

# GSX-213

## Ultra-miniature SM Crystal for NFC, Smartcard etc

- Ultra-miniature for maximum space saving
- Ideal for near field communications (NFC), smartcard, wireless & mobile
- Metal lid can be grounded to minimise EMI
- Seam sealed for excellent long-term stability
- Excellent ageing characteristics

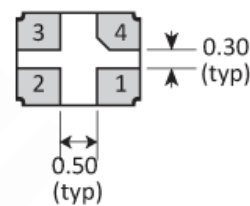
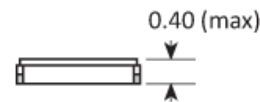
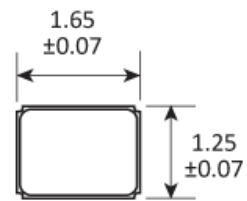
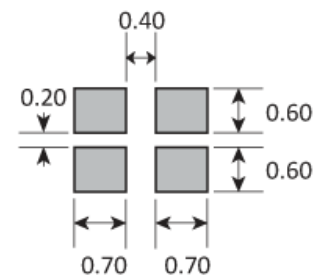


### CONFIGURABLE OPTIONS

Parameter	Option Code
Frequency	
Calibration tolerance	
Any	
±10ppm	1
±15ppm	P
±30ppm	3
Temperature stability	
Any	
±10ppm	1
±15ppm	P
±20ppm	2
±30ppm	3
Operating temperature range	
Any	
-10 to +60°C	1
-20 to +70°C	2
-30 to +80°C	3
-40 to +85°C	4
Circuit condition	
Any	
5pF	R
8pF	M
9pF	N
10pF	A
Series resonant	S
Oscillation mode	
Fundamental	F

**SPECIFICATIONS**

Frequency range	24.0 ~ 60.0MHz
Dimensions	1.65 x 1.25 x 0.40mm
Storage temperature range	-40 to +85 °C
Equivalent series resistance	200Ω max @ 26.0MHz 150Ω max @ 37.4MHz 100Ω max @ 38.4MHz 100Ω max @ 40.0MHz
Ageing	±1ppm max first year
Test drive level	100μW max
Soldering condition	260 °C, 10 sec x2 max

**PACKAGE DRAWING**

**SOLDER PAD LAYOUT**


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

Dimensions in mm

## ORDERING INFORMATION

To request a quotation for the GSX-213 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...

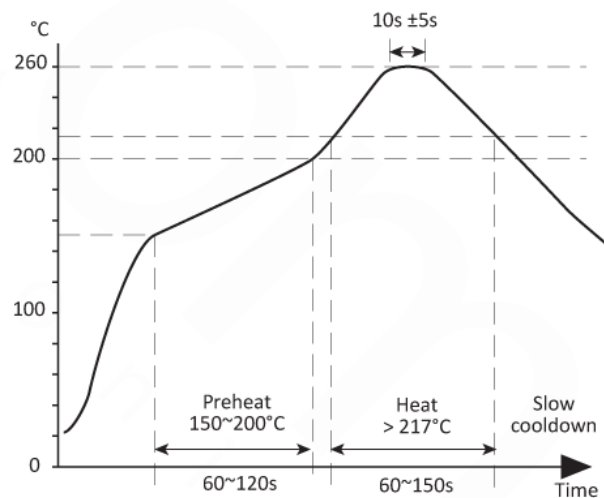
If you'd like more information about chipset compatibility please [get in touch with our team here](#).

## 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.



## 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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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.