

## Product Description

Description:	24.0MHz GSX-333/1P2NF SM Crystal
Product family:	GSX-333
Category:	SM Quartz Crystal
Order code:	MP03660

## Features

- ▶ Metal lid can be grounded to minimise EMI
- ▶ Seam sealed for excellent long-term stability
- ▶ Ultra-miniature for maximum space saving

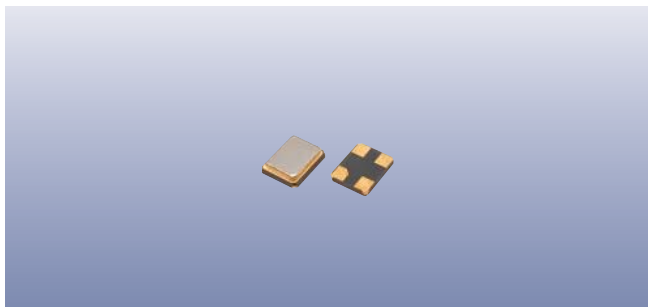
## Additional Information

For further information regarding packaging, construction, material composition, soldering profile and environment, please refer to **GSX-333 Product Information sheet**

For dimensions, refer to package drawing: **D0262-A**

## Electrical Specifications

Parameter	Value	Notes
Nominal frequency:	24.0MHz	
Calibration tolerance:	±10ppm max	At 25°C ±3°C
Temperature stability:	±15ppm max over -20 to +75°C ±30ppm max over -40 to +85°C	Referred to frequency at 25°C
Operating temperature range:	-40 to +85°C	
Storage temperature range:	-40 to +85°C	
Circuit condition:	9pF	
Static capacitance (C <sub>0</sub> ):	5.0pF max	
Oscillation mode:	Fundamental	
Equivalent series resistance:	40Ω max	
Aging:	±1ppm/year max	
Test drive level:	10μW typ, 200μW max	



## 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  
T zDC

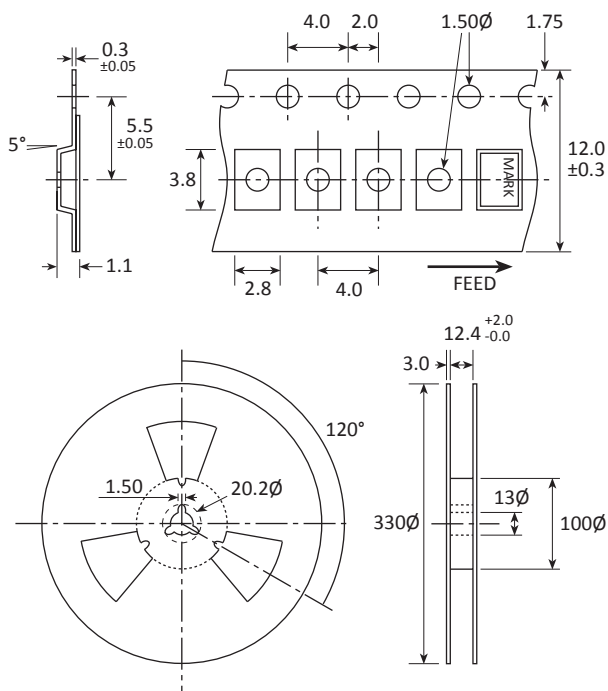
Marking type: Laser  
DC = Date code in YW, as shown below  
Example: "zd" = 2012 week 30

Year	2009	2010	2011	2012
	2013	2014	2015	2016
Code	Z	z	<u>Z</u>	<u>z</u>

Week codes:

A ~ Z: weeks 1 to 26  
a ~ z: weeks 27 to 52

## Tape & Reel Specification



Not to scale. Dimensional tolerances  $\pm 0.1\text{mm}$  unless otherwise stated.

## Construction

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

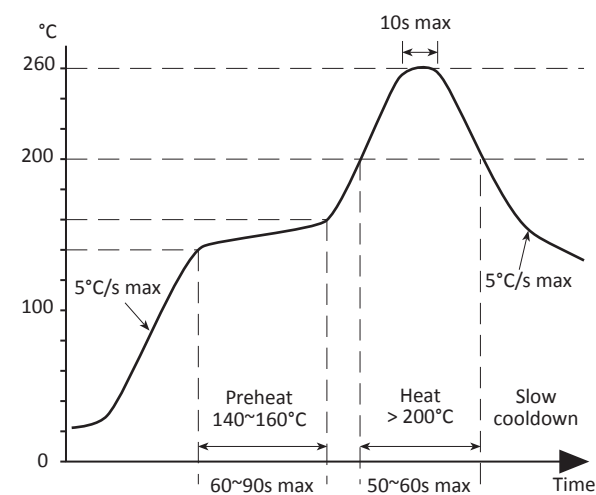
## Composition



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



## Soldering Profile



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