

How to affect temperature characteristic by the cut angle of the crystal quartz?

Since discovered the piezoelectric effect in quartz crystals, which appearance of an electric potential across certain faces of a crystal when it is subjected to mechanical pressure.

According to different cut angles to quartz bars, there are different kinds of quartz plates, for examples, AT, BT, CT-cut plates different types of quartz cuts, have different available elastic, piezoelectric and different properties, which are the basic parameters for designing a quartz crystal device. The most often used Quartz-cut types are AT-cut angle $+35^\circ 15'$ shown as below figures schematically.

Especially, the frequency-temperature characteristic of AT-cut angle is more stable than other cut angles.

