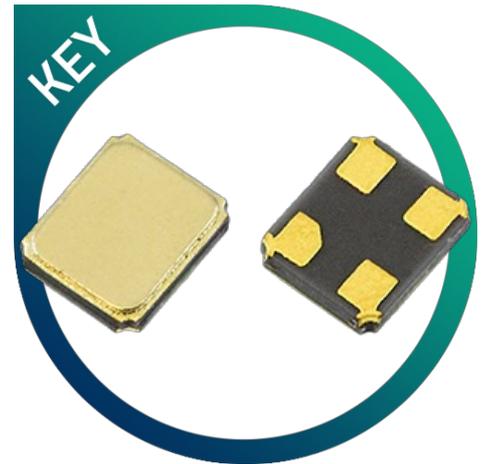


# GSX-113

## Ultra miniature low profile SM Crystal

- Fundamental mode up to 80.0MHz
- Ultra-miniature for maximum space saving
- Low profile and light weight for smart cards
- Seam sealed for excellent long-term stability
- Compatible with latest ASIC designs



### CONFIGURABLE OPTIONS

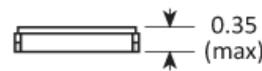
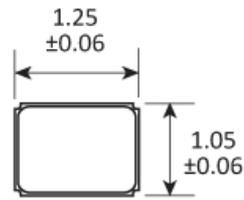
Parameter	Option Code
<b>Frequency</b>	
<b>Calibration tolerance</b>	
Any	
±5ppm	L
±10ppm	1
±20ppm	2
±30ppm	3
<b>Temperature stability</b>	
Any	
±10ppm	1
±15ppm	P
±20ppm	2
±30ppm	3
<b>Operating temperature range</b>	
Any	
-20 to +70 °C	2
-30 to +80 °C	3
-40 to +85 °C	4
<b>Circuit condition</b>	
Any	
5pF	R
6pF	T
8pF	M
10pF	A
12pF	B
<b>Oscillation mode</b>	
Fundamental	F

\* ±5ppm calibration tolerance may not be available at certain frequencies. Check with our sales office before ordering

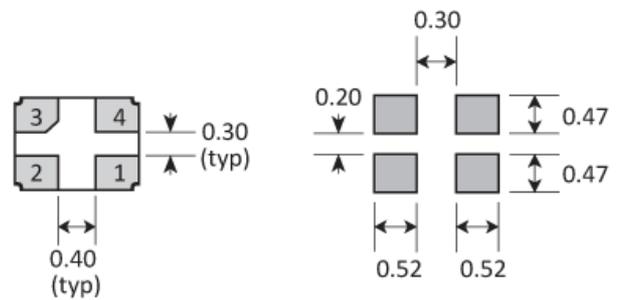
## SPECIFICATIONS

Frequency range	32.0 ~ 80.0MHz
Dimensions	1.25 x 1.05 x 0.35mm
Storage temperature range	-40 to +125 °C
Equivalent series resistance	120Ω max @ 32.0MHz 100Ω max @ 40.0MHz 60Ω max @ 48.0MHz 40Ω max @ 76.8MHz
Ageing	±1ppm max first year
Test drive level	10μW
Soldering condition	260 °C, 10 sec x2 max
Net mass	1.69mg

## PACKAGE DRAWING



### SOLDER PAD LAYOUT



PAD	CONNECTION
1	Crystal
2	Not connected
3	Crystal
4	Ground & lid

Dimensions in mm

## ORDERING INFORMATION

To request a quotation for the GSX-113 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...

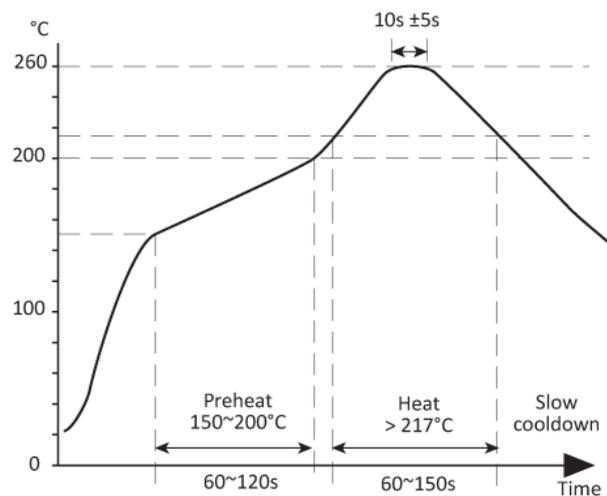
If you'd like more information about chipset compatibility please [get in touch with our team here](#).

## MARKING

FREQUENCY T DC
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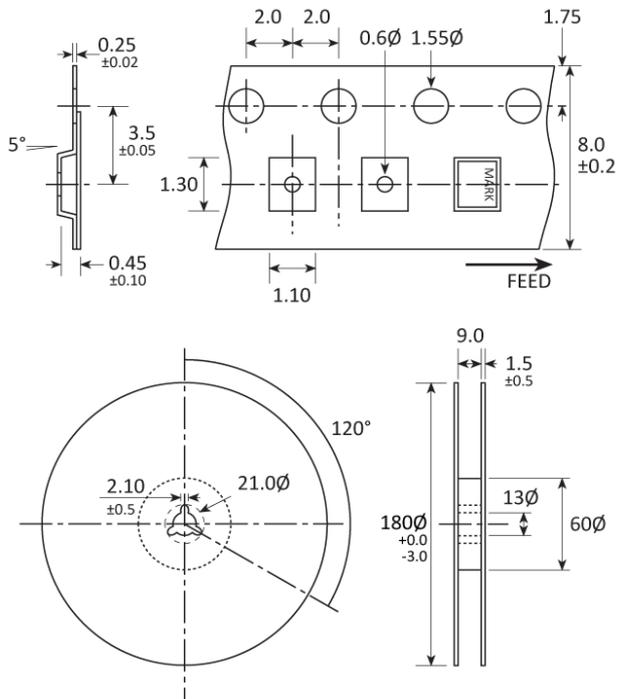
Marking type: Laser  
 DC = Date code

## SOLDERING PROFILE



Lead free solderability limits: 260°C ±5°C x 10s ±5s x 2.

## 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



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](#)