Re: HP 10544 OCXO

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"Gerhard Hoffmann" <dk4xp@arcor.de> wrote in message
news:41e44e8e$0$23137$9b4e6d93@newsread2.arcor−online.net...
> If your oven works at 80 degC, it contains an SC cut crystal and not an
AT.
> AT crystals have their optimum temperature at abt. 28 degC, they are close
> to useless at 80 degC.
>
> 73, Gerhard dk4xp

This is totally wrong.

In the first place, the 10544 definitely uses an AT cut
crystal, not an SC cut. (The 10811 uses an SC cut). I worked at the HP
Santa Clara Division where these oscillators were made for 19 years.

Secondly, 28 degrees is the *inflection point* for an AT cut, not the
turnover temperature.
For NON−oven applications, you want to operate at the inflection point.
For oven applications, you want to operate at a turnover temperature.
An AT cut can certainly be made with a turnover around 80 degrees if
cut at the proper angle.

Definitions:

Turnover: first derivative of frequency w.r.t. temperature = zero
Inflection: second derivative of frequency w.r.t. temperature = zero

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