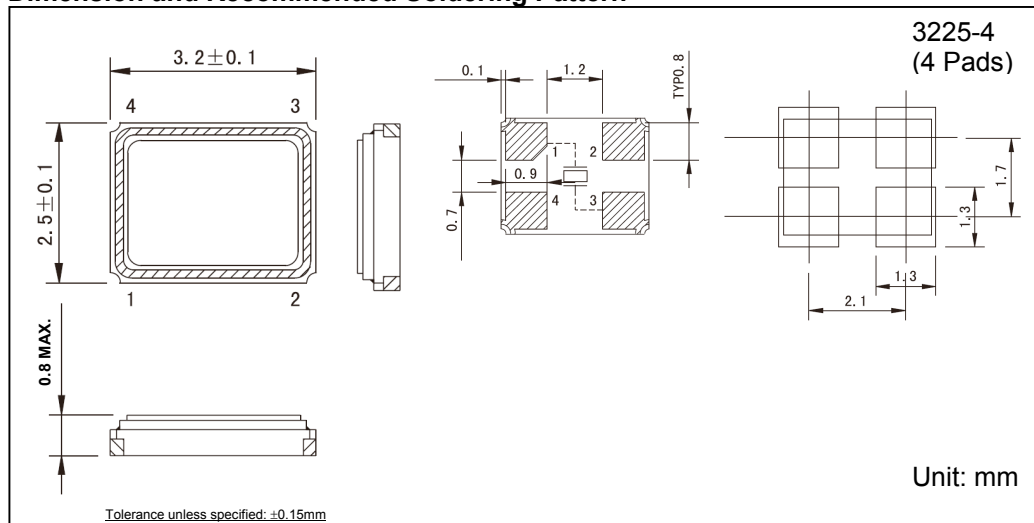




### Quartz Crystal Unit (3.2 x 2.5 x 0.8mm)

#### ● Dimension and Recommended Soldering Pattern



RoHS Compliant  
Directive 2002/95/EC

REACH Compliant  
(15 SVHCs)  
Regulation (EC) No.  
1907/2006

TS16949:2002  
Certified

#### ● Electrical Specifications

|                               |    |                                                        |
|-------------------------------|----|--------------------------------------------------------|
| Holder type                   |    | 3225-4 (3.2 x 2.5 x 0.8mm, surface-mounted, four pads) |
| Frequency range               | Fo | 12MHz to 50MHz                                         |
| Frequency tolerance (at 25°C) | ΔF | ±10ppm to ±100ppm                                      |
| Frequency drift               | Tc | ±10ppm to ±100ppm                                      |
| Operating temperature range   | T0 | -10°C ~ +60°C to -40°C ~ +85°C                         |
| Storage temperature range     | TS | -40°C ~ +85°C to -55°C ~ +125°C                        |
| Aging (at 25°C)               |    | ±5ppm / year max.                                      |
| Shunt capacitance             | C0 | 7pF max.                                               |
| Drive level                   | DL | 10μW (typical)                                         |
| Insulation resistance         | Ri | 500MΩ min. at DC100V                                   |
| Load capacitance              | CL | Suggested by customer                                  |

- The above information is for reference only. For other frequencies or specifications, please consult with our sales representatives for details.

#### ● Equivalent Series Resistance and Mode of Operation

| Frequency range        | Equivalent series resistance | Mode of operation |
|------------------------|------------------------------|-------------------|
| 12.000MHz to 15.999MHz | 100Ω max.                    | Fundamental       |
| 16.000MHz to 19.999MHz | 80Ω max.                     | Fundamental       |
| 20.000MHz to 23.999MHz | 60Ω max.                     | Fundamental       |
| 24.000MHz to 50.000MHz | 40Ω max.                     | Fundamental       |

- The above information is for reference only. For other frequencies or specifications, please consult with our sales representatives for details.