

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	9pF, $C_1 = 4fF \pm 20\%$	Philips	MA06096
12.0MHz	18pF, $C_1 = 4fF \pm 20\%$	Philips	MA06097
15.360MHz	18pF, 6.5ppm/pF typ pullability		MA06098
16.0MHz	9pF, 20ppm/pF min pullability	CSR	MA05625*
32.0MHz	12pF, 20ppm/pF typ pullability	S. Wave	MA06099

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

Specifications

Parameters	Product	Option Codes
	GSX-533	
Frequency range: 12.0 ~ 44.0MHz	■	
Calibration tolerance: ±10ppm ±15ppm ±20ppm Other values (±7.5 ~ ±100ppm)	■ □ □ □	1 P 2 specify
Temperature stability: ±10ppm ±15ppm ±20ppm ±30ppm Other values (±7.5 ~ ±100ppm)	■ □ □ □ □	1 P 2 3 specify
Operating temperature range: -10 to +60°C -20 to +70°C -30 to +80°C Other values	■ □ □ □	1 2 3 specify
Storage temperature range: -40 to +85°C	■	
Circuit condition: 9pF 12pF 16pF 18pF 20pF Other values	□ □ ■ ■ ■ □	N B D E F specify
Oscillation mode: Fundamental	■	F
Equivalent series resistance: 40Ω max	■	
Frequency perturbation: ±1ppm max	■	
Ageing: ±1ppm max first year	■	
Test drive level: 10μW	■	
Soldering condition: 260°C, 10 sec x2 max	■	

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

Ordering Information

Product name + option codes + frequency

eg: **GSX-533/111NF 16.0MHz** 10/10/10/9-F

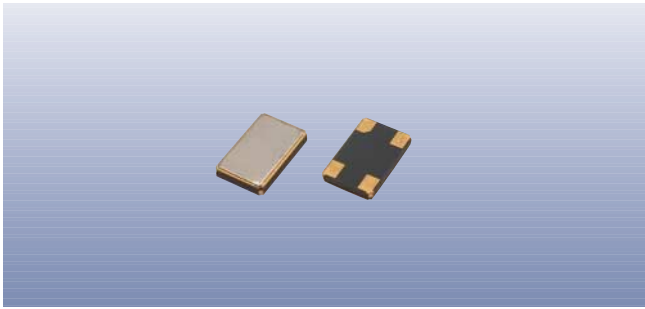
GSX-533/1P3AF 26.0MHz 10/15/30/10-F

Option code X (eg GSX-533/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 pcs per reel.
- ◆ Refer to our website for T&R and soldering details.

GPS / Mobile Applications

Frequency	Specification	IC / Appln	Part No
13.0MHz	8pF, 22.5ppm/pF ±15%	Silicon Labs	MA06106
13.0MHz	8pF, 29.5ppm/pF ±10%	Silicon Labs	MA06118
13.0MHz	8.5pF, 25.5ppm/pF ±10%	Silicon Labs	MA06119
13.0MHz	11.5pF, $C_1 = 4.9fF \pm 20\%$	Infineon	MA06107
16.367667MHz	20pF, $C_1 = 6.0fF \pm 15\%$		MA06105
24.5535MHz	32pF, $C_1 = 8.5fF \pm 15\%$	SiRF GPS	MA05925
26.0MHz	10pF, 18~25ppm/pF	Infineon	MA06108
26.0MHz	9.5pF, 20ppm/pF min	Hitachi	MA06122



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

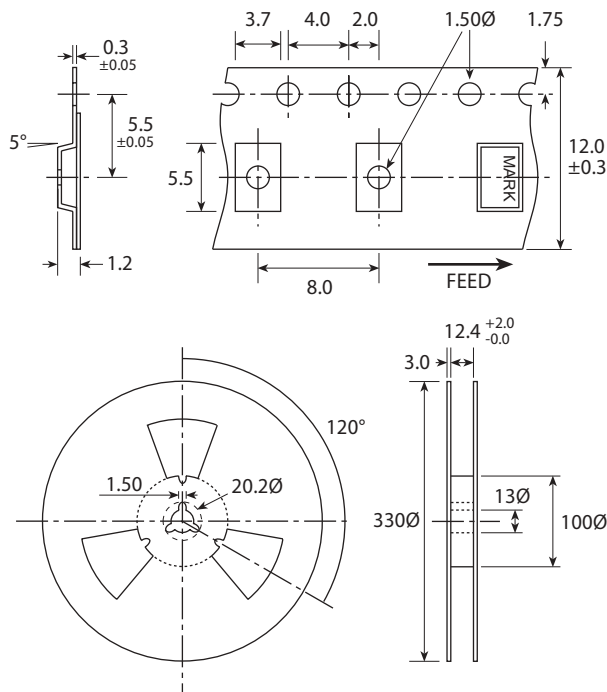
NNN
T DC

Marking type: Laser
NNN = Part ID code
DC = Date code in YW, as shown below
Example: "zd" = 2004 week 30

Year	2001	2002	2003	2004
	2005	2006	2007	2008
Code	Z	z	Z	z

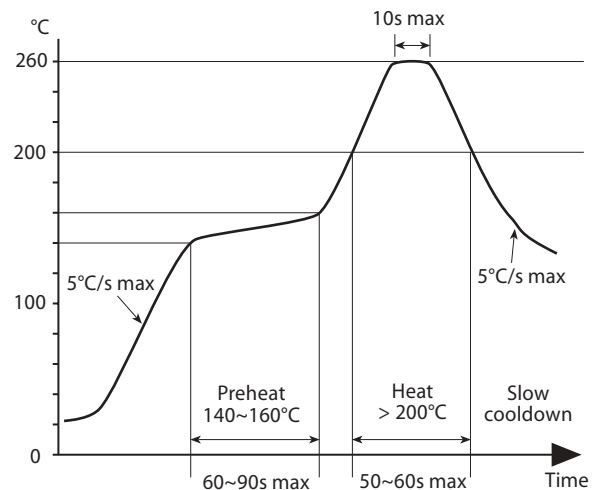
Week codes:
A ~ Z: weeks 1 to 26
a ~ z: weeks 27 to 52

Tape & Reel Specification



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

Soldering Profile



Solder resistance: 260°C x 10 secs x 2.