

# GSC3215K Series

## Quartz Crystal Unit

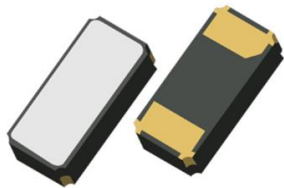
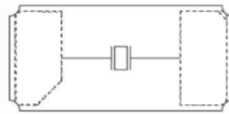
### Features

- Nominal Frequency 32.768KHz

### Mechanical Data

- 3215 Surface Mount Package
- RoHS Compliant and Halogen Free

### Packages & Pin Assignments

3215	Equivalent Circuit
	

### Ordering and Marking Information

Ordering Information				
Part Number	ESR ( $\Omega$ )	CL (pF)	Marking Code	Quantity/Reel
GSC3215K5AF	50K	12.5pF	X□□□□A	3,000 PCS
GSC3215K7AF	70K		X□□□□A	
GSC3215K5BF	50K	9pF	X□□□□B	
GSC3215K7BF	70K		X□□□□B	
GSC3215K5CF	50K	7pF	X□□□□C	
GSC3215K7CF	70K		X□□□□C	
GSC3215K5DF	50K	6pF	X□□□□D	
GSC3215K7DF	70K		X□□□□D	
<p><b>GSC3215K</b> <math>\square</math> <math>\square</math> <math>\square</math> <math>\square</math> <b>F</b></p> <p>- <b>Product Code:</b> GSC3215K</p> <p>- <b>ESR Code:</b> <math>\square</math> for ESR 5 for 50K and 7 for 70K</p> <p>- <b>Type Code:</b> <math>\square</math> for Load Capacitance 4 types A, B, C and D</p> <p>- <b>Green Level:</b> F for RoHS Compliant and Halogen Free</p>				

### Marking Information

X 2 2 2 2 3

- **Product Code:**  
X

- **GS Code:**  
2 2 2 2

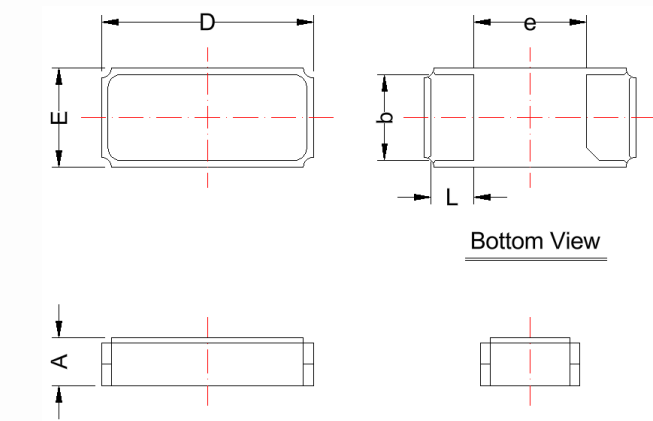
- **Type Code:**  
3 for Load Capacitance Type  
 4 types A, B, C and D

### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

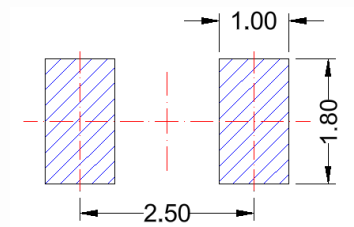
Symbol	Description	Min	Typ	Max	Unit	Note
	Crystal Cut Type	NT				
F	Nominal Frequency		32.768		KHz	
FT	Frequency Tolerance	-20		20	ppm	
K	Parabolic Curvature Constant		-0.04		ppm/°C <sup>2</sup>	
	Aging	-3		3	ppm	Per Year
C <sub>L</sub>	Load Capacitance		12.5		pF	A Type
			9			B Type
			7			C Type
			6			D Type
DL	Drive Level		0.1	0.5	μW	
ESR	Equivalent Series Resistance			50	KΩ	Suffix 5□F
				70		Suffix 7□F
C <sub>0</sub>	Shunt Capacitance			1.6	pF	
C <sub>1</sub>	Motional Capacitance			5	fF	
R <sub>INS</sub>	Insulation Resistance	500			MΩ	@ DC100V
T <sub>i</sub>	Turnover Temperature	20	25	30	°C	
T <sub>OPR</sub>	Operation Temperature	-40		85	°C	
T <sub>STG</sub>	Storage Temperature	-55		125	°C	
T <sub>L</sub>	Soldering Temperature			350	°C	t ≤ 4s

# 3215

## Package Dimension



## Recommended Land Pattern



Unit:mm

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	---	0.90	---	0.035
b	1.20	1.40	0.047	0.055
D	3.10	3.40	0.122	0.134
E	1.40	1.60	0.055	0.063
e	1.70 TYP		0.067 BSC	
L	0.55	0.75	0.012	0.016





**NOTE:**



Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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