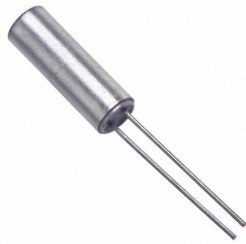


**DIP QUARTZ CRYSTAL RESONATOR**



**DIP Tuning Fork 3.0x8.0 mm**

- Tuning fork crystal in 3 x 8 mm cylinder type
- 32.768 KHz standard
- ±20 ppm Standard
- Excellent Reliability Performance



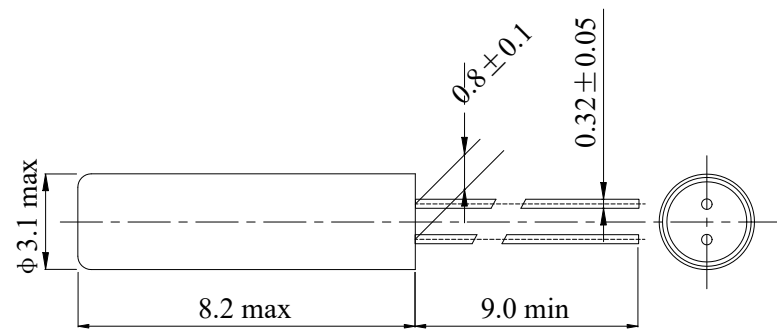
RoHS compliant

**★ PARAMETERS**

PARAMETERS	SPECIFICATION
Frequency Range	32.768KHz (30.00~ 76.8.00 KHz available)
Loading Capacitance	12.5pF Std. 6 pF~20pF available
Drive Level	1.0 μ W Max
Frequency Tolerance	±5ppm / ±10ppm / ±20ppm (at 25°C)
Equivalent Resistance	30K Ω Max
Temperature coefficient	-0.04×10 <sup>-6</sup> /°C <sup>2</sup> max, -0.034×10 <sup>-6</sup> /°C <sup>2</sup> typical
Operating Temp. Range:	-20~+70°C / -40~+85°C
Storage Temp. Range:	-40~+85°C
Aging (25°C, First Year)	±5ppm max

○ All specification subject change without notice.

**★ DIMENSIONS& LAND PATTERN LAYOUT (Unit: mm)**



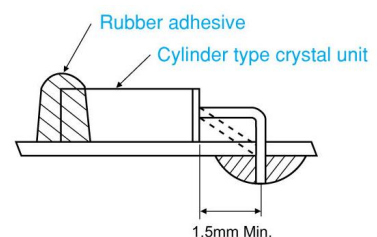
**★ Frequency Stability vs. Temperature**

Operating Temperature Range	Frequency Stability		
	-80ppm	-160ppm	
-10°C~+60°C	●		
-20°C~+70°C		●	

● standard ○ available

● Mounting of cylinder type products:

Soldering the body of the cylinder type crystal units with PCB must be avoided due to deteriorate the characteristics or damage the products. Rubber adhesive is recommended.



● Soldering

Lead wires should be soldered within 3 seconds with the soldering iron heated to a temperature no higher than 300°C

★ PART NUMBER GUIDE *e.g. FTX32.768K12.5D8-20D (\*D8=3.0×8.0mm)*

	Quartz Crystal Resonator	Frequency	Load Capacitance	Package	Frequency Tolerance ppm	Operating Temp. Range
FT	X	32.768KHz	12.5	D8	20	D

Definition	Description	
Operating Temperature Range	<b>A:</b> -10~+60°C	<b>B:</b> -20~+70°C
	<b>C:</b> -30~+80°C	<b>D:</b> -40~+85°C
	<b>E:</b> -30~+105°C	<b>F:</b> -40~+105°C
	<b>G:</b> -40~+125°C	<b>S:</b> Customer specified

★ WAVE SOLDERING PROFILE

