

## Re: USB port blew -- why?

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.repair/2004-10/0596.html>

---

**From:** larrymoencurlly (larrymoencurlly\_at\_my-deja.com)

**Date:** 10/07/04

Date: 7 Oct 2004 03:40:32 -0700

"JAD" <Kapasitor@coldmail.com> wrote in message news:<10m9p9p6k9k4sdf@corp.supernews.com>...

> "larrymoencurlly" <larrymoencurlly@my-deja.com> wrote in message  
> news:755e968a.0410031718.36d14f87@posting.google.com...

>> One of the ports of my NEC-based USB 2.0 card quit working because  
>> the National Semiconductor LM3526 power controller chip failed.  
>> I'm pretty sure that I didn't zap it with static or try to plug  
>> it in backwards. The data sheet for the LM3526 says that it's  
>> protected against voltage, current, and even temperature, so what  
>> happened?

>>

>> National Semiconductor says that each USB port must have a 120uF or  
>> larger tantalum capacitor between +5V and ground for protection  
>> against transients that occur during hot-plugging, and NEC's  
example

>> schematic for their uPD720100A USB 2.0 chip shows the LM3526 using  
>> 150uF aluminum in parallel with 0.1uF ceramic. But my USB card has  
>> only a 100uF aluminum capacitor and maybe a ceramic capacitor in  
>> parallel for this. Could this be why the USB port got zapped?  
>> Would it help to solder a tantalum in parallel as well? Will it  
hurt?

> what main board? FIC ECS MSI?...usb blew cause the board blows.

My main boards are cheap, FIC and ECS, so any built-in USB for them uses an SiS or VIA chip. My NEC USB is a PCI card. But why couldn't any built-in USB blow out because of something off the main board? I had a built-in RS-232 serial port blow because someone tried to hot plug a parallel printer port (vaporized a couple of tiny capacitors used by the RS-232-TTL converter chip), no other damage.