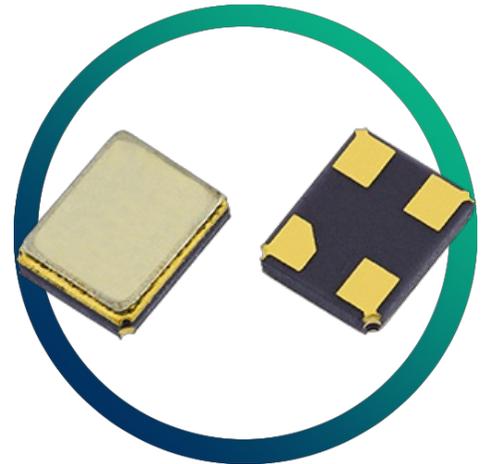


GSX-321

Miniature 2.5 x 2.0mm SM Crystal

- Tight specification / wide temperature option
- Ultra-miniature for maximum space saving
- Ideal for Bluetooth / Wireless applications
- Metal lid can be grounded to minimise EMI
- Seam sealed for excellent long-term stability



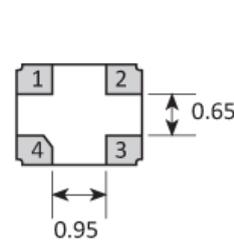
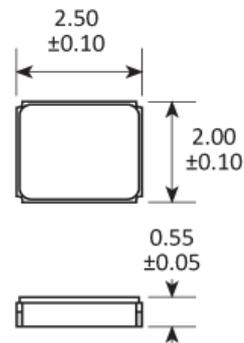
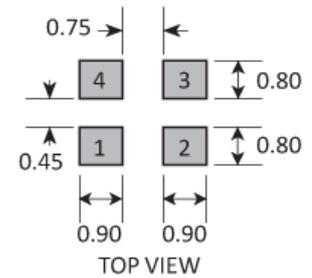
CONFIGURABLE OPTIONS

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

* ±10ppm temperature stability may not be available over -30+80 °C or greater. Check with our sales office before ordering

SPECIFICATIONS

Frequency range	12.0 ~ 66.0MHz
Dimensions	2.5 x 2.0 x 0.6mm
Storage temperature range	-40 to +85°C
Equivalent series resistance	200Ω max (12.0 ~ 12.9MHz)
	150Ω max (13.0 ~ 15.9MHz)
	80Ω max (16.0 ~ 19.9MHz)
	60Ω max (20.0 ~ 29.9MHz)
	50Ω max (30.0 ~ 34.9MHz)
40Ω max (35.0 ~ 66.0MHz)	
Test drive level	10μW typ, 100μW max
Soldering condition	260°C, 10 sec x2 max
Net mass	9.00mg

PACKAGE DRAWING

SOLDER PAD LAYOUT


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

Dimensions in mm

ORDERING INFORMATION

To request a quotation for the GSX-321 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.

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.

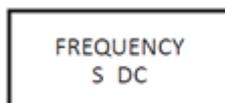
APPLICATIONS

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

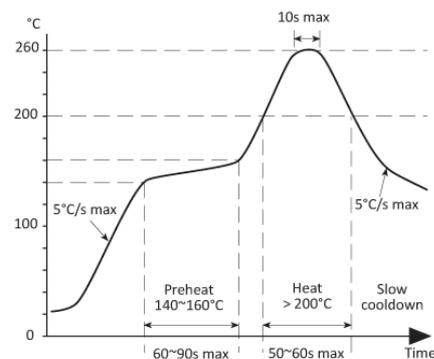


Marking type: Laser

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

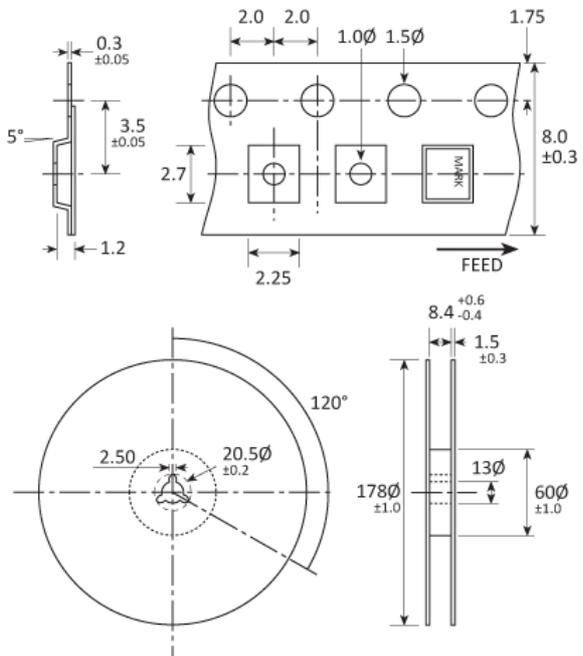
SOLDERING PROFILE



Solderability limits:

260°C max x 10sec max x 2 max

TAPE & REEL SPECIFICATION



Dimensions in mm

CONSTRUCTION

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

HANDLING & STORAGE



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



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

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.