

PAD	CONNECTION
1	Ground or Freq adjustment
2	Ground
3	Output
4	Supply

Scale 3:1

**Features**

- *Ideally suited for GPS applications*
- *Supply voltages from 1.8V ~ 3.6V*
- *Low power consumption*
- *Miniature SM package*
- *Excellent frequency stability*

**GPS / Mobile Applications**

Frequency	Application	Part No
16.367667MHz	SiRF - Centrality, Nemerix, Skytraq	MP02057
16.3680MHz	MTK, Sige	MP01176
16.3690MHz	SiRF	MP01863
19.20MHz	W/CDMA	MP02058
26.0MHz	Broadcom (Global Locate), u-Blox	MP02059
26.0MHz	GSM / EGSM	MA06427
40.0MHz	WiMax, Intel, Sequans, Beceem	MP02060

**Specifications**

*GTXO-93T: TCXO, no frequency adjustment*

*GTXO-93V: TCXO with VC frequency adjustment*

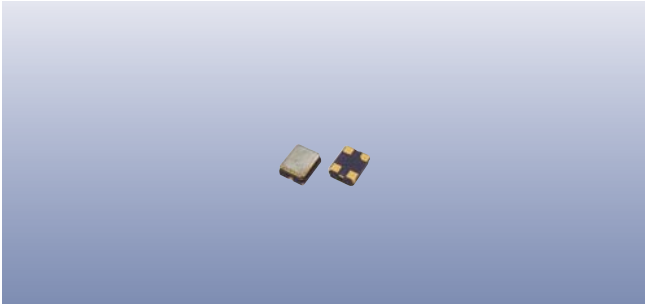
Parameters	Variant		Option Codes
	T	V	
Frequency range: 10.0 ~ 40.0MHz	■	■	
Frequency calibration: ±2.0ppm (+25°C ±3°C)	■	■	
Frequency stability: ±2.5ppm ±2.0ppm ±1.5ppm ±0.5ppm (see note 1)	■ □ □ □	■ □ □ □	J H G E
Temperature range: 0 to +50°C -10 to +60°C -20 to +75°C -30 to +85°C	□ □ □ ■	□ □ □ ■	R C N S
Storage temperature range: -40 to +85°C	■	■	
Frequency vs supply voltage: ±0.2ppm, V <sub>DD</sub> ±5%	■	■	
Frequency vs load change: ±0.2ppm (10kΩ±10%/10pF±10%)	■	■	
Frequency slope: ±0.05ppm/°C over -30+85°C	■	■	
Ageing: ±1.0ppm max first year	■	■	
Supply voltage (V <sub>DD</sub> ): +2.8V Other (+1.8V ~ +3.6V)	■ □	■ □	specify
Supply current: 1.5~2.0mA max	■	■	
Output waveform: Clipped sine, 0.8V p-p (see note 2)	■	■	
Test load: 10kΩ // 10pF	■	■	
Start up time: 3ms max	■	■	
Frequency adjustment: None ±8 ~ ±14ppm, +1.4V ±1.0V	■	■	
Harmonics: -5dBc max	■	■	
Phase noise: -130dBc/Hz @ 1kHz	■	■	

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

**Ordering Information**

Product name + variant + option codes + frequency  
 Option codes must be included to properly specify a model.  
 eg: *GTXO-93V/JS 13.00MHz* ±2.5ppm -30+85C, TCXO with VC  
*GTXO-93T/HN 14.40MHz* ±2.0ppm -20+75C, TCXO no VC  
 Option code X (eg GTXO-93V/X) denotes a custom spec.

- ◆ 1: ±0.5ppm over -30+85°C is not available in V variant (VC-TCVXO)
- ◆ 2: The output is not DC-free. A coupling capacitor (10nF) may be required.



**Construction**

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

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

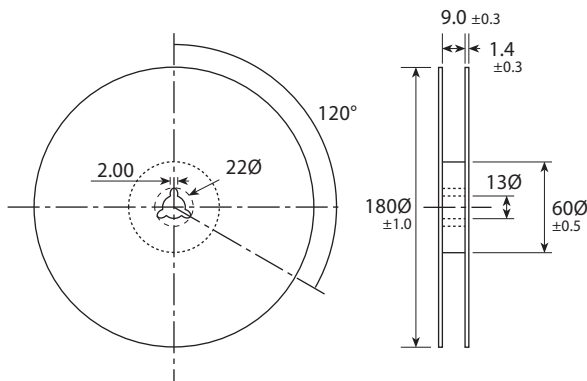
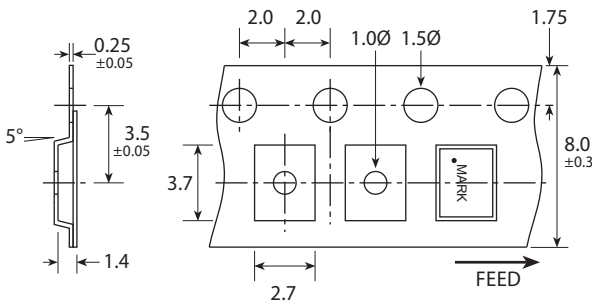
 Static sensitive product. Observe proper handling precautions

**Marking**

FREQUENCY  
DC

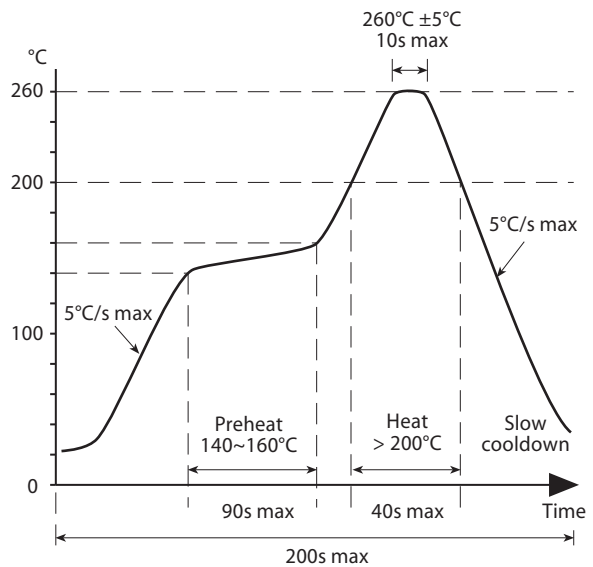
- Pin 1
- Marking type: Laser
- DC = Date code

**Tape & Reel Specification**



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

**Soldering Profile**



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