\text{peak}} = +260\text{ }^\circ\text{C}$ for 10 sec max): | $\leq \pm 1.0\text{ ppm}$ $\leq \pm 1.5\text{ ppm}$ |
| Temperature range options: | Y |
| 0 $^\circ\text{C}$ to +50 $^\circ\text{C}$: | 1 |
| -10 $^\circ\text{C}$ to +60 $^\circ\text{C}$: | 2 |
| 0 $^\circ\text{C}$ to +70 $^\circ\text{C}$: | 3 |
| -20 $^\circ\text{C}$ to +70 $^\circ\text{C}$: | 4 |
| -30 $^\circ\text{C}$ to +85 $^\circ\text{C}$: | 5 |
| -40 $^\circ\text{C}$ to +85 $^\circ\text{C}$: | 6 |
| Frequency stability options: | Z |
| $\pm 0.14\text{ ppm}$ (available for temp.range 1 to 4) : | 1 |
| $\pm 0.28\text{ ppm}$: | 2 |
| $\pm 0.37\text{ ppm}$: | 3 |
| $\pm 0.5\text{ ppm}$: | 4 |
| $\pm 1.0\text{ ppm}$: | 5 |
| Frequ.Stability vs. supply voltage changes $V_S \pm 5\%$: Clipped Sinewave output: | $\leq \pm 0.02\text{ ppm}$ |
| LVHCMOS output: | $\leq \pm 0.3\text{ ppm}$ |
| Frequ. Stability vs. load changes $\pm 10\%$: | $\leq \pm 0.1\text{ ppm}$ |
| 24 hours aging a 25 $^\circ\text{C}$ after 10 days continuous operation: | $\leq \pm 0.02\text{ ppm}$ |
| Overall stability incl. nominal freq. tol., frequency stab. vs. temp., vs. supply voltage, vs. load changes and 15 years aging : | $\leq \pm 4.6\text{ ppm}$ |
| Holdover Stability incl. frequency stab. vs. temp and 24-hours aging (available for stability option 1 and 2) : | $\leq \pm 0.30\text{ ppm}$ |
| Storage Temperature Range: | -55 $^\circ\text{C}$ to +105 $^\circ\text{C}$ |

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|----|-------------|------------|-------|---|
| 4 | | | | KVG Quartz Crystal Technology GmbH P.O. Box 61 D-74924 Neckarbischofsheim Tel. +49 (0) 7263 / 648-0 Fax. +49 (0) 7263 / 6196 |
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| ED | Description | Date | Name | |



T-75000 Series



1. Specification continued

| | | |
|--|---|---|
| Frequency Control Options : Fixed frequency oscillator: ±5 ppm: ±8 ppm: | Suffix X F E | |
| Control voltage range V_C : | +0.5 V to +2.5 V | |
| Transfer function / Linearity: | positive / 10 % | |
| Output signal Option H : level: load: | (LV)HCMOS $V_{OL} \leq 10\% V_S$; $V_{OH} \geq 90\% V_S$ 1 kOhm // 15 pF | |
| Current consumption for HCMOS: | ≤ 6 mA | |
| TriState function at Pin 9 for HCMOS output: | High ($> 70\% V_S$) or not connected: Enable Low ($< 30\% V_S$): Disable | |
| Output signal Options S : Type: Level: Load: | Clipped Sine wave $\geq 0.8 V_{PP}$ 10 kOhm // 10 pF | |
| Current consumption for Clipped Sine wave: | ≤ 3.5 mA | |
| Phase Noise 100 Hz: 1 kHz: 10 kHz: | (typical for 12.80 MHz) ≤ -120 dBc/Hz ≤ -140 dBc/Hz ≤ -148 dBc/Hz | (typical for 26.00 MHz) ≤ -112 dBc/Hz ≤ -135 dBc/Hz ≤ -145 dBc/Hz |

2. Marking

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Frequency

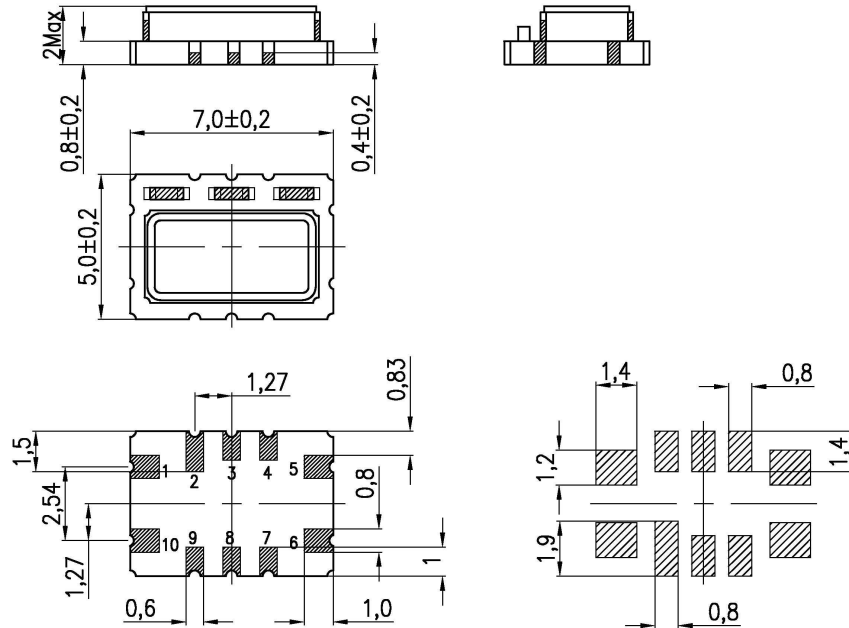
3. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-202

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4. Case

Case Style: BF189-2.0D



Pin configuration

1. Control voltage V_C or N.C.
2. N.C.
3. N.C.
4. N.C.
5. GND
6. RF Output
7. N.C.
8. N.C.
9. E/D (Tri-State) control
10. Supply Voltage V_S

| | | | | |
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