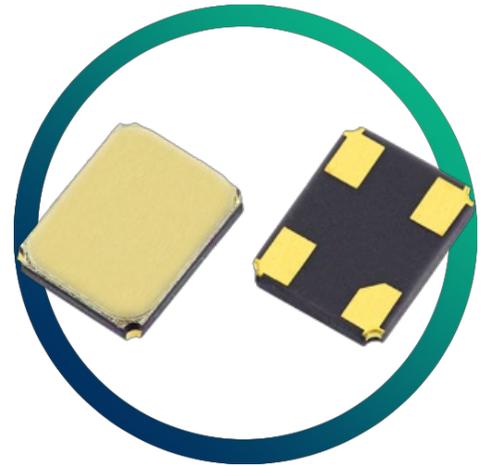


# GSX-331

## 3.2 x 2.5mm High Frequency SM Crystal with Tight Specifications

- Metal lid can be grounded to minimise EMI
- Seam sealed for excellent stability
- Tight specifications available
- Ultra-miniature for maximum space saving

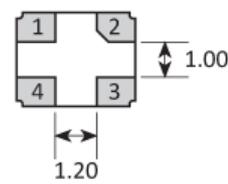
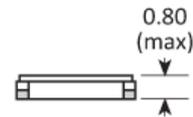
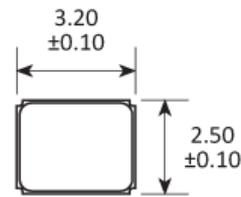
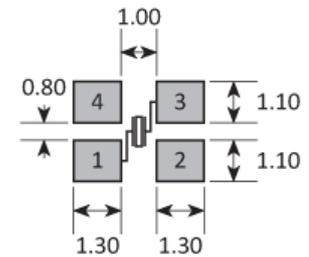


<b>CONFIGURABLE OPTIONS</b>	
<b>Parameter</b>	<b>Option Code</b>
<b>Frequency</b>	
<b>Calibration tolerance</b>	
Any	
±7.5ppm	M
±10ppm	1
±20ppm	2
±30ppm	3
<b>Temperature stability</b>	
Any	
±7.5ppm	M
±10ppm	1
±15ppm	P
±20ppm	2
±30ppm	3
<b>Operating temperature range*</b>	
Any	
-10 to +60 °C	1
-20 to +70 °C	2
-30 to +80 °C	3
-40 to +85 °C	4
<b>Circuit condition</b>	
Any	
8pF	M
9pF	N
10pF	A
12pF	B
<b>Oscillation mode</b>	
Fundamental	F
3rd overtone	3
<b>Ageing</b>	
Any	
±3ppm max first year	
±1ppm max first year	

**\*Some combinations of stability and wide temperature ranges may not be available. Our team will advise accordingly if this affects your enquiry.**

**SPECIFICATIONS**

Frequency range	10.0 ~ 54.0MHz 54.0 ~ 125MHz (3rd overtone)
Dimensions	3.2 x 2.5 x 0.8mm
Storage temperature range	-40 to +90°C
Static capacitance (C <sub>0</sub> )	5pF max
Equivalent series resistance	100Ω max (10.0 ~ 15.99MHz) 80Ω max (16.0 ~ 18.99MHz) 60Ω max (19.0 ~ 29.99MHz) 40Ω max (30.0 ~ 54.0MHz, fund) 100Ω max (54.0 ~ 125MHz, 3rd OT)
Test drive level	10μW
Soldering condition	260°C, 10 sec x2 max
Net mass	18.5mg

**PACKAGE DRAWING**

**SOLDER PAD LAYOUT**


TOP VIEW

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

Dimensions in mm

## ORDERING INFORMATION

To request a quotation for the GSX-331 please use the configurable options form to choose the options you require and then submit your configured product to our team. Our expert advisers are always happy to help with your requirements and can be contacted on +44 1460 256 100 or at [sales@golledge.com](mailto:sales@golledge.com).

Following product selection you will be issued with a seven character Golledge part number. Your Golledge part number is the internationally accepted Golledge manufacturing part number (MPN) that should be used for all project documentation, including bills of materials (BoMs) and purchase orders.

If you have any queries regarding any of our documentation our dedicated sales team will be happy to help.

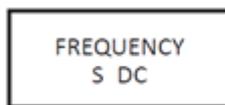
## APPLICATIONS

Our crystals and oscillators are regularly supplied for use with industry-leading ICs, from world-leading manufacturers including:

Analogue Devices  
 Atmel (Microchip Technology Inc.)  
 Broadcom  
 Dialog Semiconductor PLC  
 Intel  
 Nordic Semiconductor  
 NXP Semiconductors  
 Qualcomm (and CSR)  
 Silicon Labs  
 STMicroelectronics  
 Texas Instruments (TI)  
 Xilinx  
 and more...

If you'd like more information about chipset compatibility please [get in touch with our team here](#).

## MARKING

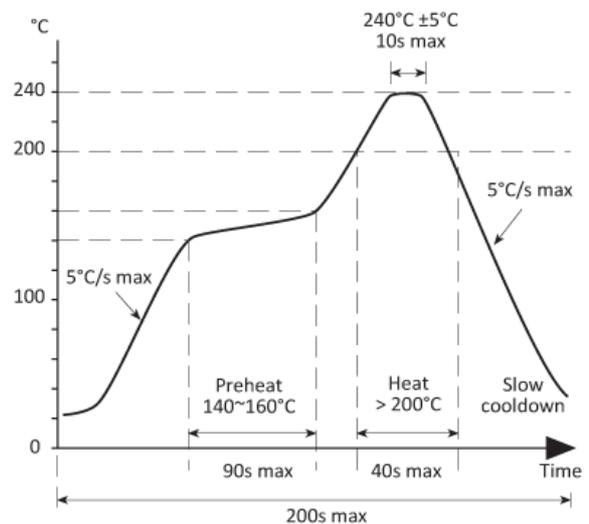


Marking type: Laser

DC = Date Code in YM, eg. "GF" = Jun 2017

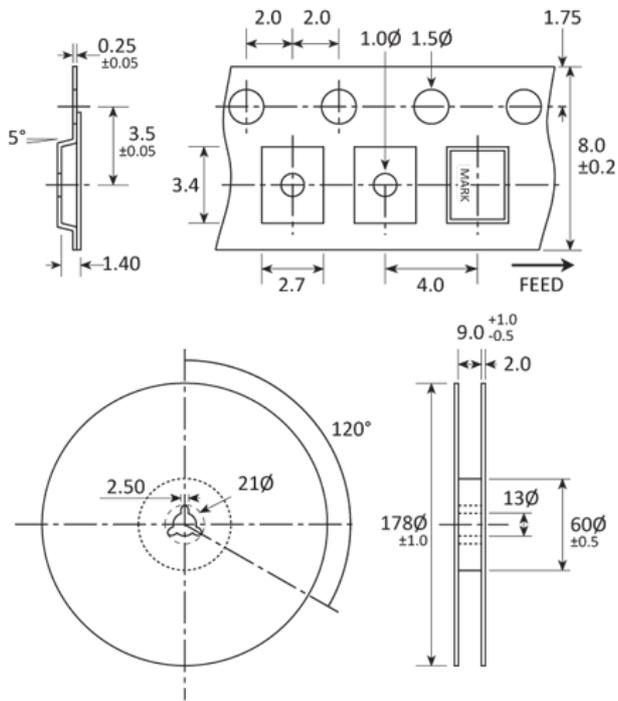
	A	B	C	D	E	F	G	H	J	K	L	M
Y	1	2	3	4	5	6	7	8	9	0		
M	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

## SOLDERING PROFILE



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

**TAPE & REEL SPECIFICATION**



**HANDLING & STORAGE**



Human Body Model (HBM) 1A (250V to <500V)



Moisture Sensitivity Level (MSL): 1 (or not applicable)

**CONSTRUCTION**

Ceramic body with gold-plated pads

Metal lid, seam sealed

**COMPLIANCE**

Please refer to our **DOCUMENTS** section for more information.



Lead-free (< 0.1% by weight)



RoHS compliant with no exemptions.



REACH compliant.



Free of conflict minerals.



Free from halogens.



Free from ozone-depleting substances.