

**DIP QUARTZ CRYSTAL RESONATOR****Dip Crystal 11.4×4.8 mm HC-49U/S**

- Package Height 3.5 mm max, 2.5~3.5 mm available
- 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	3.5~100MHz
Operation Mode	(3.5 ~ 40MHz) 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	±2.5ppm ~ ±50ppm
Operating Temp. Range:	0 ~ +50℃ to -40 ~ +125℃
Storage Temp. Range:	-55 ~ +125℃

○ All specification subject change without notice.

★ FREQUENCY STABILITY VS. TEMPERATURE

Operation Temperature Range	Frequency Stability					
	±2.5ppm	±5ppm	±10ppm	±20ppm	±30ppm	±50ppm
0℃~+50℃	○	○	○	●	○	○
-10℃~+60℃		○	○	●	○	○
-20℃~+70℃			○	○	●	○
-40℃~+85℃				○	○	●

● standard ○ available

★ ESR (SERIES RESISTANCE RS)

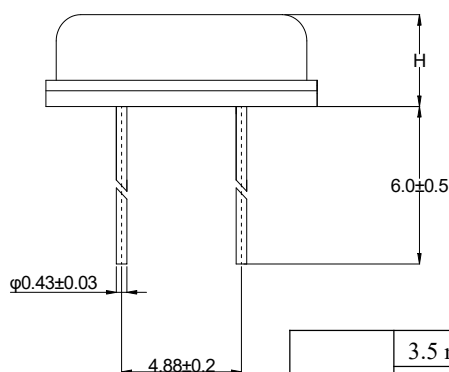
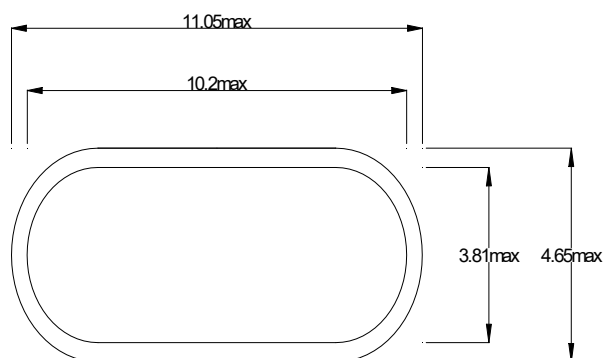
Frequency	Vibration Mode	ESR
3.5-3.999MHz	AT CUT/FUND.	150Ω Max.
4.000-4.499MHz	AT CUT/FUND.	120Ω Max.
4.500-5.999MHz	AT CUT/FUND.	100Ω Max.
6.000-7.999MHz	AT CUT/FUND.	80Ω Max.
8.000-9.999MHz	AT CUT/FUND.	60Ω Max.
10.000-11.999MHz	AT CUT/FUND.	50Ω Max.
12.000-13.999MHz	AT CUT/FUND.	40Ω Max.
14.000-40.000MHz	AT CUT/FUND.	30Ω Max.
27.000-100MHz	AT 3rd /OT	100Ω Max.

★ PART NUMBER GUIDE e.g. FTX16.000M20S-30/30B (*S=HC49/S 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	S	30	30	B

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

★ DIMENSIONS (Unit: mm)



H	3.5 mm max
	3.0mm max
	2.8 mm max
	2.5mm max

★ WAVE SOLDERING PROFILE

