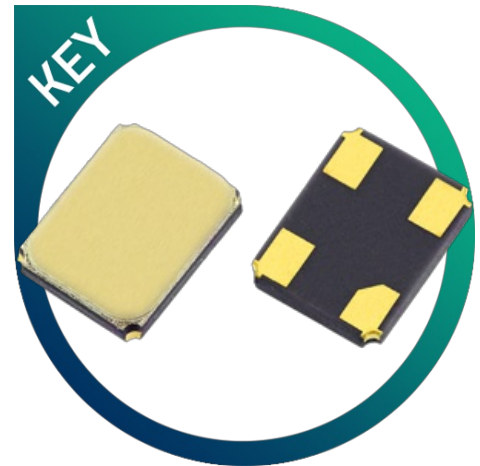


# GRX-330

## Automotive Crystal (AEC-Q200)

- AEC-Q200 qualified for automotive applications
- Vacuum seal for excellent long-term stability
- High reliability at low cost
- Metal lid can be grounded to minimise EMI



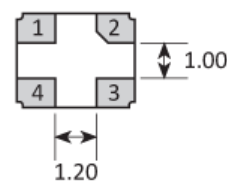
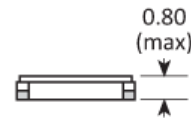
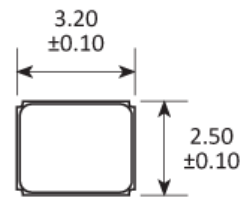
### CONFIGURABLE OPTIONS

Parameter	Option Code
<b>Frequency</b>	
<b>Calibration tolerance</b>	
Any	
±10ppm	1
±15ppm	P
±20ppm	2
<b>Temperature stability</b>	
Any	
±15ppm	P
±20ppm	2
±50ppm	5
±100ppm	C
<b>Operating temperature range</b>	
Any	
-40 to +85 °C	4
-40 to +125 °C	A
<b>Circuit condition</b>	
Any	
10pF	A
12pF	B
16pF	D
20pF	F
<b>Oscillation mode</b>	
Fundamental	F

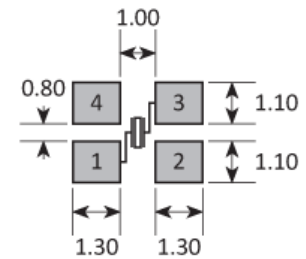
## SPECIFICATIONS

Frequency range	12.0 ~ 40.0MHz
Dimensions	3.2 x 2.5 x 0.8mm
Storage temperature range	-40 to +125°C
Static capacitance (C <sub>0</sub> )	5pF max
Equivalent series resistance	100Ω max (12.0 ~ 15.99MHz)
	80Ω max (16.0 ~ 18.99MHz)
	60Ω max (19.0 ~ 29.99MHz)
	40Ω max (30.0 ~ 40.0MHz)
Ageing	±3ppm max first year
Test drive level	10μW typ, 100μW max
Soldering condition	260°C, 10 sec x2 max
Qualification	AEC-Q200 (Automotive)
Net mass	16.0mg

## 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 GRX-330 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).

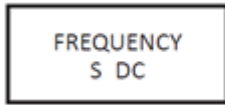
Following product selection you will be issued with a seven character Golledge part number. Your Golledge part number is the internationally accepted Golledge manufacturing part number (MPN) that should be used for all project documentation, including bills of materials (BoMs) and purchase orders.

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

## APPLICATIONS

Vehicle telematics  
 Connected car  
 Remote keyless entry (RKE)  
 Audio - DAB/Bluetooth  
 Camera

**MARKING**

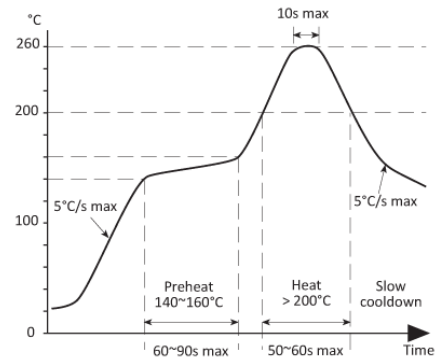


Marking type: Laser

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

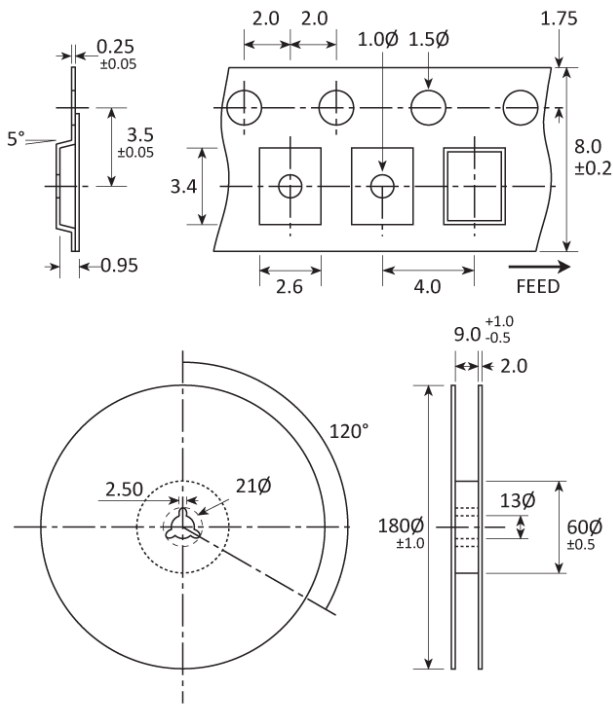
**SOLDERING PROFILE**



Solderability limits:

260°C max x 10sec max x 2 max

**TAPE & REEL SPECIFICATION**



Dimensions in mm

**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.