

USB-IF COMPLIANCE PROGRAM

USB 2.0 Test Report for Full Speed Device

TM

Company Name: Holtek Semiconductor Inc.

Model Name: HT82A6208

Product Type: HID device

Product Receive Date: 2009/08/26

Test Start Date: 2009/08/27

Report Date: 2009/08/31

Test Result: **PASS**

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Company

Company Name: Holtek Semiconductor Inc.
Company Address: No.3,Creation Rd. II Science Park, Hsinchu 300, Taiwan, R.O.C.
VID (Dec) 04D9 The VID for the company who apply the USB-IF logo.

Technical Contact

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E-Mail: cyhuang@holtek.com.tw
FAX Number: 03-5641557

Marketing Contact

Name: _____
Phone Number: _____
E-Mail: _____
FAX Number: _____

Product Information:

Silicon Model Name: _____ TID (If you know): _____

*** These are requirement fields. All testing will be held until information is completed. ***

- Retail Device Device and Silicon Silicon Only
 Hi Power Low Power
 Bus Powered Self Powered
 Untethered B Tethered

Highest capacity tested for Mass Storage Device: _____

Device Category: HID device Device Description: _____

VID: _____ PID: _____

Tested OS: Win 2000 Win XP (Standard test fee will cover 1 OS only.)

Tester: Dash Liu

Authorized Signature: *Eric Chen*

Project ID : UNC-HOK-USB-023_1



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Legacy USB Compliance Tests

Frameworks Test Result: Pass Fail

Chapter 9: Pass Fail

HID View: Pass Fail N/A

MSC Test: Pass Fail N/A

UVC Test: Pass Fail N/A

Interface: 1 MAX Power: 100 mA Remote Wakeup: Yes

Power Current Test Result: Pass Fail

Operating Power: 13.4 mA Unconfiguration Power: 13.3 mA (<100mA)
(=< Max Power <= 100mA for Low Power) (=<Max Power <= 100mA)

(=< Max Power <= 100mA for Self Power)

(=< Max Power <= 500mA for High Power)

Configuration Power: 13.4 mA

(=< Max Power <= 100mA for Low Power)

(=< Max Power <= 500mA for High Power)

Suspend Mode Power with Remote Wakeup: 560 uA

Suspend Mode Power without Remote Wakeup: 560 uA

(=< 2500uA)

Interoperability Test Overall Result: Pass Fail OS: W2k XP

EHCI Controller:

- | | | |
|---|--|--|
| 1. Enumeration and Driver installation: | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 2. Check operation of device | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3. Interoperability – Operate all device: | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 4. Hot plug test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 5. Warm Boot test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 6. Remote Wake-up test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail <input type="checkbox"/> N/A |
| 7. S3 Active Standby Test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 8. S3 Active Standby Resume Test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 9. Topology change | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 10. S4 Active Hibernate Test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 11. S4 Active Hibernate Resume Test | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |

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UHCI Controller:

12. Interoperability – Operate all device: Pass Fail

OHCI Controller:

13. Interoperability – Operate all device: Pass Fail

Signal Quality Test Result: Pass Fail

Full Speed UP Stream Signal Quality: Pass Fail

Inrush Current Test: Pass Fail

Back Voltage Test Result: (Enumerate before/after) Pass Fail

D+: mV / mV

D- : mV / mV

V_{Bus}: mV / mV

(All values <= 400mV)

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More Detail Test Result:

1. Full Speed Upstream Signal Quality: Pass

- Overall result: pass!
- Signal eye:
eye passes
- EOP width: 167.09 ns
EOP width passes
- Measured signaling rate: 11.9983 MHz
signal rate passes
- Crossover voltage range: 1.83 V to 1.85 V, mean crossover 1.84 V
(first crossover at 1.83 V, 10 other differential crossovers checked)
crossover voltages pass
- Consecutive jitter range: -143.804 ps to 96.790 ps, RMS jitter 102.136 ps
Paired JK jitter range: -8.916 ps to 4.362 ps, RMS jitter 7.019 ps
Paired KJ jitter range: -94.466 ps to 88.346 ps, RMS jitter 64.777 ps
jitter passes

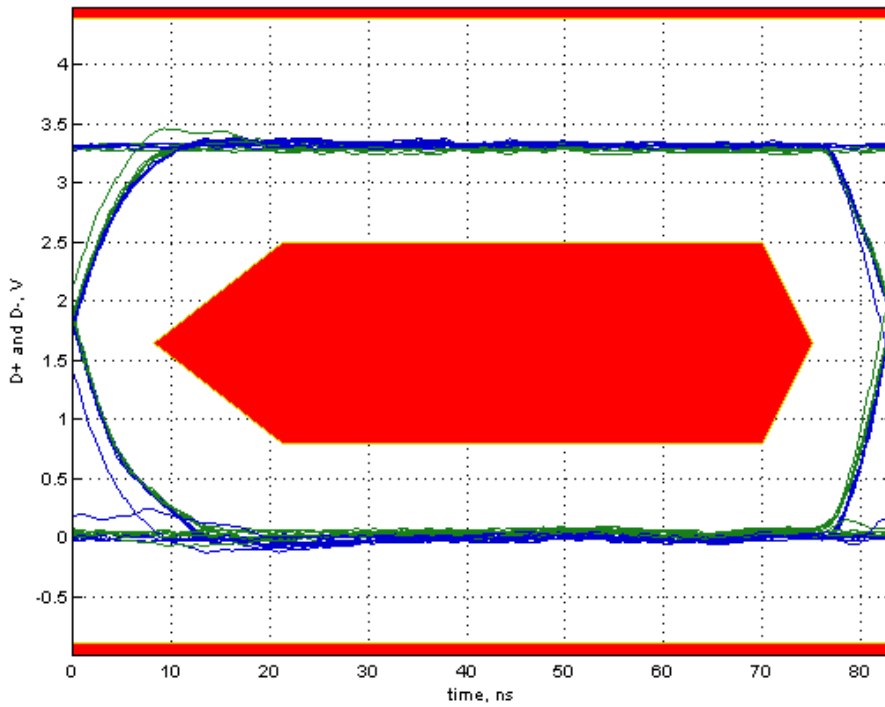
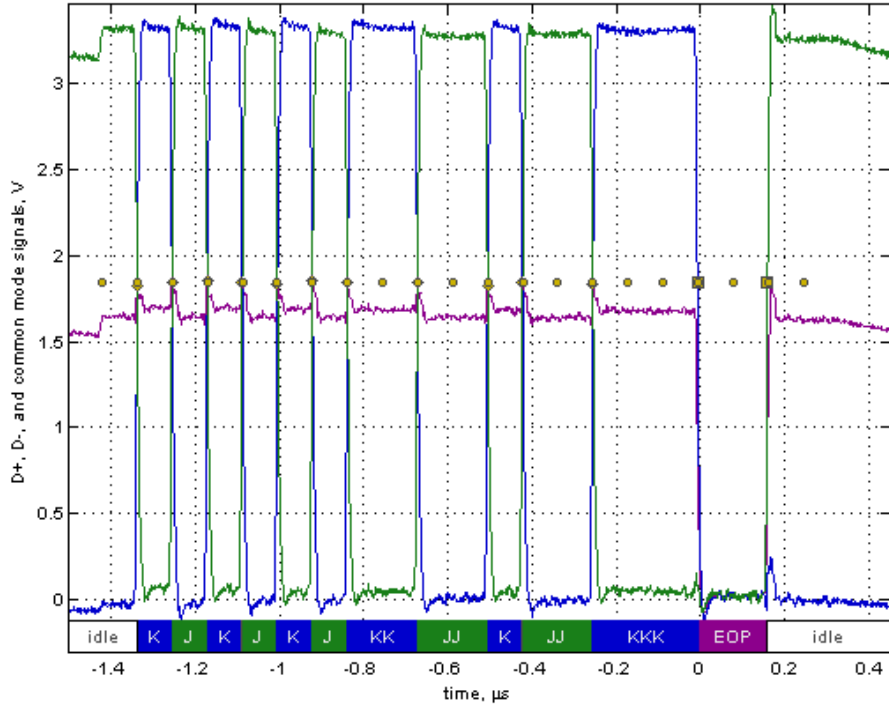
Additional Information

- Rising Edge Rate: 302.64 V/us (Equivalent risetime = 8.72 ns)
(minimum 132.00 V/us, maximum 660.00 V/us)
- Falling Edge Rate: 258.27 V/us (Equivalent risetime = 10.22 ns)
(minimum 132.00 V/us, maximum 660.00 V/us)
- Edge Rate Match: 17.18% (limit +/-10%)

Signal Data and Eye

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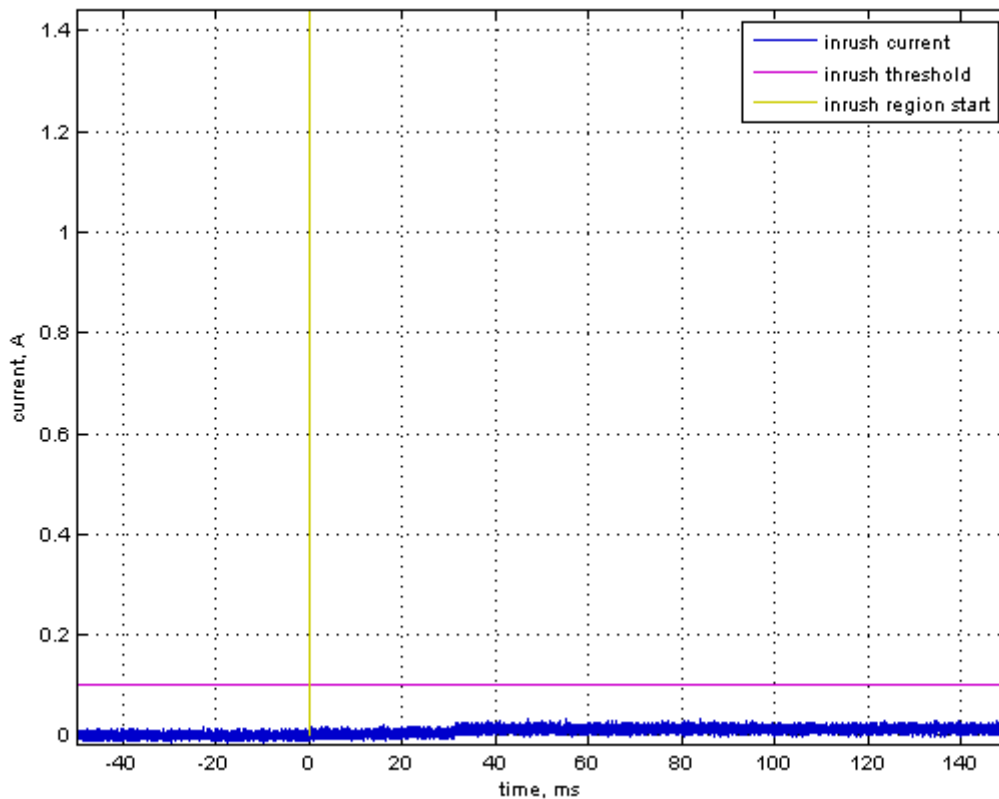
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2. Inrush Current Test: Pass

- Overall result: pass!
- Inrush at 5.000 V: 37.92 μC
inrush passes
- Region 1 Start: 0.0136 ms - End: 0.199 ms = 37.92 μC

Hot Plug (Attach) Current Draw

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Test Procedure Reference:

1. Universal Serial Bus Implementers Forum Full and Low Speed Electrical and Interoperability Compliance Test Procedure, version: 1.3

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