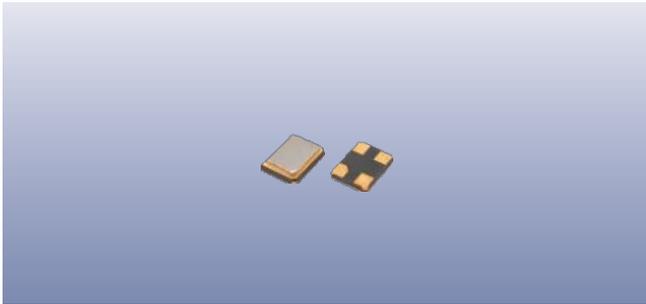




## Specification

## Part No: MA07943



### Product Description

Description:	12.0MHz GSX-333/111BF SM Crystal
Product family:	GSX-333
Category:	SM Quartz Crystal
Order code:	MA07943

### Features

- ▣ Qualified for use with CSR Bluetooth chipsets
- ▣ 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

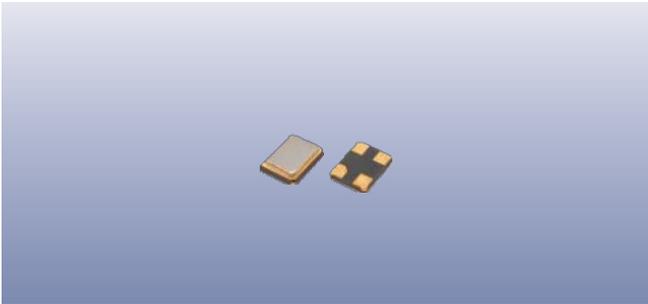
Parameter	Value	Notes
Nominal frequency:	12.0MHz	
Calibration tolerance:	±10ppm max	@25°C ±3°C
Temperature stability:	±10ppm max	Referred to frequency at 25°C
Operating temperature range:	-10 to +60°C	
Storage temperature range:	-40 to +85°C	
Circuit condition (C <sub>J</sub> ):	12pF	
Oscillation mode:	Fundamental	
Equivalent series resistance:	100Ω max	
Test drive level:	10μW	
Frequency perturbation:	±1ppm max	
Ageing:	±1ppm max	First year





# Product Information

# GSX-333



### 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

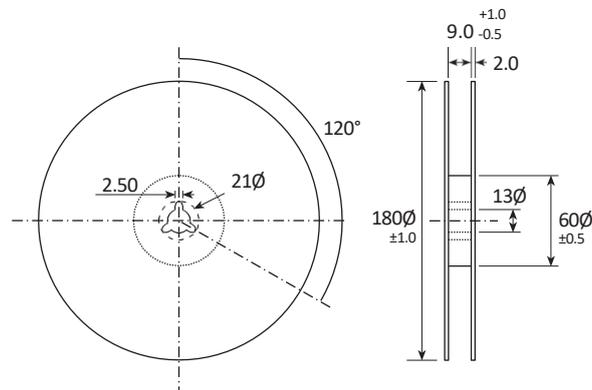
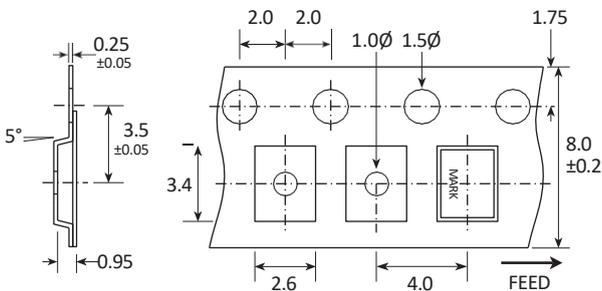
Production quantities supplied on T&R, 3k pcs per reel.  
Small quantities may be supplied on tape (no reel), or in bulk.

### Marking

FREQUENCY  
T DC

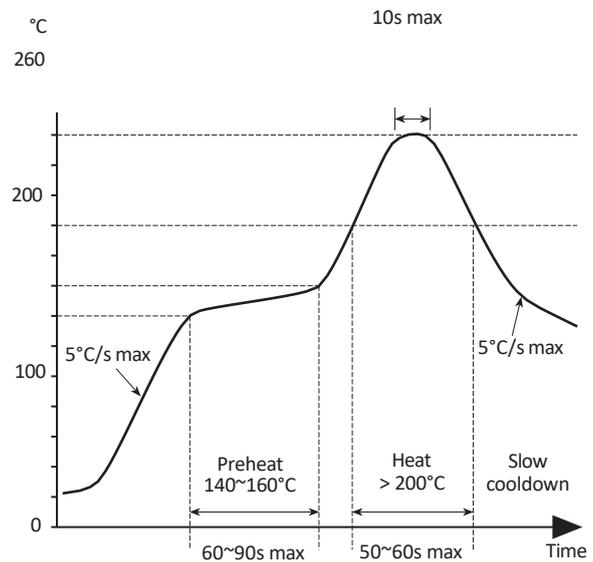
Marking type: Laser  
DC = Date code

### Tape & Reel Specification



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

### Soldering Profile



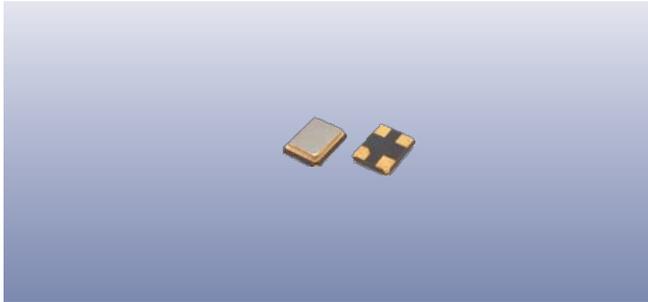
Maximum solder resistance: 260°C x 10 secs x 2.





# Package Drawing

# D0262-A



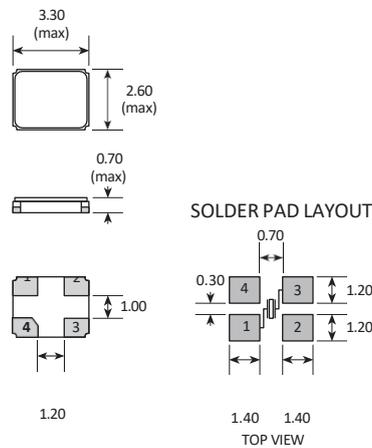
### Product Family

GSX-333

### Construction

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

### Dimensions (mm)



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

NOTE: Chamfer normally on pad 4, but may alternatively be supplied on pad 1.

