



TUNING FORK QUARTZ CRYSTAL UNITS



• ETDG Series 2.0*1.2 32.768KHz Crystal

FEATURES

- Miniature Package
- Low resistance
- 32.768KHz Frequency
- Tight Tolerance



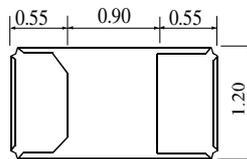
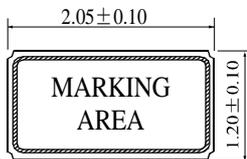
The SMD type quarda crystal provides ultimate in size, performance, and economic trade-offs. So it is used as a clock source in communication equipment, measuring instrument, microprocessor and other time management application.

Electrical Specifications

| Item | Type | ETDG |
|------------------------------|------------------|---|
| Frequency Range | F0 | 32.768KHz |
| Load Capacitance | CL | 12.5pF(7.0pF, 9.0pF Option) |
| Frequency Tolerance | $\Delta F/F_0$ | $\pm 20\text{ppm(At } 25^\circ\text{C)}$ |
| Equivalent Series Resistance | ESR | 80K Ω Max. |
| Temperature Coefficient | K | $-0.035\text{ppm}*(\Delta^\circ\text{C})^2 \pm 10\%$ |
| Turnover Temperature | T ₀ | 25 \pm 5 $^\circ\text{C}$ |
| Operating Temperature Range | T _{OPR} | -40~+85 $^\circ\text{C}$ |
| Storage Temperature Range | T _{STG} | -55~+125 $^\circ\text{C}$ |
| Shunt Capacitance | C ₀ | 2.0pF Max. |
| Insulator Resistance | IR | 500M Ω min. (At 100V _{DC}) |
| Drive Level | DL | 0.5 μW Max. |
| Aging | Fa | $\pm 3\text{ppm max. (At } 25^\circ\text{C, First year)}$ |
| Packing Unit | | 3000pcs/reel |

**Please contact us for inquiries regarding other Specifications

Mechanical Dimensions(mm)



Recommended Solder Pattern

