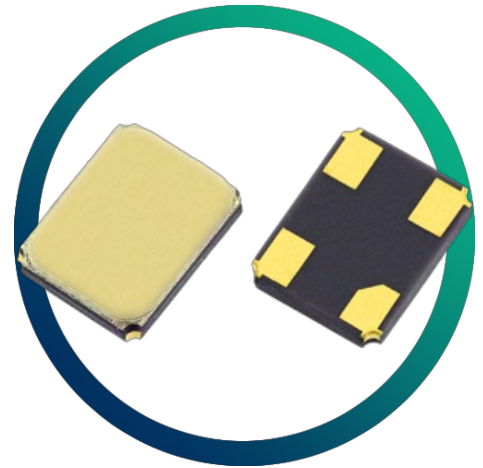


# GSX-331

## 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

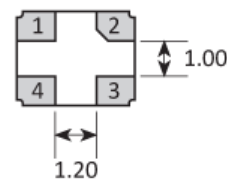
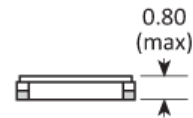
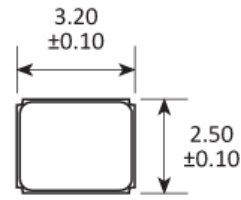
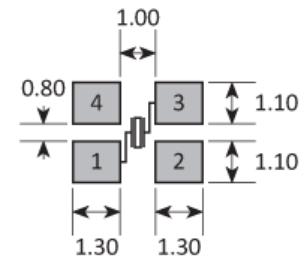


<b>CONFIGURABLE OPTIONS</b>	
<b>Parameter</b>	<b>Option Code</b>
<b>Frequency</b>	
<b>Calibration tolerance</b>	
Any	
±7.5ppm	M
±10ppm	1
±20ppm	2
±30ppm	3
<b>Temperature stability</b>	
Any	
±7.5ppm	M
±10ppm	1
±15ppm	P
±20ppm	2
±30ppm	3
<b>Operating temperature range*</b>	
Any	
-10 to +60 °C	1
-20 to +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.

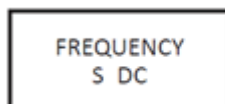
## APPLICATIONS

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

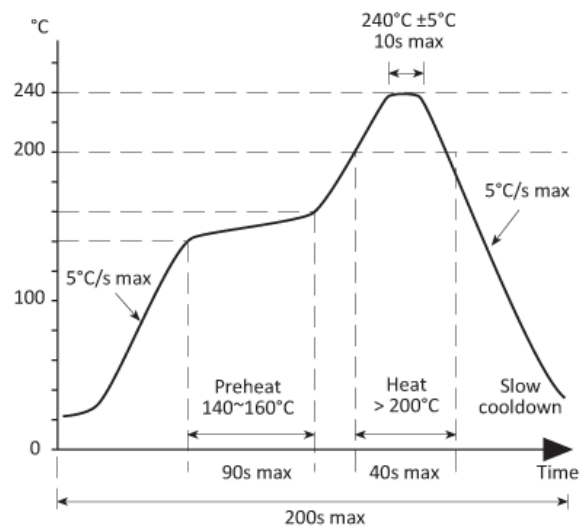


Marking type: Laser

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

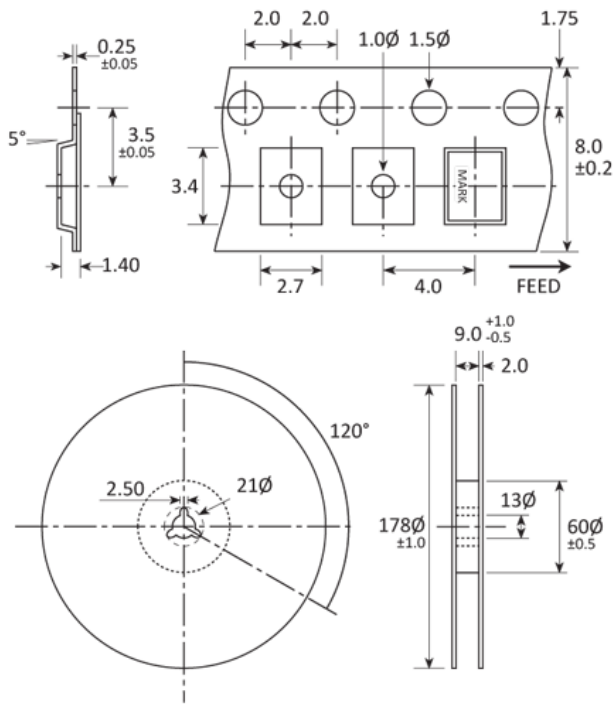
	A	B	C	D	E	F	G	H	J	K	L	M
Y	1	2	3	4	5	6	7	8	9	0		
M	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

## 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**



Lead-free (< 0.1% by weight)



RoHS compliant with no exemptions. [See our declaration](#)



REACH compliant. [See our statement](#)



Free of conflict minerals. [See our declaration](#)



Free of Halogens. [See our declaration](#)



Free of Ozone-depleting substances. [See our declaration](#)

## OTHER INFORMATION

### About Golledge

We are the UK's leading supplier of frequency control products and are proud to serve the global electronics industry. Our philosophy is a focus firmly on your requirements by striving to meet and exceed your needs. We do this by ensuring the utmost quality and consistency in our products and services. If you have any queries about the Golledge service or any of our products please get in touch, we'd love to hear from you.

### Come and visit

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Somerset, TA19 9DQ, England

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### Email us

sales@golledge.com

### Our Worldwide Distributors

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Alcom Electronics NV/SA



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Our customer feedback is testament to our quality; "Never had such good service as this from anyone in 35 years of being in the industry, this is impressive and has really helped us out of a corner to keep the design flowing" Andy (Senior Design Engineer), "As always your support is state of the art" Nicoleta (Material Management), "Legendary work - as usual it has to be said" John (Operations).  
To take advantage of our highly praised service get in touch with us today.