

PAD	CONNECTION
1	Crystal
2	Ground & lid
3	Crystal
4	Ground & lid

## Features

- ▶ Ultra-miniature for maximum space saving
- ▶ Ideal for Bluetooth / Wireless applications
- ▶ High reliability & tight stability
- ▶ Metal lid can be grounded to minimise EMI
- ▶ Seam sealed for excellent long-term stability

## Specifications

Parameters	Product	Option Codes
	GSX-221	
Frequency range:	16.0 ~ 56.0MHz	<input checked="" type="checkbox"/>
Calibration tolerance:	±10ppm ±15ppm ±20ppm Other values (±7.5 ~ ±100ppm)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Temperature stability:	±10ppm ±15ppm ±20ppm ±30ppm Other values (±7.5 ~ ±100ppm)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Operating temperature range:	-10 to +60°C -20 to +70°C -30 to +80°C Other values	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Storage temperature range:	-40 to +90°C	<input checked="" type="checkbox"/>
Circuit condition:	8pF 9pF 12pF Other values	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Oscillation mode:	Fundamental	<input checked="" type="checkbox"/>
Equivalent series resistance (max):	150Ω (16.0 ~ 19.9MHz) 100Ω (20.0 ~ 29.9MHz) 80Ω (30.0 ~ 35.9MHz) 60Ω (36.0 ~ 56.0MHz)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Ageing:	±3ppm max first year	<input checked="" type="checkbox"/>
Static capacitance (C0):	5pF max	<input checked="" type="checkbox"/>
Test drive level:	10μW typ	<input checked="" type="checkbox"/>
Soldering condition:	260°C, 10 sec x2 max	<input checked="" type="checkbox"/>

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

## Ordering Information

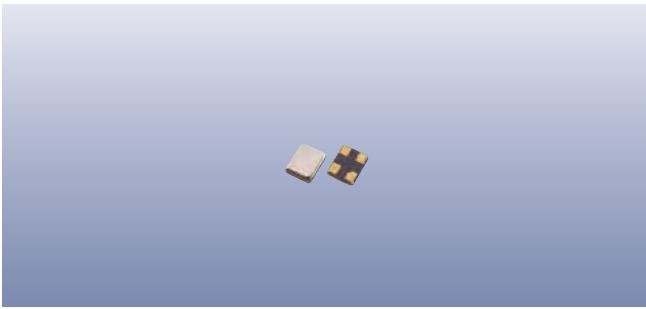
Part No, or product name + option codes + frequency

eg: **GSX-221/111NF 26.0MHz** 10/10/10/9-F

**GSX-221/1P3BF 26.0MHz** 10/15/30/12-F

Option code X (eg GSX-221/X) denotes a custom specification.

♦ ±10ppm temperature stability may not be available over -30+80°C. Check with our sales office before ordering.



## 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 2011/65/EU



## Packaging & Handling

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

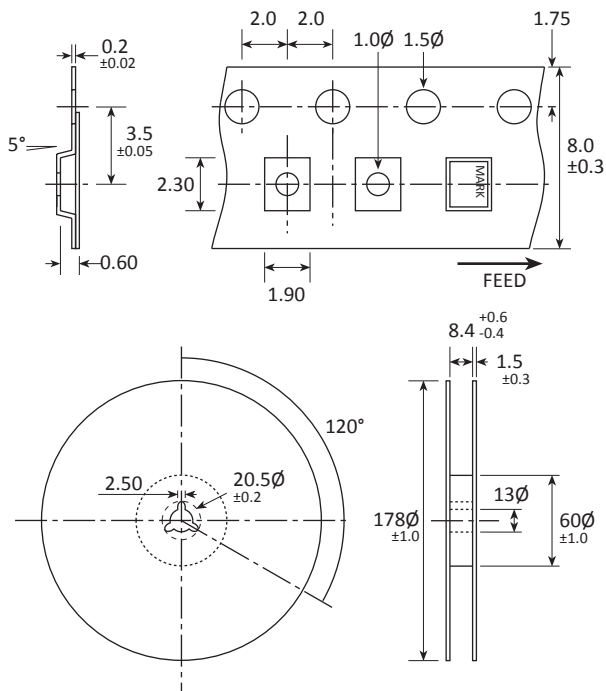
## Marking

FREQUENCY  
S DC

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

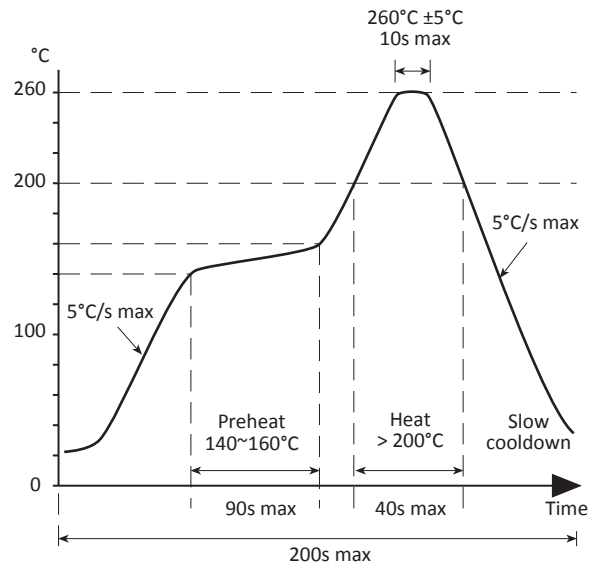
	A	B	C	D	E	F	G	H	J	K	L	M
Y	1	2	3	4	5	6	7	8	9	0		
M	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

## Tape & Reel Specification



Not to scale. Dimensional tolerances ±0.1mm unless otherwise stated.

## Soldering Profile



Maximum solder resistance: 260°C x 10 secs x 2.