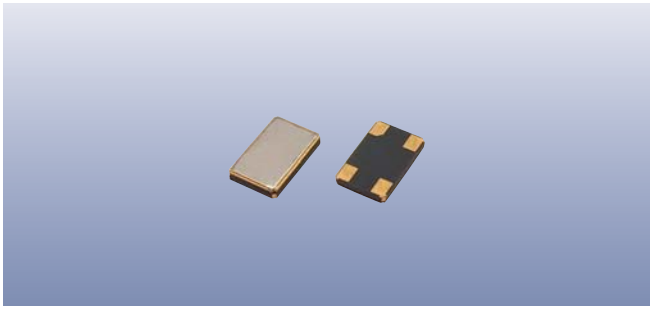
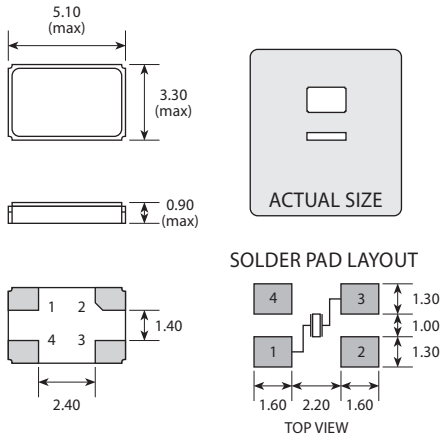
SM Crystal for Wireless

GSX-533





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

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 ±20%	Philips	MA06096
12.0MHz	18pF, C_1 = 4fF ±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*** ***GSX-533***	***Option Codes***
Frequency range: 8.0 ~ 54.0MHz	■	
(54.0 ~ 160MHz, 3rd OT under dev)	□	
Calibration tolerance: ±10ppm	■	1
±15ppm	□	P
±20ppm	□	2
Other values (±7.5 ~ ±100ppm)	□	specify
Temperature stability: ±10ppm	■	1
±15ppm	□	P
±20ppm	□	2
±30ppm	□	3
Other values (±7.5 ~ ±100ppm)	□	specify
Operating temperature range:		
-10 to +60°C	■	1
-20 to +70°C	□	2
-30 to +80°C	□	3
Other values	□	specify
Storage temperature range:		
-40 to +85°C	■	
Circuit condition: 9pF	□	N
12pF	□	B
16pF	■	D
18pF	■	E
20pF	■	F
Other values	□	specify
Oscillation mode: Fundamental	■	F
3rd overtone (>54.0MHz)	■	3
Equivalent series resistance (max):		
100Ω (8.0 ~ 11.99MHz)	■	
60Ω (12.0 ~ 13.99MHz)	■	
50Ω (14.0 ~ 15.99MHz)	■	
40Ω (16.0 ~ 54.0MHz)	■	
Perturbations: ±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.
- Available on T&R - 1k pcs per reel.

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 ±20%	Infineon	MA06107
16.367667MHz	20pF, C_1 = 6.0fF ±15%		MA06105
24.5535MHz	32pF, C_1 = 8.5fF ±15%	SiRF GPS	MA05925
26.0MHz	10pF, 18~25ppm/pF	Infineon	MA06108
26.0MHz	9.5pF, 20ppm/pF min	Hitachi	MA06122

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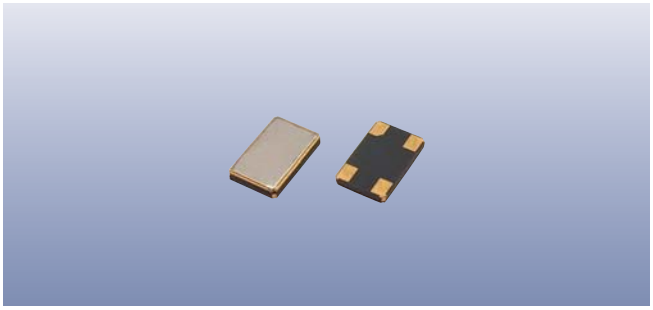
04 Mar 2011

Product Information

GSX-533



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

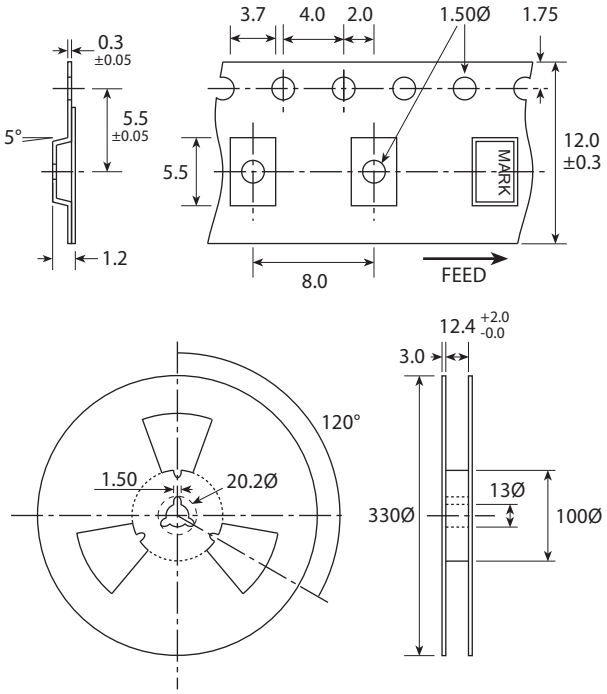
Marking type: Laser
NNN = Part ID code
DC = Date code in YW, as shown below
Example: "ZD" = 2011 week 4

Year	2011 2015	2012 2016	2013 2017	2014 2018
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 ±0.1mm unless otherwise stated

Construction

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

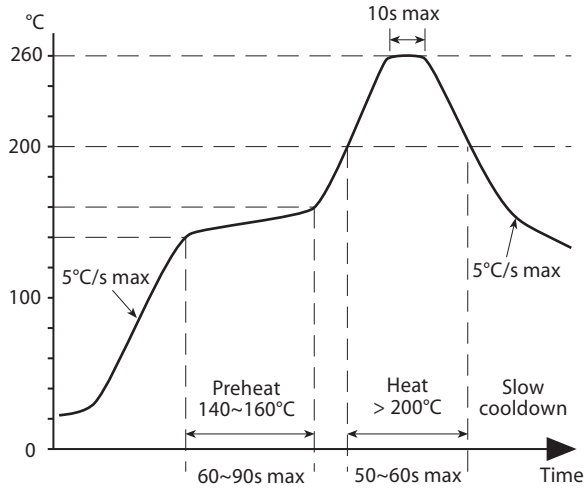
Composition

RoHS 2002/95/EC

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

Pb LeadFree

Soldering Profile



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

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