CS

## Wei Zhang

发给 sqe@dptel.com, ????, wangcm

2016-07-26 00:25 详细信息

## Shaky,

It's widely known in the quartz crystal industry that sleeping sickness phenomenon is unusual and not well understood. At Croven we are also facing the challenge of very limited number of test samples to study because only less than 0.05% of all the crystals seem to have such problem.

We have done a series of electrical tests and physical test on the questionable crystals. So far the only seemingly common feature of these sleeping sickness crystals is relatively thin paste at electrode contact observed after we cut open these crystals. As a result we have taken the following actions to address the issue:

- All DP1203-4 crystals have added more conductive paste 1.
- 2. Because sleeping sickness is very sensitive to very little excitation after power up. We started implementing plugin test in Dapu's circuit board before any electrical test and environmental conditioning.
- We have included maximum delta Rs 30 Ohm in the temperature test to eliminate any anomaly.

We would like you to know that we have spent large amount of time and resources to study and resolve this issue. I believe at this time we have fully answered all questions and there is no further information I can provide. I consider this matter closed.

在石英晶体行业昏睡病的现象是不寻常的,并不能很好地理解。在Croven我们也面临测试样品的数目非常有限的挑战,因 为所有的晶体只有不到0.05%似乎有这样的问题。

我们已经做可疑晶体的一系列的电气试验和物理测试。迄今为止,在我们剖开这些晶体后我们发现这些昏睡病晶体的唯一看 似共同的特点是电极接触处比较薄的导电膏。因此,我们采取了以下措施来解决这一问题:

- 1. 所有DP1203-4晶体增加了更多的导电膏
- 2. 因为昏睡病晶体通电后对非常小的激励也非常敏感。我们开始首先实行Dapu电路板插件测试, 然后再检测任何电气试验和 环境条件测试。
- 3. 这里已包括最高达30卢比欧姆的温度测试,以消除任何异常。

我们希望你知道,我们花了大量的时间和资源来研究和解决这个问题。我相信在这个时候我们已经完全回答所有问题,并我 没有进一步的信息可以提供了。我们Croven认为这件事情结束了。

Wei Zhang

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From: sqe@dptel.com [mailto:sqe@dptel.com]

Sent: July 24, 2016 11:18 PM

To: Wei Zhang

**Cc:** 晶体采购; wangcm

Subject: 回复: RE: Return of most recent parts you have discussed with Wei Zhang 25 pcs RE: RE: DP1203 was found defective parts.

张先生,好:

时间又过去一个月了,关于5个sleeping sickness问题的5MHz晶体,目前的进展如 何? 谢谢!