

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 ±15ppm ±20ppm Other values (±7.5 ~ ±100ppm)	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1 P 2 specify
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"/>	1 P 2 3 specify
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"/>	1 2 3 specify
Storage temperature range: -40 to +85°C	<input checked="" type="checkbox"/>	
Circuit condition: 8pF 9pF 12pF 16pF Series resonant Other values	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	M N B D S specify
Oscillation mode: Fundamental	<input checked="" type="checkbox"/>	F
Equivalent series resistance: 60Ω max	<input checked="" type="checkbox"/>	
Frequency perturbation: ±1 ppm max	<input checked="" type="checkbox"/>	
Ageing: ±1 ppm 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

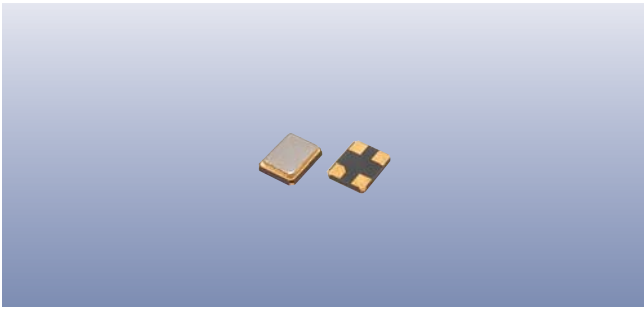
Product name + option codes + frequency

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.
- ◆ Available on T&R - 1k or 3k pcs per reel.



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

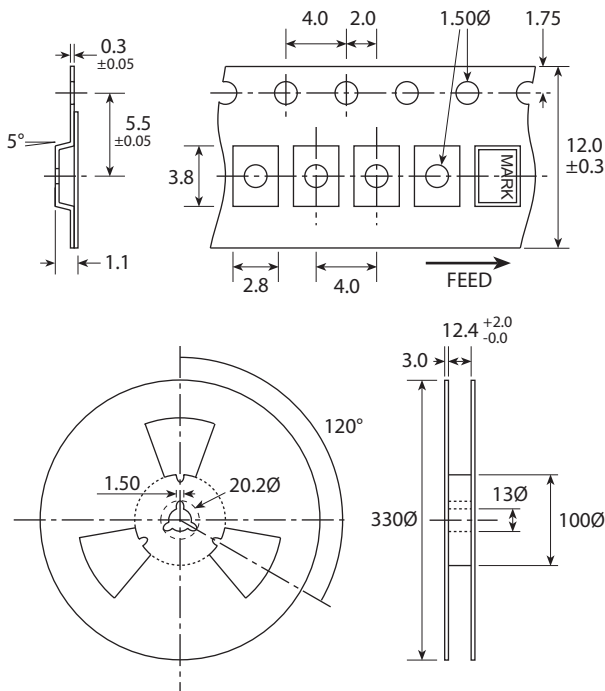
Production quantities supplied on T & R, 1k or 3k pcs per reel.
Small quantities may be supplied on tape (no reel), or in bulk.

Marking

FREQUENCY T DC	Marking type: Laser DC = Date code in YW, as shown below Example: "zd" = 2004 week 30
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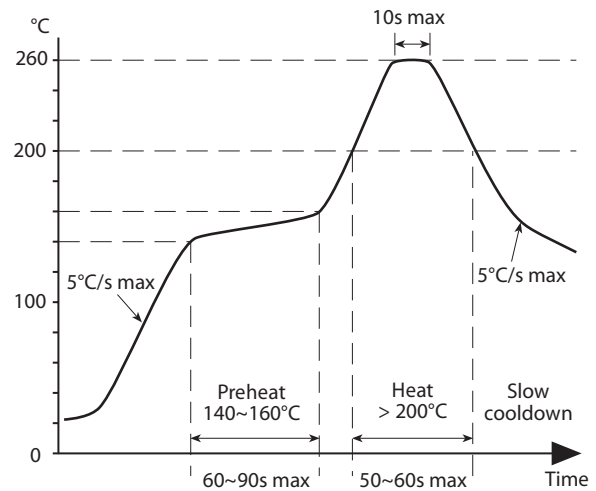
Year	2001	2002	2003	2004	Week codes: A ~ Z: weeks 1 to 26 a ~ z: weeks 27 to 52
	2005	2006	2007	2008	
Code	Z	z	Z	z	

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.