DIP QUARTZ CRYSTAL RESONATOR

DIP Cylindrical Crystal MHz ϕ 3×8 mm

- 3 x 8 mm cylinder type
- Small size
- ±20 ppm Standard
- With Insulation Sleeve Available

RoHS 2002/95/EC

RoHS compliant

★ PARAMETERS

PARAMETERS	SPECIFICATION
Frequency Range	6.000～50.000MHz
Loading Capacitance	20pF Std. 7pF~33pF available
Drive Level	10 μ W（300 μ W Max）
Frequency Tolerance	±10ppm / ±20ppm（at 25℃）
Equivalent Resistance	See Below
Frequency Stability	±10ppm～±30ppm
Operating Temp. Range:	0～+50℃ to -40～+85℃
Storage Temp. Range:	-40～+85℃
Aging（25℃， First Year）	±5ppm max

⊙*All specification subject change without notice.*

★ FREQUENCY STABILITY VS. TEMPERATURE

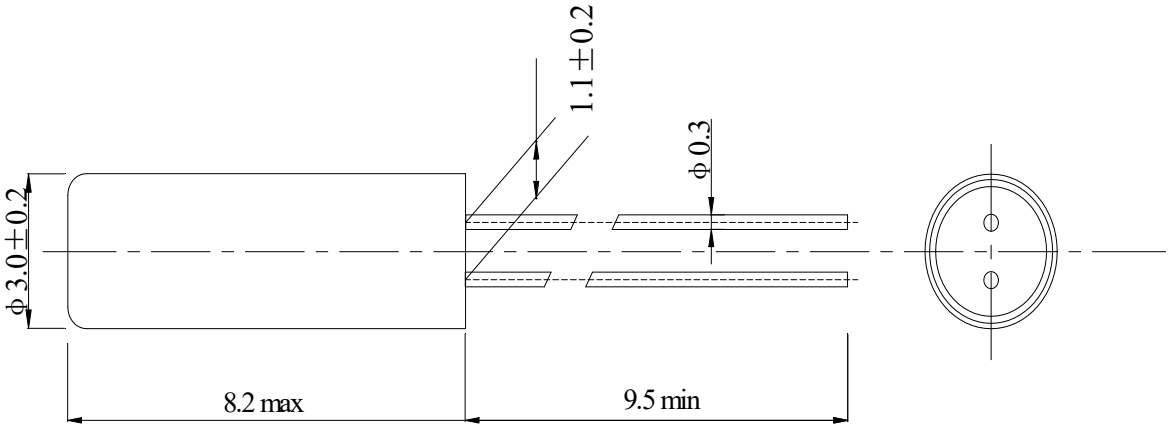
Operation Temperature Range	Frequency Stability			
	±10ppm	±20ppm	±30ppm	±50ppm
0℃~+50℃	○	●	○	○
-10℃~+60℃	○	●	○	○
-20℃~+70℃	○	○	●	○
-40℃~+85℃		○	○	●

● standard ○ available

★ ESR（SERIES RESISTANCE RS）

Frequency	Vibration Mode	ESR
6.000-7.999MHz	AT CUT/FUND.	100Ω(MAX)
8.000-9.999MHz	AT CUT/FUND.	80Ω(MAX)
10.000-11.999MHz	AT CUT/FUND.	60Ω(MAX)
12.000-15.999MHz	AT CUT/FUND.	50Ω(MAX)
16.000-19.999MHz	AT CUT/FUND.	40Ω(MAX)
20.000-33.000MHz	AT CUT/FUND.	30Ω(MAX)
30.000-50.000MHz	AT 3rd /OT	100Ω(MAX)

★ DIMENSIONS& LAND PATTERN LAYOUT (Unit: mm)



- 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℃

★ PART NUMBER GUIDE *e.g. FTX20.000M20A8-20/30B (*A8=AT 3.0×8.0mm)*

Logo	Quartz Crystal Resonator	Frequency Hz	Load Capacitance pF	Package	Frequency Tolerance ppm	Frequency Stability ppm	Operating Temp. Range
FT	X	20.000M	20	A8	20	30	B

Definition	Description
Operating Temperature Range	**A**：-10~+60℃
	B：-20~+70℃
	C：-30~+80℃
	D：-40~+85℃
	E：Customer specified

★ WAVE SOLDERING PROFILE