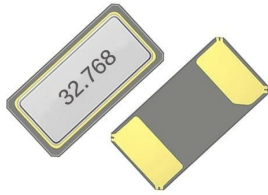


**SMD QUARTZ CRYSTAL RESONATOR**

**2 Pad Version 1.6×1.0 mm**



- Ultra miniature SMD tuning fork crystal resonator
- 32.768 KHz standard
- ±20 ppm Standard
- Excellent Reliability Performance
- Reflow soldering temperature: 260°C max



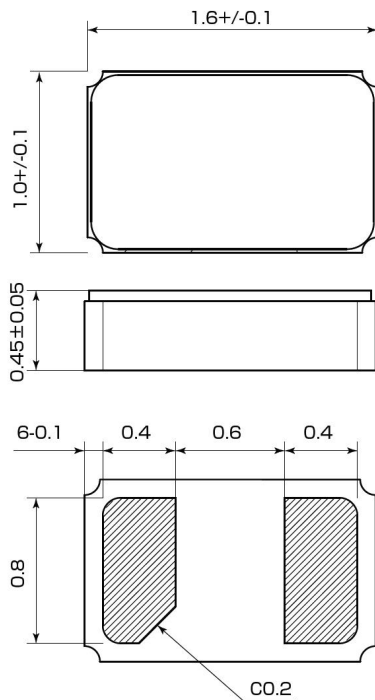
RoHS compliant

**★ PARAMETERS**

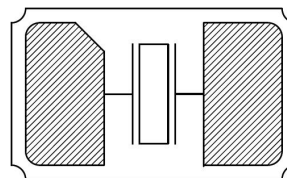
PARAMETERS	SPECIFICATION
Frequency Range	32.768KHz
Loading Capacitance	12.5pF Std. 7pF 9pF available
Drive Level	0.1μW (1.0μW Max)
Frequency Tolerance	±10ppm / ±20ppm ( at 25°C )
Equivalent Resistance	90KΩ Max
Turn-over temperature	+25°C±5°C
Temperature coefficient	-0.04×10 <sup>-6</sup> /°C <sup>2</sup> Max
Operating Temp. Range:	-40~+85°C (-40~+125°C Available)
Storage Temp. Range:	-40~+85°C
Aging (25°C, First Year)	±3ppm Max

○ All specification subject change without notice.

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

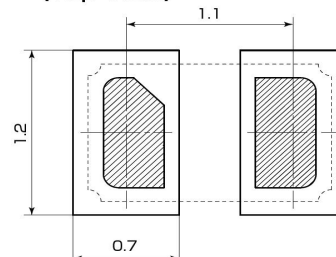


〈Top View〉



**■ Recommended Land Pattern [mm]**

〈Top View〉

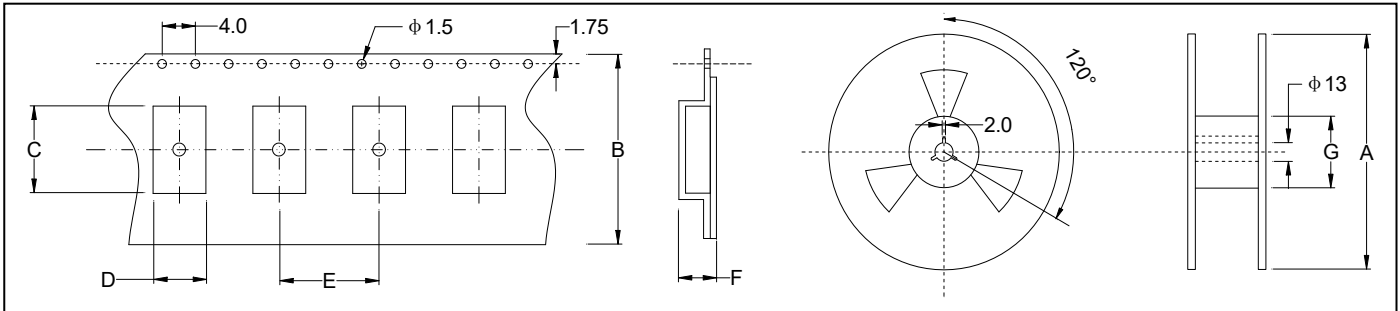


**★ PART NUMBER GUIDE** e.g. FTX32.768K12.5SM1-20D (\*SM1=1.6×1.0 SMD)

	Quartz Crystal Resonator	Frequency	Load Capacitance pF	Package	Frequency Tolerance ppm	Operating Temp. Range
FT	X	32.768KHz	12.5	SM1	20	D

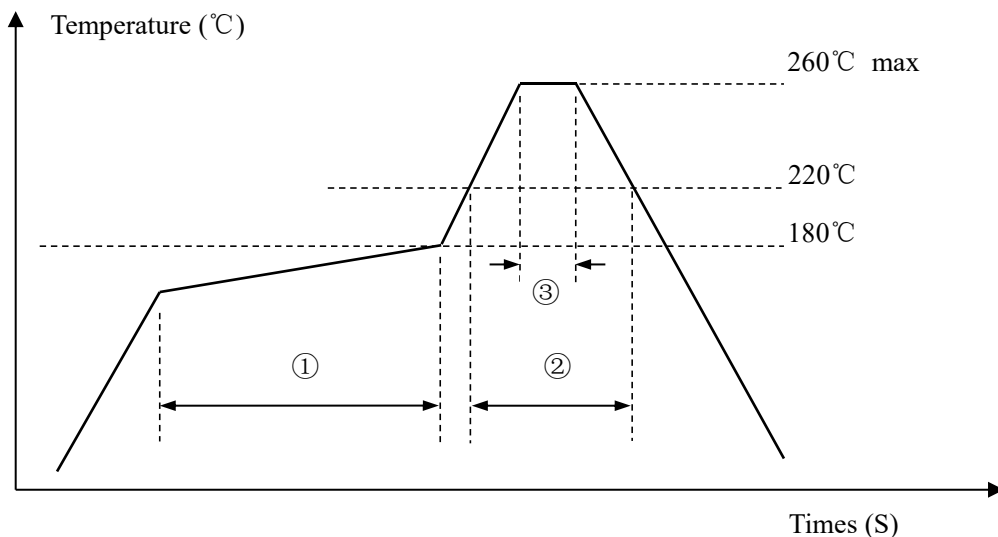
Definition	Description	
Operating Temperature Range	<b>A:</b> -10~+60°C	<b>B:</b> -20~+70°C
	<b>C:</b> -30~+80°C	<b>D:</b> -40~+85°C
	<b>E:</b> -30~+105°C	<b>F:</b> -40~+105°C
	<b>G:</b> -40~+125°C	<b>S:</b> Customer specified

★ TAPING SPECIFICATION (Unit: mm)



	A	B	C	D	E	F	G
SMD1.6×1.0	180	8.0	1.79	1.28	4.0	0.65	60
3000 pcs per reel							

★ REFLOW SOLDERING PROFILE



Pb free reflow A	①	Preheat	160~180°C	100sec. max
	②	Primary heat	220°C	35sec. max
	③	Peak	260°C	10sec. max