VC-TCXO / TCXO
ULTRA HIGH STABILITY

TG5032CGN
TG5032SGN

- Frequency range: 10 MHz to 40 MHz
- Supply voltage: 3.3 V Typ.
- Frequency / temperature characteristics:
  - ±0.1×10⁻⁴ Max. (-40 °C to +85 °C)
  - ±3×10⁻⁴ Max./20 years
- External dimensions: 5.0×3.2×1.45 mm (10 pins)
- Applications: Small Cells, Stratum3, SynCE, IEEE 1588
- Features: Ultra high stability, Wide temperature range

Specifications (characteristics)

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>TG5032CGN (CMOS)</th>
<th>TCXO</th>
<th>VC-TCXO</th>
<th>TCXO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output frequency range</td>
<td>f0</td>
<td>10 MHz to 40 MHz</td>
<td></td>
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<tr>
<td>Supply voltage</td>
<td>VCC</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Storage temperature</td>
<td>Tstg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>Tuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Frequency tolerance</td>
<td>f Tol</td>
<td>±1.0×10⁻⁴ Max.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>b) Frequency/temperature</td>
<td>f0-Tc</td>
<td>±0.1×10⁻⁴ Max. / G: -40 °C to +85 °C</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Characteristics</td>
<td>H: +0.25×10⁻⁴ Max. / G: -40 °C to +85 °C</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c) Frequency/load coefficient</td>
<td>f0-Load</td>
<td>±0.1×10⁻⁴ Max.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>d) Frequency/voltage coefficient</td>
<td>f0-Vcc</td>
<td>±0.5×10⁻⁴ Max.</td>
<td></td>
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<tr>
<td>e) Frequency aging</td>
<td>f Age</td>
<td>±3.0×10⁻⁴ Max.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Holdover stability (Constant temperature)</td>
<td>-</td>
<td>±0.04×10⁻⁴ Max. / G: -25 °C, 24 hours</td>
<td></td>
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<tr>
<td>f) Frequency control range</td>
<td>f Cont</td>
<td>±6×10⁻⁴ to +10×10⁻⁴</td>
<td></td>
<td></td>
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<tr>
<td>g) Frequency change polarity</td>
<td>-</td>
<td>Positive polarity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetry</td>
<td>SYM</td>
<td></td>
<td></td>
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<tr>
<td>Output voltage</td>
<td>Vcc</td>
<td>±0.05 Vcc Min.</td>
<td></td>
<td></td>
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<tr>
<td>Output level</td>
<td>Vpp</td>
<td>±0.8 V Min.</td>
<td></td>
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<tr>
<td>Rise time / Fall time</td>
<td>t/τ</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Start-up time</td>
<td>t sl</td>
<td>5.0 ms (Non-Filter, Standard) / 2.0 sec. (Filter, Option)</td>
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<tr>
<td>Output load condition</td>
<td>Vld</td>
<td>±0.1 fF to 10 fF</td>
<td></td>
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<tr>
<td>Input voltage</td>
<td>VI</td>
<td>±0.70 Vcc Min.</td>
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</tbody>
</table>

- Note: Please contact us for requirements not listed in this specification.

Product Name (Standard form)

TG5032 CGN 30.720000MHz C [C] A G [H] D [A]

- Model
- Output (C, CMOS, S, Clipped sine wave)
- Supply voltage (C: 3.3 V Typ.)
- Frequency / temperature characteristics (A: ±0.1×10⁻⁴ Max., H: ±0.25×10⁻⁴ Max., B: ±0.28×10⁻⁴ Max.)
- Operating temperature (G: -40 °C to +85 °C)
- TC function (H: Active High)
- TC function (Refer to symbol table)
- Internal identification code (A' is default)

External dimensions (Unit mm)

Footprint (Recommended) (Unit mm)

To maintain stable operation, provide a 0.1 µF by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between Vcc - GND).
PROMOTION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONFORMING TO INTERNATIONAL STANDARDS

At Seiko Epson, all environmental initiatives operate under the Plan-Do-Check-Action (PDCA) cycle designed to achieve continuous improvements. The environmental management system (EMS) operates under the ISO 14001 environmental management standard.

All of our major manufacturing and non-manufacturing sites, in Japan and overseas, completed the acquisition of ISO 14001 certification.

WORKING FOR HIGH QUALITY

In order provide high quality and reliable products and services than meet customer needs, Seiko Epson made early efforts towards obtaining ISO9000 series certification and has acquired ISO9001 for all business establishments in Japan and abroad. We have also acquired IATF 16949 certification that is requested strongly by major automotive manufacturers as standard.

Explanation of the mark that are using it for the catalog

► Pb free.

► Complies with EU RoHS directive.

*About the products without the Pb-free mark.

Contains Pb in products exempted by EU RoHS directive.

(Contains Pb in sealing glass, high melting temperature type solder or other.)

► Designed for automotive applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.

► Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc.).

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