

| PAD | CONNECTION |
|-----|----------------|
| 1 | Enable/Disable |
| 2 | Ground |
| 3 | Output |
| 4 | Supply |

Specifications

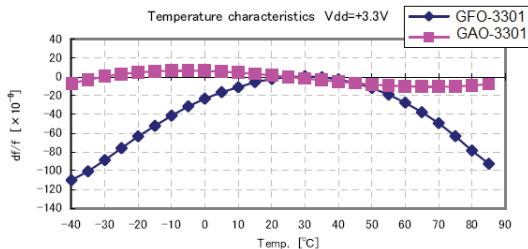
| Parameters | Product | Option Codes |
|--|-----------|--------------|
| | GFO-3301 | |
| Frequency: | 32.768kHz | ■ |
| Frequency tolerance @ 25°C: +5ppm ±20ppm | | ■ |
| Temperature stability (wrt 25°C): -90ppm~+10ppm, -20~+70°C -140ppm~±10ppm, -40~+85°C | | ■ ■ |
| Operating temperature range: -40 to +85°C | | ■ |
| Storage temperature range: -55 to +125°C | | ■ |
| Supply voltage (V _{DD}): Operable from +1.5 ~ +5.5V | | ■ |
| Supply current (max): 1.5µA max (3.3V, no load) | | ■ |
| Standby current (max): 1.0µA max | | ■ |
| Driving ability: 15pF CMOS | | ■ |
| Logic levels: '0' level = 0.4V max '1' level = V _{DD} -0.4V min | | ■ ■ |
| Start up time: 1s max | | ■ |
| Waveform symmetry: 40:60 @ 50%V _{DD} | | ■ |
| Rise / fall time: 20ns typ, 200ns max | | ■ |

■ Standard. □ Optional - Please specify required code(s) when ordering

Features

- ▶ Extremely low current consumption
- ▶ Operational from 1.5V ~ 5.5V
- ▶ Tuning fork resonator
- ▶ Miniature ceramic package with metal lid
- ▶ Competitive pricing

Temperature Characteristics vs GAO-3301



- ◆ GAO-3301 offers good temp stability, but draws higher current
- ◆ GFO-3301 draws very low supply current, but looser stability

Ordering Information

Product name or Golledge PN.

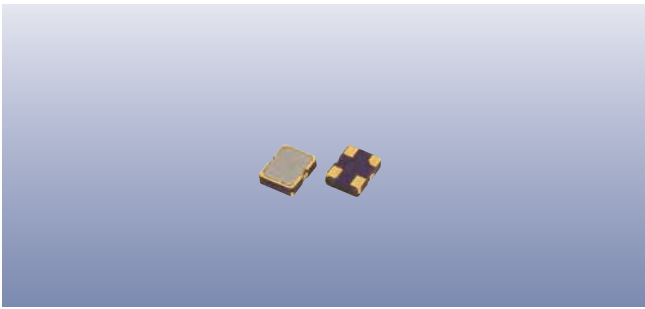
ie: **GFO-3301**

or **MP05295**

Option code X (eg GFO-3301/X) denotes a custom spec.

Enable / Disable Function

| Input (pad 1) | Output (pad 3) |
|---|----------------|
| Open | Enabled |
| '1' level (V _{IH} = 70% V _{DD} min) | Enabled |
| '0' level (V _{IL} = 30% V _{DD} max) | High Impedance |



Packaging & Handling

Production quantities supplied on T&R, 1k or 3k pcs per reel. Small quantities may be supplied on tape (no reel), or in bulk.

 Static sensitive product. Observe proper handling precautions

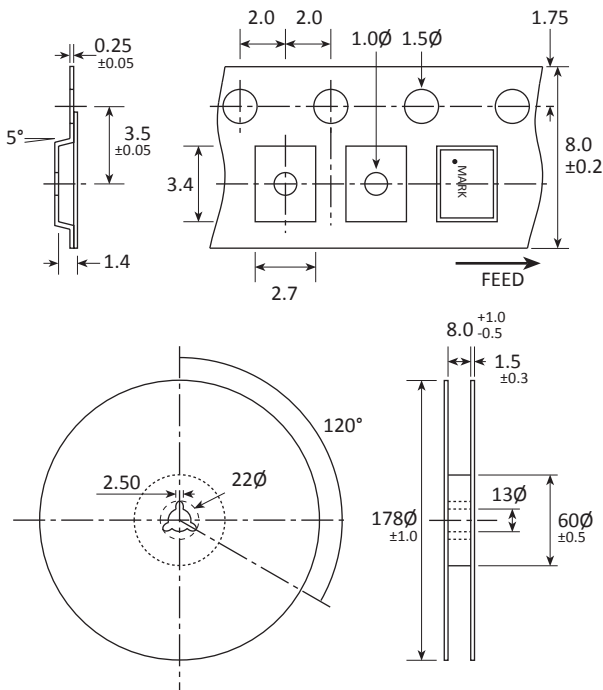
Marking

FREQUENCY
DC

Marking type: Laser
DC = Date code in YM, eg "CE" = May 2013

| | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | A | B | C | D | E | F | G | H | J | K | L | M |
| Y | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |
| M | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |

Tape & Reel Specification



Not to scale. Dimensions in mm. Tolerances ±0.1mm unless otherwise stated.

Construction

- Ceramic body with gold-plated pads
- Metal lid, seam sealed

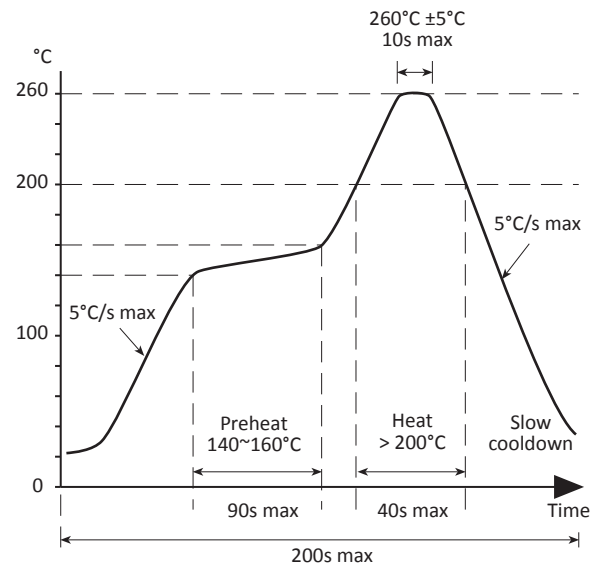
Composition



This product is lead-free, and is fully compliant with the RoHS 2 directive 2011/65/EU



Soldering Profile



Solder resistance: 260°C x 10 secs x 2.