

Scale 3:1

Features

- ▶ Good frequency perturbation
- ▶ Metal lid can be grounded to minimise EMI
- ▶ Seam sealed for excellent long-term stability
- ▶ Ultra-miniature for maximum space saving
- ▶ Ideal for Bluetooth / Wireless applications

Bluetooth Applications

Frequency	Specification	IC	Part No
12.0MHz	8pF, 10.5ppm/pF typ pullability	CSR	MA07080*
16.0MHz	9pF, 9ppm/pF typ pullability	CSR	MA06152*
26.0MHz	9pF, 16.5ppm/pF typ pullability	CSR	MA05768*

* Qualified for use with CSR chipset solutions. Golledge is a global supply partner for CSR

GPS / Mobile Applications

Frequency	Specification	IC / Appln	Part No
20.0MHz	16pF		MA06153

Specifications

Parameters	Product	Option Codes
	GSX-333	
Frequency range: 12.0 ~ 48.0MHz	<input checked="" type="checkbox"/>	
Calibration tolerance:		
±10ppm	<input checked="" type="checkbox"/>	1
±15ppm	<input type="checkbox"/>	P
±20ppm	<input type="checkbox"/>	2
Other values (±7.5 ~ ±100ppm)	<input type="checkbox"/>	specify
Temperature stability:		
±10ppm	<input checked="" type="checkbox"/>	1
±15ppm	<input type="checkbox"/>	P
±20ppm	<input type="checkbox"/>	2
±30ppm	<input type="checkbox"/>	3
Other values (±7.5 ~ ±100ppm)	<input type="checkbox"/>	specify
Operating temperature range:		
-10 to +60°C	<input checked="" type="checkbox"/>	1
-20 to +70°C	<input type="checkbox"/>	2
-30 to +80°C	<input type="checkbox"/>	3
Other values	<input type="checkbox"/>	specify
Storage temperature range:		
-40 to +85°C	<input checked="" type="checkbox"/>	
Circuit condition:		
8pF	<input type="checkbox"/>	M
9pF	<input type="checkbox"/>	N
12pF	<input type="checkbox"/>	B
16pF	<input checked="" type="checkbox"/>	D
Series resonant	<input type="checkbox"/>	S
Other values	<input type="checkbox"/>	specify
Oscillation mode: Fundamental	<input checked="" type="checkbox"/>	F
Equivalent series resistance:		
60Ω max	<input checked="" type="checkbox"/>	
Frequency perturbation:		
±1ppm max	<input checked="" type="checkbox"/>	
Ageing: ±1ppm max first year	<input checked="" type="checkbox"/>	
Test drive level: 10μW	<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

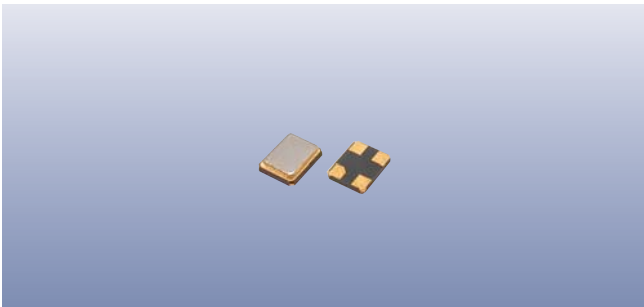
Product name + option codes + frequency

eg: **GSX-333/111NF 16.0MHz** 10/10/10/9-F

GSX-333/1P3AF 26.0MHz 10/15/30/10-F

Option code X (eg GSX-333/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 2002/95/EC



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

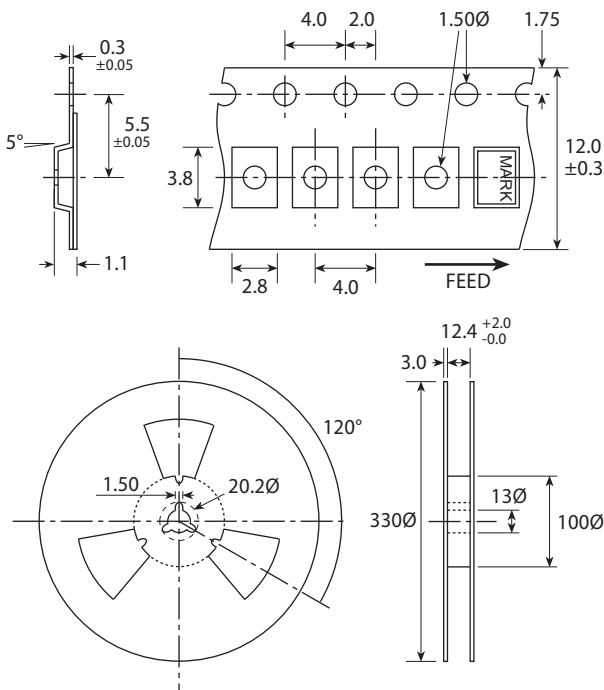
FREQUENCY
T zDC

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	⌒	⌒

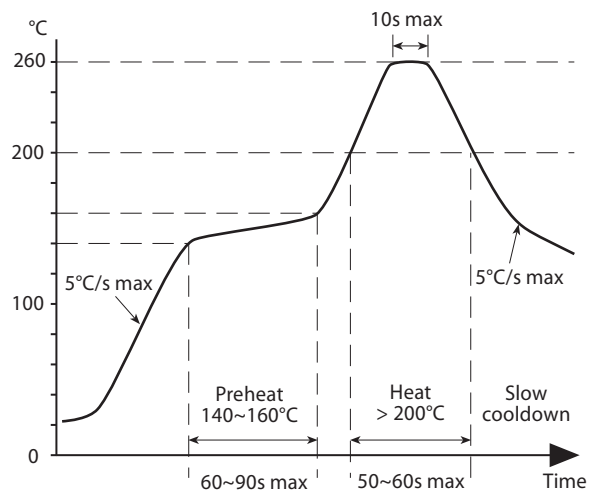
Week codes:
A ~ Z: weeks 1 to 26
a ~ z: weeks 27 to 52

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.