

# GAO-3201

1.8~5.0V 32.768kHz

## Oscillator

- Excellent temperature stability
- Low current consumption
- AT-cut resonator + dividing circuit
- Miniature ceramic package with metal lid
- Competitive pricing



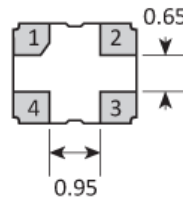
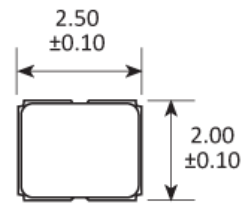
### CONFIGURABLE OPTIONS

| Parameter                   | Option Code |
|-----------------------------|-------------|
| Frequency stability         |             |
| ±25ppm                      | A           |
| Operating temperature range |             |
| -40 to +85 °C               | I           |

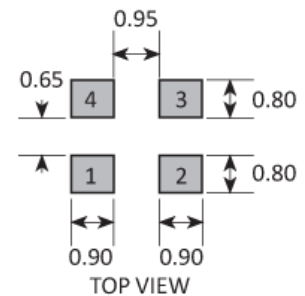
## SPECIFICATIONS

|                             |                                                                    |
|-----------------------------|--------------------------------------------------------------------|
| Frequency                   | 32.768kHz                                                          |
| Dimensions                  | 2.5 x 2.0 x 0.9mm                                                  |
| Storage temperature range   | -55 to +125 °C                                                     |
| Supply voltage ( $V_{DD}$ ) | Operable from +1.8 ~ +5.0V                                         |
| Supply current (@ 15pF)     | 0.108mA typ, 0.200mA max (1.8V)<br>0.117mA typ, 0.200mA max (3.3V) |
| Driving ability             | 15pF CMOS                                                          |
| Logic levels                | '0' level = 10% $V_{DD}$ max<br>'1' level = 90% $V_{DD}$ min       |
| Waveform symmetry           | 45:55 @ 50% $V_{DD}$                                               |
| Rise / fall time            | 13ns typ, 100ns max, 10 ~ 90% $V_{DD}$                             |
| Start up time               | 10ms max                                                           |
| Stand-by current            | 2 $\mu$ A typ, 10 $\mu$ A max                                      |
| Ageing                      | $\pm$ 5ppm/yr max @ 25 °C                                          |

## PACKAGE DRAWING



### SOLDER PAD LAYOUT



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

Dimensions in mm

## ORDERING INFORMATION

To request a quotation for the GAO-3201 please use the configurable options form to choose the options you require and then submit your configured product to our team. Our expert advisers are always happy to help with your requirements and can be contacted on +44 1460 256 100 or at [sales@golledge.com](mailto:sales@golledge.com).

Following product selection you will be issued with a seven character Golledge part number. Your Golledge part number is the internationally accepted Golledge manufacturing part number (MPN) that should be used for all project documentation, including bills of materials (BoMs) and purchase orders.

If you have any queries regarding any of our documentation our dedicated sales team will be happy to help.

## 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 |

## MARKING

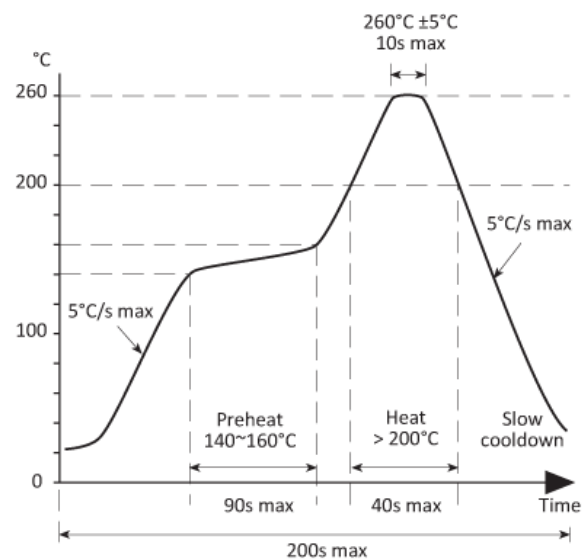
| FREQUENCY | DC |
|-----------|----|
| S         | DC |

Marking type: Laser

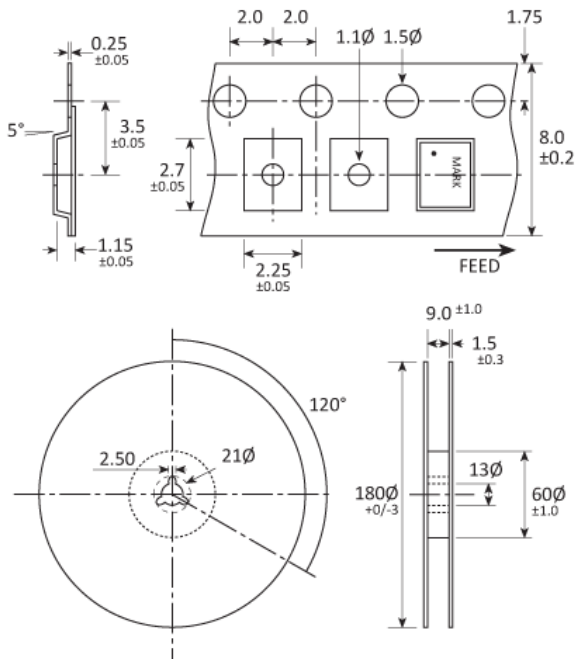
DC = Date code in YM, where Y is numeric, and M is a letter  
e.g. "8F" = June 2018

|   | A   | B   | C   | D   | E   | F   | G   | H   | J   | K   | L   | M   |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| M | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |

## SOLDERING PROFILE



## TAPE & REEL SPECIFICATION



Dimensions in mm

## HANDLING & STORAGE



Human Body Model (HBM) 1A (250V to <500V)



Moisture Sensitivity Level (MSL): 1 (or not applicable)

## CONSTRUCTION

Ceramic body with gold-plated pads

Metal lid, seam sealed

## COMPLIANCE

Please refer to our **DOCUMENTS** section for more information.



Lead-free (< 0.1% by weight)



RoHS compliant with no exemptions.



REACH compliant.



Free of conflict minerals.



Free from halogens.



Free from ozone-depleting substances.