



Detach the Self-Destructed SSD to Expose the True Image of the Burned Chipsets

Originally by Eric 2016-10-14

The video in my last article showed the process of physical destruction, while we only witnessed the NAND Flashes being burned one by one, then what is the true image of a burned NAND Flash?

Thanks to our cute colleagues for detaching the NAND Flashes from the SSD and getting them “skinned”, now we can have a look at the destructed NAND Flashes.

First, we can see varying degrees of rips or blisters on the back side and front side of the detached NAND Flashes, leaking or fractured metal wires are visible to naked eyes, it seems remain fairly “intact”.





While let us observe the rip with microscope:.

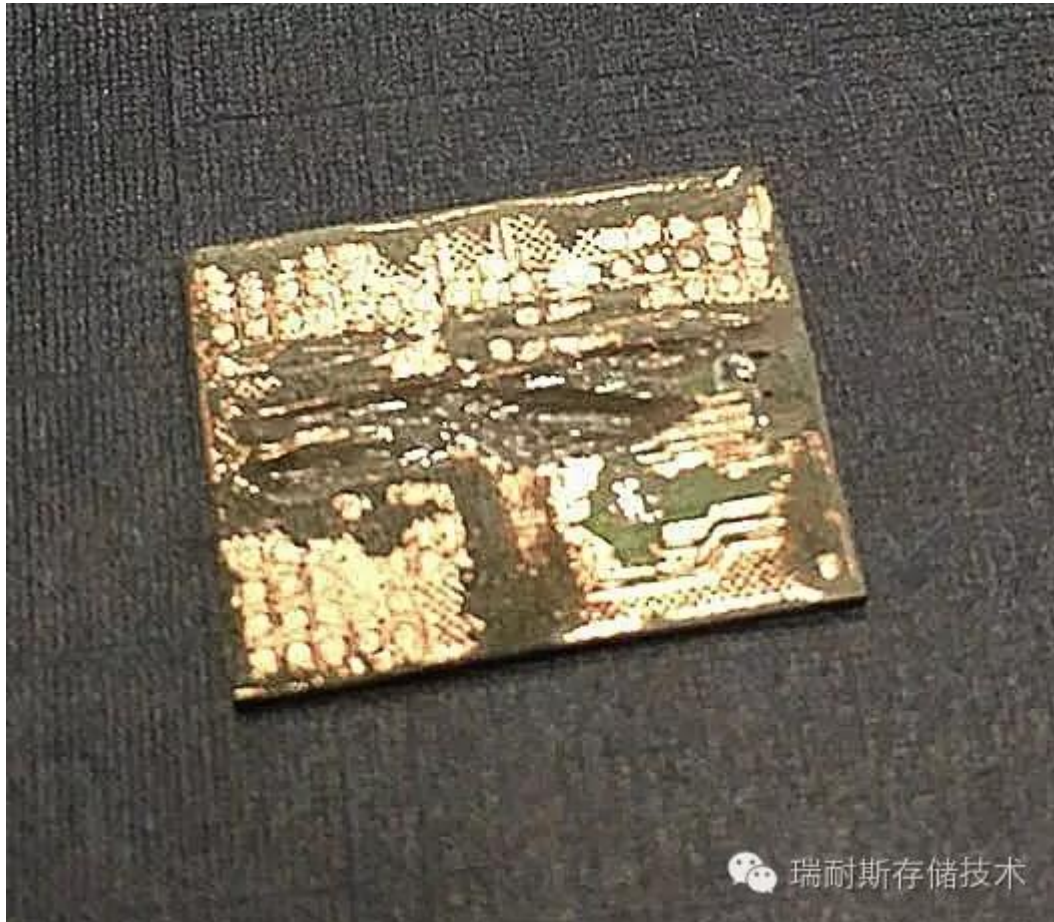


And our grinding kits:





After grinding off the surface, extremely deep scorch-marks which almost drilled through to the surface from the bottom can be observed.



The two questions our companions are deeply concerned:

1. What has been burned in NAND Flash was IO or DIE?
2. Why not just burn all the NAND Flashed in one time which is faster but choose to burn them one by one?

To answer the first question: We can confirm that it was DIE which has been burned. We have some kind of test method, and of course this can be verified by third-party, the specific test method involves trade secrets, let us keep it for the time being.

And for the second question: Haste makes waste. It seems more rapid if just burning all the NAND flashes in one time, while in effect it is too difficult to realize the ideal purpose. The actual tests tell us that it is inevitable to have some chipsets un-burned if attempting to burn all NAND Flashes in one time



with the method of broad irrigation, sometimes only the first NAND Flash was burned down with all others unable to be destructed, and sometimes only the middle one was destructed. In short, there are always chipsets left un-burned. However, it is in practice a safer method for adopting specific control program to burn the NAND Flashed one by one. Actually “stupid” method is sometimes more effective in engineering applications.

Our self-destructing SSD takes 5 seconds for burning one NAND Flash down, and then the next one, so 40 seconds for destructing all the NAND flashes, and plus the 5 seconds of pressing the self-destruct button, the whole procedure of self-destructing can be finished in 45 seconds.