

PAD	CONNECTION
1	Enable / disable
2	Not connected
3	Ground
4	Output 1 (Q)
5	Output 2 ( $\bar{Q}$ )
6	Supply

## Features

- ▶ Complementary LV-PECL output
- ▶ RMS phase jitter 0.3ps
- ▶ Multiplier-free design
- ▶ Enable / disable tristate function
- ▶ Designed for high speed data transfer

## Example Applications

- ▶ Networking - Gigabit ethernet etc
- ▶ Storage - SAS, SATA etc
- ▶ Telecomms - SONET, SDH etc
- ▶ Computing
- ▶ Instrumentation

## Specifications

**GXO-E31L: 3.3V supply**

**GXO-E31J: 2.5V supply**

Parameters	Variant		Option Codes
	L	J	
<b>Frequency range:</b> 40.0 ~ 60.0MHz (fundamental) 60.0 ~ 160MHz (3rd OT) 160.0 ~ 250MHz (inverted mesa)	■	■	
<b>Frequency stability*:</b> ±100ppm ±50ppm ±25ppm (<160MHz)	■ □ □	■ □ □	B A
<b>Operating temperature range:</b> -10 to +70°C -40 to +85°C	■ □	■ □	I
<b>Storage temperature range:</b> -40 to +85°C	■	■	
<b>Supply voltage (V<sub>DD</sub>):</b> +3.3V (±5%) +2.5V (±5%)	■	■	
<b>Supply current:</b> 45mA max (40.0~160MHz) 50mA max (>160~250MHz)	■ ■	■ ■	
<b>Output:</b> Complementary LV-PECL	■	■	
<b>Test load:</b> R <sub>T</sub> = 50Ω V <sub>TT</sub> = V <sub>DD</sub> -2.0V	■ ■	■ ■	
<b>Logic levels:</b> '0' level = V <sub>DD</sub> -1.81 ~ V <sub>DD</sub> -1.62 '1' level = V <sub>DD</sub> -1.025 ~ V <sub>DD</sub> -0.88	■ ■	■ ■	
<b>Waveform symmetry:</b> 45:55 max @ 50%V <sub>p,p</sub>	■	■	
<b>Rise / fall time:</b> 0.4ns max (20 ~ 80%V <sub>p,p</sub> )	■	■	
<b>Enable / disable function:</b> Tristate (control via pad 1)	■	■	
<b>Phase jitter RMS:</b> 1ps max (0.3ps typ), 12kHz~20MHz	■	■	

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

\* Frequency stability is inclusive of calibration @ 25°C, operating temperature range, supply voltage change and load change.

## Ordering Information

Product name + variant + option codes (if any) + frequency

eg: **GXO-E31L 156.250MHz** 3.3V, ±100ppm -10+70°C

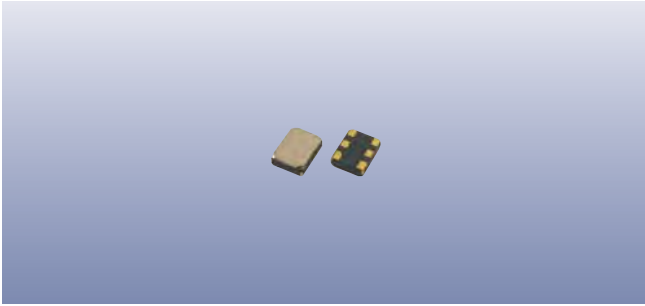
**GXO-E31J/BI 125.0MHz** 2.5V, ±50ppm -40+85°C

Option code X (eg GXO-E31L/X) denotes a custom spec.

## Enable / Disable Function

Input (pad 1*)	Output 1 (pad 4)	Output 2 (pad 5)
Open '1' level (≥0.7V <sub>DD</sub> ) '0' level (≤0.3V <sub>DD</sub> )	Enabled Enabled High Impedance	Enabled Enabled High Impedance

\* Enable / disable function can be on pad 2 on request.



## Construction

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

## Composition



This product is lead-free, and is fully compliant with current RoHS directives



## Packaging & Handling

Production quantities supplied on T&R, 2k pcs per reel.  
Small quantities may be supplied on tape (no reel), or in bulk.



◆ Static sensitive product. Observe proper handling precautions

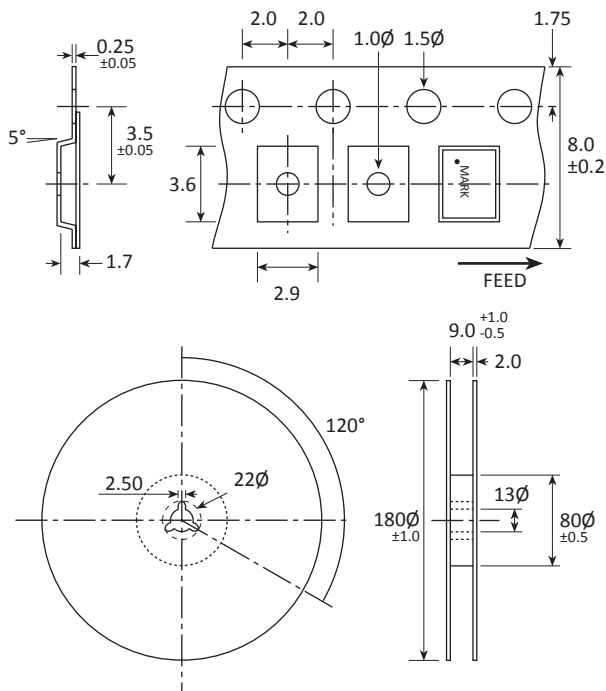
## Marking

FREQUENCY DC  
• PARTNO

- Pin 1
- Marking type: Laser
- DC = Date code in YM, eg "DE" = May 2014

	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.

## Soldering Profile

