TG1612SLN

- Output frequency: 13 MHz to 55.2 MHz
- Supply voltage: 1.8 V Typ. / 2.8 V Typ. / 3.0 V Typ. / 3.3 V Typ.
- Frequency / temperature characteristics:
  - ±0.5 x 10^6 Max. (-40 °C to +85 °C) and
  - ±5.0 x 10^6 Max. (+85 °C to +105 °C)
- External dimensions: 1.6 x 1.2 x 0.45 mm Max.
- Applications: Smart phone, LPWA module
- Features: 105 °C High temp, Standby function (ST)

### Specifications (characteristics)

<table>
<thead>
<tr>
<th>Item</th>
<th>Symbol</th>
<th>VC-TCXO</th>
<th>TCXO</th>
<th>TCXO-Standy</th>
<th>Conditions / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output frequency range</td>
<td>fo</td>
<td>13 MHz to 55.2 MHz</td>
<td>26 MHz</td>
<td></td>
<td>Standard frequency</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>V_C</td>
<td>1.8 V ± 0.1 V</td>
<td>2.8 V ± 5 %</td>
<td>3.0 V ± 5 %</td>
<td>Supply voltage range: 1.7 V to 3.63 V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>I_stg</td>
<td>-40 °C to +125 °C</td>
<td></td>
<td></td>
<td>Storage as single product.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>I_use</td>
<td>G: -40 °C to +85 °C</td>
<td>H: -40 °C to +105 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency tolerance</td>
<td>f_tol</td>
<td>±2.0 x 10^6 Max.</td>
<td></td>
<td></td>
<td>After restart, +25 °C</td>
</tr>
<tr>
<td>Frequency/temperature</td>
<td>f_to-Tc</td>
<td>C: ±0.5 x 10^6 Max. / -40 °C to +85 °C</td>
<td>W: ±5.0 x 10^6 Max. / +85 °C to +105 °C</td>
<td></td>
<td>Standard stability version</td>
</tr>
<tr>
<td>Frequency/load coefficient</td>
<td>f_o-Vcc</td>
<td>±0.2 x 10^6 Max.</td>
<td></td>
<td></td>
<td>Customized product (Option)</td>
</tr>
<tr>
<td>Frequency/voltage coefficient</td>
<td>f_o-Vcc</td>
<td>±0.2 x 10^6 Max.</td>
<td></td>
<td></td>
<td>V_C ± 5 %</td>
</tr>
<tr>
<td>Frequency aging</td>
<td>f_age</td>
<td>±1.0 x 10^6 Max.</td>
<td></td>
<td></td>
<td>+25 °C, First year, 13 MHz ≤ fo ≤ 20 MHz, 26 MHz ≤ fo ≤ 40 MHz</td>
</tr>
<tr>
<td>Current consumption</td>
<td>I_cc</td>
<td>1.5 mA Max.</td>
<td>1.7 mA Max.</td>
<td>2.0 mA Max.</td>
<td>2.2 mA Max.</td>
</tr>
<tr>
<td>Input resistance</td>
<td>R_in</td>
<td>500 kΩ Min.</td>
<td></td>
<td></td>
<td>V_C - GND (DC)</td>
</tr>
<tr>
<td>Frequency control range</td>
<td>f_cont</td>
<td>±8.0 x 10^6</td>
<td></td>
<td></td>
<td>B: Vc = 0.9 V ± 0.6 V (Vcc - 1.8 V) or D: Vc = 1.5 V ± 1.0 V (Vcc = 3.0 V) or</td>
</tr>
<tr>
<td>Frequency change polarity</td>
<td>-</td>
<td>Positive polarity</td>
<td></td>
<td></td>
<td>E: Vc = 1.65 V ± 1.0 V (Vcc = 3.3 V)</td>
</tr>
<tr>
<td>Stand-by current</td>
<td>I_std</td>
<td>-</td>
<td></td>
<td></td>
<td>3 μA Max.</td>
</tr>
<tr>
<td>Input voltage</td>
<td>V_W</td>
<td>-</td>
<td></td>
<td></td>
<td>ST = GND</td>
</tr>
<tr>
<td>Symmetry</td>
<td>SYM</td>
<td>40 % to 60 %</td>
<td></td>
<td></td>
<td>GND level (DC cut)</td>
</tr>
<tr>
<td>Start-up time</td>
<td>I_stt</td>
<td>2.0 mA Max.</td>
<td></td>
<td></td>
<td>T = 0 at 90 % V_C</td>
</tr>
<tr>
<td>Output load condition</td>
<td>Load_R</td>
<td>10 kΩ</td>
<td></td>
<td></td>
<td>DC cut capacitor = 0.01 μF</td>
</tr>
<tr>
<td>Load C</td>
<td>Load_C</td>
<td>10 pF</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Product Name: TG1612 SLN 26.000000MHz

- Model: 1
- Output: S: Clipped sine wave
- Frequency: 4
- Supply voltage: Refer to symbol table
- Frequency / temperature characteristics: C: ±0.5 x 10^6 Max., F: ±2.0 x 10^6 Max., W: ±0.5 x 10^6 Max. and ±5.0 x 10^6 Max.
- Operating temperature: H: -40 °C to +105 °C, G: -40 °C to +85 °C
- ST function: N: Non, S: Standby
- V_c: Refer to symbol table, N: Non for TCXO, Standby mode
- Internal identification code ("M" is default)

### External dimensions

(Unit:mm)

- Length: 1.6 ± 0.1
- Width: 1.0 ± 0.01
- Height: 0.5 ± 0.05

### Footprint (Recommended)

(Unit:mm)

- Width: 1.40
- Height: 0.55

To maintain stable operation, provide a 0.01 uF to 0.1 uF by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between Vcc - GND).
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►Pb free.

►Complies with EU RoHS directive.

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

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