

DIP QUARTZ CRYSTAL RESONATOR



Dip Crystal 11.4×4.8 mm HC-49U

- Wave Soldering Temperature: 265℃ max
- highly stable and reliable crystal unit with a metallic package
- Taped Version Available

RoHS
2002/95/EC

RoHS compliant

★ PARAMETERS

PARAMETERS	SPECIFICATION
Frequency Range	1.8~100MHz
Operation Mode	(1.8~36MHz) Fundamental (27~100MHz) 3rd Overtone
Loading Capacitance	20pF Std. 8 to 33pF, Series available
Drive Level	100 μ W (500 μ W max)
Frequency Tolerance	±10ppm ~ ±30ppm (at 25℃)
Equivalent Resistance	See Below
Frequency Stability	±10ppm ~ ±50ppm
Operating Temp. Range:	0 ~ +50℃ to -40 ~ +85℃
Storage Temp. Range:	-40 ~ +85℃

○ 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)

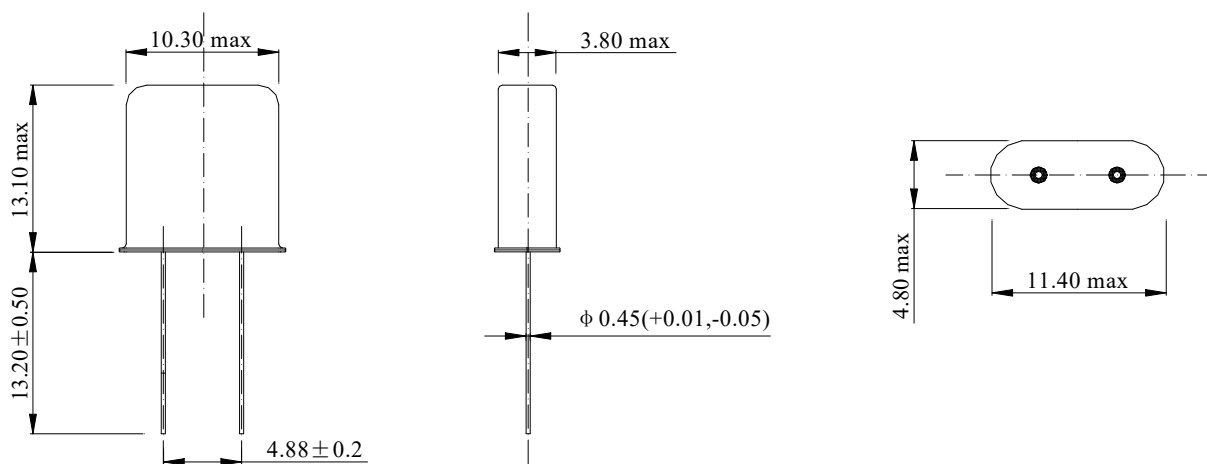
Frequency	Vibration Mode	ESR
1.800-1.999MHz	AT CUT/FUND.	600Ω (max)
2.000-2.399MHz	AT CUT/FUND.	450Ω (max)
2.400-2.999MHz	AT CUT/FUND.	350Ω (max)
3.000-3.499MHz	AT CUT/FUND.	150Ω (max)
3.500-3.999MHz	AT CUT/FUND.	90Ω (max)
4.000-6.999MHz	AT CUT/FUND.	70Ω (max)
7.000-9.999MHz	AT CUT/FUND.	50Ω (max)
10.000-15.999MHz	AT CUT/FUND.	30Ω (max)
16.000-36.000MHz	AT CUT/FUND.	25Ω (max)
27.000-29.000MHz	AT 3rd /OT	30Ω (max)
30.000-100.00MHz	AT 3rd /OT	40Ω (max)

★ PART NUMBER GUIDE e.g.FTX16.000M20U-30/30B (*U=HC49U TYPE)

Logo	Quartz Crystal Resonator	Frequency Hz	Load Capacitance pF	Package	Frequency Tolerance ppm	Frequency Stability ppm	Operating Temp. Range
FT	X	16.000M	20	U	30	30	B

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

★ DIMENSIONS (Unit: mm)



★ WAVE SOLDERING PROFILE

