

## Features

- Ideally suited for base stations, VSAT etc
- Outstanding phase noise characteristics
- LVCMOS output
- Optional electronic frequency control
- Commercial, extended or industrial temp range
- Miniature SM package

## Specifications

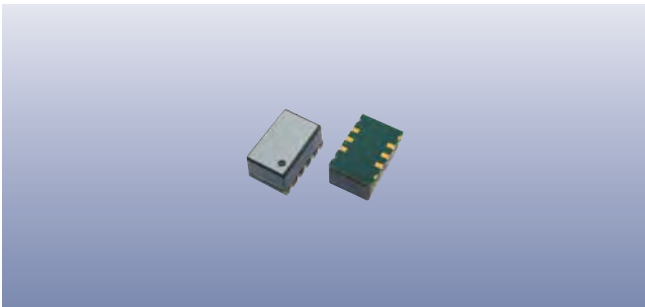
Parameters	Product	Option Codes
	GOXO-149	
Frequency range:	10.0 ~ 80.0MHz	■
Temperature stability:	$< \pm 2 \times 10^{-8}$ $< \pm 5 \times 10^{-8}$ $< \pm 1 \times 10^{-7}$	<input type="checkbox"/> P <input type="checkbox"/> N <input type="checkbox"/> M
Operating temperature range:	0 to +70°C -20 to +75°C -40 to +70°C -40 to +85°C	<input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> I
Ageing (after 30 days):	$< \pm 1 \times 10^{-8}$ per day $< \pm 3 \times 10^{-7}$ first year	■
Calibration tolerance @25°C:	$< \pm 1 \times 10^{-6}$	■
Frequency stability:	$< \pm 2 \times 10^{-8}$ per 5% change in load $< \pm 2 \times 10^{-8}$ per 5% change in $V_{DD}$	■
Overall stability*:	$\pm 4.6 \times 10^{-6}$ max	■
Storage temperature range:	-55 to +125°C	■
Output waveform:	15pF LVCMOS 45:55% @ 50% $V_{DD}$	■
Rise / fall times:	6.5ns	■
Start up time:	10ms	■
Frequency adjustment:	None $\pm 10$ ppm, 1.65V $\pm 1.35$ V (positive slope, 5% linearity)	<input type="checkbox"/> T <input type="checkbox"/> V
Supply voltage ( $V_{DD}$ ):	+3.3V ( $\pm 5\%$ )	■
Power consumption (0+70°C):	2.5W max at switch on 1.1W typ when stabilised at 25°C	■
Warm up (to within spec):	60s at +25°C 90s at -40°C	■
Allan variance (1 sec):	$< \pm 1 \times 10^{-9}$	■
Phase noise (@ 10.0MHz):	$< -100$ dBc/Hz @ 10Hz $< -130$ dBc/Hz @ 100Hz $< -148$ dBc/Hz @ 1kHz $< -154$ dBc/Hz @ 10kHz $< -155$ dBc/Hz @ 100kHz	■
Phase jitter RMS:	0.5ps typ, 1.0ps max, 12kHz~fo/2	■

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

\* Overall stability is inclusive of calibration @ 25°C, operating temperature range, supply voltage change, load change, shock and vibration and 20 years ageing.

## Ordering Information

Product name + option codes + frequency  
 Option codes must be included to properly specify a model.  
 eg: **GOXO-149/NFT 13.00MHz**  $\pm 5 \times 10^{-8}$  -20+75°C, OCXO no VC  
**GOXO-149/MIV 14.40MHz**  $\pm 1 \times 10^{-7}$  -40+85°C, OCXO with VC  
 Option code X (eg GOXO-149/X) denotes a custom spec.



## Construction

- ▮ FR4 substrate, Ryton R4 cover
- ▮ Water resistant, non hermetic seal

## Composition



This product is lead-free, and is fully compliant with the RoHS directive 2002/95/EC



## Packaging & Handling

Production quantities supplied on T&R, 500 pcs max per reel. Small quantities may be supplied on tape (no reel), or in bulk.



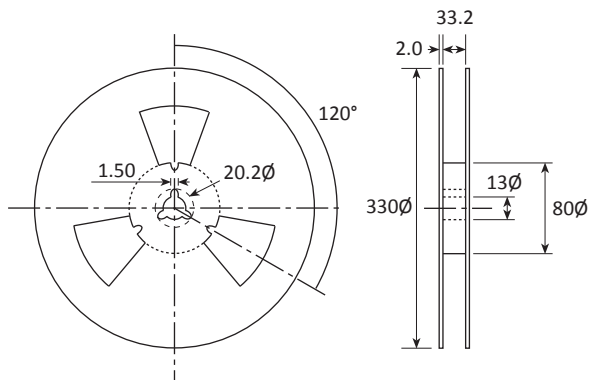
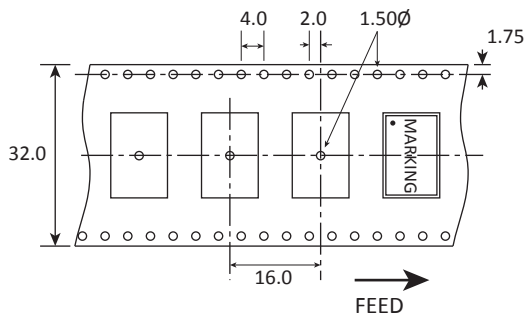
◆ Static sensitive product. Observe proper handling precautions

## Marking

GOLLEGE  
FREQUENCY  
• DC

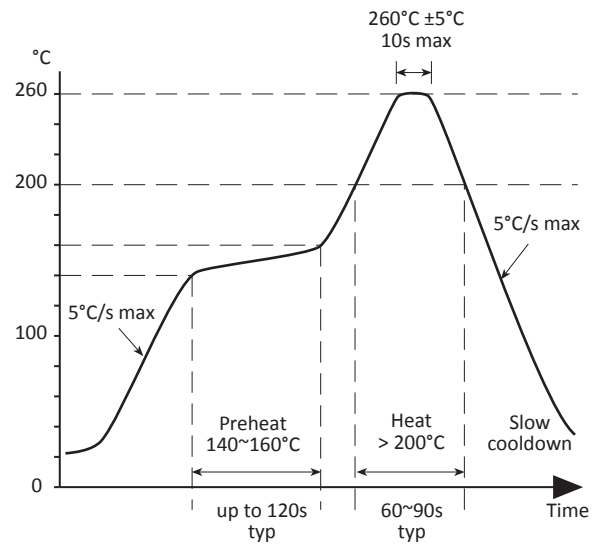
- Pin 1
- Marking type: Ink
- DC = Date code

## Tape & Reel Specification



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

## Soldering Profile



Meets IPC/JEDEC J-STD-020C

## Recommended Cleaning

Wash only in a inline high pressure wash station that has an air knife and drying capabilities.  
(Drying temperature range from 85° to 100°C)