

COMPLIANCE PROGRAM TEST REPORT

USB 2.0 Test Report For **On-The-Go Revision 2.0**

Company Name: Freescale Semiconductor

VID (Dec or Hex): <u>15A2</u> The VID for the company who apply the USB-IF logo.

Model Name: MCIMX7D

Product Type: MCIMX7D

Report Date: 2016/06/27

Test Result: PASS

Tester: Mike Yang Authorized Signature: Howard Chang





Legal Disclaimer

1. TEST RESULT IS VALID ONLY TO THE ORIGINAL TESTED DEVICE MODEL. ALLION RESERVES THE RIGHT TO PROHIBIT OTHERS TO DISTORT, ISOLATE, FALSIFY, COPIED AND/OR BY ANY PROCESS TO CHANGE THE CONTENT OF THIS TEST REPORT UNLESS IT IS PRIOR APPROVED BY ALLION.



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Company Information:

Company

Company Name: Company Address: Freescale Semiconductor NO. 192 Liangjing Rd. Pudong New Area

Product Information:

Information Obtained From Checklist or Vendor				
Input	Туре	Purpose	Checklist Ref	
Uses Micro-AB		Check this box for an EH which uses a Micro-AB receptacle instead of a Standard-A receptacle. It will be automatically selected for OTG devices.	P15a	
Supports Sessions		Check this box if the OTG A-UUT or EH with Micro-AB receptacle does not keep V BUS enabled all the time that the ID pin is held low. Check this box for an EH with Standard-A receptacle which does not keep V BUS high all the time it is powered up. In either case it is assumed that SRP or ADP is available to detect the presence of a device.	PI10	







Input	Туре	Purpose	Checklist Ref
SRP as A-device		Check this box if the UUT, as an A- device, supports detecting, and acting on, an SRP pulse generated by a connected device.	PI13
HNP as A-device		Check this box if the UUT, as an A- device, supports HNP to enable the connected B-device to become host if it so requires.	PI13
HNP Polling as A- device		Check this box if the UUT, as an A- device, supports HNP polling. If it does it is allowed to remain as host, for as long as the other device does not set its Host Request Flag.	PI13
ADP as A-device		Check this box if the UUT, as an A- device, supports ADP probing to detect the presence or otherwise of a connected device.	PI13
SRP as B-device		Check this box if the UUT, as a B- device, supports generating an SRP pulse in order to start a session (cause the connected A-device to turn on V BUS).	PI20
HNP as B-device		Check this box if the UUT, as an B- device, supports HNP to allow it to become host if it so requires.	PI20
ADP as B-device		Check this box if the UUT, as an B- device, supports ADP sensing and probing to detect the presence or otherwise of a connected device.	PI20
FS Not Available		Check this box if UUT does not fully support full-speed operation. This is not permitted for an OTG device, but may be for an Embedded Host.	PI11, PI18









Input	Туре	Purpose	Checklist Ref
I _{A_VBUS_RATED}	<u>500</u> mA	The rated output current of an A- device in mA units.	PI8
bMaxPower	<u>2</u> mA	bMaxPower (sic) is the highest current, in mA, declared in any of the device's Configuration Descriptors. This value ignores current drawn under the Battery Charging provisions.	PI17
TPWRUP_RDY	<u>30 S</u>	Maximum time, in seconds, specified by vendor from powering on the UUT until it is ready to perform USB functionality. By default this is set to 30 seconds, but a vendor is permitted to specify a longer time.	PI24
TA_WAIT_BCON max	<u>10 S</u>	The maximum time, in seconds, that V BUS is left on for by an A-device, in the absence of a B-device connecting. The default value is thirty seconds. A vendor is permitted to specify a longer time, but should be aware that this will have an impact on the time taken for, and therefore possibly the cost of, compliance testing.	PI10
Unknown Dev (No HNP)	<u>VID:</u> <u>1A0A</u> <u>PID:</u> <u>0201</u>	The test will use the VID/PID combination specified during tests for error messages, when an unknown B-device, not capable of HNP, is connected. A default value (1A0A/0201) is used, but any other device not on the UUT's TPL may be defined here.	-



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Input	Туре	Purpose	Checklist Ref
Unknown Dev (HNP)	<u>VID:</u> <u>1A0A</u> <u>PID:</u> <u>0202</u>	The test will use the VID/PID combination specified during tests for error messages, when an unknown B-device, capable of HNP, is connected. A default value (1A0A/0202) is used, but any other device not on the UUT's TPL may be defined here.	-

Test Cable Information:

Information Obtained From Checklist or Vendor				
Input	Туре	Purpose		
Cable A	<u>220</u> mΩ	Test Cable A loop resistance in m Ω .		
Cable B	<u>543</u> mΩ	Test Cable B loop resistance in m Ω .		







A-UUT

A4.4: A-UUT High-speed Signal Quality

🛛 Pass

🗌 Fail

🗌 N/A

Fail

N/A

Engineering Servic

These tests measure the ability of transmitters to do valid high speed signaling. High speed signal quality is measured on upstream ports. A high speed scope with differential probes is used. Signaling data is captured with the scope and then translated to an eye pattern. The signal quality eye patterns obtained from the measurements must agree with the transmit eye patterns in the USB 2.0 Specification.

EL_2: Transmitter Data Rate	🛛 Pass	🗌 Fail	□ N/A
EL_3: Eye Pattern	🛛 Pass	🗌 Fail	□ N/A
EL_6: Rising and Falling Time	🛛 Pass	🗌 Fail	□ N/A
EL_7: Monotonic Data Transition	🛛 Pass	🗌 Fail	□ N/A

A4.5: A-UUT Packet Parameters Pass

This test measures the amount of time it takes hosts and devices to respond. It also verifies Host generated SYNCs and EOPs.

EL_21: (32bit)	32bit/32bit	🛛 Pass	🗌 Fail	□ N/A
EL_25: (8bit)	8bit	🛛 Pass	🗌 Fail	□ N/A
EL_23: (>=88bit and <=192bit)	136bit	🛛 Pass	🗌 Fail	□ N/A
EL_22: (>=8bit and <=192bit)	142bit	🛛 Pass	🗌 Fail	□ N/A
EL_55: (40bit)	40bit	🛛 Pass	🗌 Fail	□ N/A
<u>A4.7: A-UUT CHI</u>	RP Timing	🛛 Pass	🗌 Fail	□ N/A

This test examines the basic timings and voltages of both upstream ports during the speed detection protocol. (Device reset from Full Speed)

EL_33: (<=100us)	1.5us	🛛 Pass	🗌 Fail	□ N/A
EL_34: (>=40us and <=60us)	50us	🛛 Pass	🗌 Fail	□ N/A
EL_35: (100us and <=500us)	414us	🛛 Pass	🗌 Fail	□ N/A

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<u>A4.8: A-UUT</u>	Suspend/	<u>Resume/Res</u>	<u>set timing</u>	\boxtimes	Pass

 Fail
 N/A

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EL_39:		🛛 Pass	🗌 Fail	□ N/A
EL_41: (<=3ms)	110us	🛛 Pass	🗌 Fail	□ N/A

The USB-IF no longer requires EL_8: Test_J and Test_K to be performed as a condition for USB Certification. Measurement of EL_9: Test_J, Test_K and SE0 is still a requirement for certification. EL_9 is defined in the USB 2.0 Test Specification and measures the data line voltage when not driven. For detail information please reference as below link:

EL_9

Test Mode	Voltage (mV)
SE0_NAK D+	1.7
SE0_NAK D-	1.5
Test J D-	1.5
Test K D+	1.7

(-20mV to 20mV)

🛛 Pass	🗌 Fail	🗌 N/A
🛛 Pass	🗌 Fail	🗌 N/A
🛛 Pass	🗌 Fail	□ N/A
	⊠ Pass ⊠ Pass ⊠ Pass	 Pass Fail Pass Fail Pass Fail



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A

N/A

Fail

Engineering Services



If the downstream port has BC 1.2 capability, all items of BC 1.2 specific category(s) should be tested

under this port for USB-IF certification.







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A4.7: B-UUT Suspend/Resume/Reset timing Pass

□ N/A

🗌 Fail

Engineering Service:

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This test verifies that a device can be suspended and resumed while operating in high speed and also that the device can be reset from the suspended state.

EL_38: (>=3ms and <=3.125ms)	3ms	🛛 Pass	🗌 Fail	□ N/A
EL_39:		🛛 Pass	🗌 Fail	□ N/A
EL_40:		🛛 Pass	🗌 Fail	□ N/A
EL_27: (>=3.1ms and <=6ms)	3.5ms	🛛 Pass	🗌 Fail	□ N/A
EL_28: (>=2.5us and <=6ms)	1.5ms	🛛 Pass	🗌 Fail	□ N/A

A4.8: B-UUT Test J/K, SE0_NAK

🛛 Pass

Fail N/A

The USB-IF no longer requires EL_8: Test_J and Test_K to be performed as a condition for USB Certification. Measurement of EL_9: Test_J, Test_K and SE0 are still a requirement for certification. EL_9 is defined in the USB 2.0 Test Specification and measures the data line voltage when not driven. For detail information please reference as below link:

EL_9

Test Mode	Voltage (mV)		
SE0_NAK D+	1.8		
SE0_NAK D-	1.6		
Test J D-	1.2		
Test K D+	1.3		

(-20mV to 20mV)



			Engin
A4.9: B-UUT Receiver Sensitivity	🛛 Pass	🗌 Fail	🗌 N/A
These tests check the receive characteristics of	upstream ports		
EL_18	🛛 Pass	🗌 Fail	□ N/A
EL_17 Positive: +154mV	🛛 Pass	🗌 Fail	□ N/A
EL_17 Negative: -154mV	🛛 Pass	🗌 Fail	□ N/A
EL_16 Positive: +142mV	🛛 Pass	🗌 Fail	□ N/A
EL_16 Negative: -141mV	🛛 Pass	🗌 Fail	□ N/A
B-UUT Basic Speed Signal Qualityt	🛛 Pass	🗌 Fail	
Connector Type: <u>Untethered</u> (Tethered r	means no standard B or	special B conne	ector)
Basic Speed Upstream Signal Quality	y: 🛛 🖂 Pass	🗌 Fail	
Inrush Current Test:	🛛 Pass	🗌 Fail	
<u>B-UUT Back Voltage Test Result</u> Enumerate before / after		Pass] Fail
Pin Voltage (mV)			
VBus V (All values <= 400mV)			
	🛛 Pass	🗌 Fail	
<u>B-UUT Miscellaneous:</u>			
<u>B-UUT Miscellaneous:</u> Bypass Capacitance Check:	🛛 Pass 🗌	Fail	



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),	USB Compliance Program Test Report	ALLION Engineering Services
	Power Current Test Result 🛛 Pass 🗌 Fail	
	High-Speed:Low Powered DeviceImage: PassFail	□ N/A
	Unconfiguration Power: <u>0.1</u> mA (<= 100mA)	
	Configuration Power: 0.1 mA (<= Max Power <= 100mA for Low Power) (<= Max Power <= 500mA for High Power)	
	Suspend Mode Power without Remote Wakeup: <u>N/A</u> uA Suspend Mode Power with Remote Wakeup Enabled: <u>116</u> uA Suspend Mode Power with Remote Wakeup Diabled: <u>116</u> uA (<= 2500uA for Self Power Hub or Non Compound Device) (<= 12500uA for Bus Power Hub or Compound Device)	
	Powered' State Suspend Mode Power: <u>116</u> uA (<= 2500uA for not Supporting USB Battery Charging) (<= 100mA for Supporting USB Battery Charging)	
	Operating Power: 0.1 mA (<= Max Power <= 100mA for Low Power) (<= Max Power <= 100mA for Self Power) (<= Max Power <= 500mA for High Power)	
	Basic-Speed: Low Powered Device Sease Se	
	Unconfiguration Power: <u>0.1</u> mA (<= 100mA)	
	Configuration Power: 0.1 mA (<= Max Power <= 100mA for Low Power) (<= Max Power <= 500mA for High Power)	
	Suspend Mode Power without Remote Wakeup: <u>N/A</u> uA Suspend Mode Power with Remote Wakeup Enabled: <u>116</u> uA Suspend Mode Power with Remote Wakeup Diabled: <u>116</u> uA (<= 2500uA for Self Power Hub or Non Compound Device) (<= 12500uA for Bus Power Hub or Compound Device)	
	Powered' State Suspend Mode Power: <u>116</u> uA (<= 2500uA for not Supporting USB Battery Charging) (<= 100mA for Supporting USB Battery Charging)	
	Operating Power: 0.1 mA (<= Max Power <= 100mA for Low Power) (<= Max Power <= 100mA for Self Power) (<= Max Power <= 500mA for High Power)	

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Interoperability Test Overall Result

Operating System: Win10

EHCI Host Controller:

Enumeration and Driver installation Check operation of device Interoperability – Operate all devices Hot plug test – A Plug Hot plug test – B Plug Warm Boot test Remote Wake-up Test S3 Active Standby Test S3 Active Standby Resume Test Root Port Test S4 Active Hibernate Test S4 Active Hibernate Resume Test



🗌 Fail

 \boxtimes Pass



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On-The-Go PET Automated Test (CH 6)

<mark>A-UUT</mark>

Test Item	Result
6.7.2 A-UUT Initial Power-up Test	Pass
6.7.4 A-UUT V BUS Voltage and Current Measurements	Pass
6.7.5 A-UUT Bypass Capacitance	Pass
6.7.6 A-UUT SRP	Pass
6.7.7 A-UUT HNP	Pass
6.7.8 A-UUT ADP	Pass
6.7.9 A-UUT Leakage	Pass
6.7.10 OTG A-device, Capable of ADP and SRP, State Transition Test	N/A
6.7.11 OTG A-device, Capable of ADP but not SRP, State Transition Test	N/A
6.7.12 OTG A-device, Capable of SRP but not ADP, State Transition Test	Pass
6.7.13 A-OTG, with no Session Support, State Transition Test	N/A
6.7.18 EH, Capable of ADP and SRP, (Micro-AB) or OTG-A , Capable of ADP and SRP but not HNP, State Transition Test	N/A
6.7.19 EH, Capable of ADP but not SRP, (Micro-AB) or OTG-A , Capable of ADP but not SRP or HNP, State Transition Test	N/A
6.7.20 EH, Capable of SRP but not ADP, (Micro-AB) or OTG-A , Capable of SRP but not ADP or HNP, State Transition Test	N/A
6.7.21 EH with no Session Support State Transition Test (Micro-AB), or OTG-A with no Session or HNP Support	N/A
6.7.22 A-UUT "Device No Response" for connection timeout	Pass
6.7.23 A-UUT "Unsupported Device" Message	Pass
6.7.24 A-UUT "Device No Response" for HNP enable	Pass





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<mark>B-UUT</mark>

Test Item	Result
6.8.1 B-UUT Initial Power-up Test	Pass
6.8.2 B-UUT V BUS Voltage and Current Measurements	Pass
6.8.3 B-UUT Bypass Capacitance	Pass
6.8.4 B-UUT SRP	Pass
6.8.5 B-UUT HNP	Pass
6.8.6 B-UUT ADP	Pass
6.8.7 B-UUT Leakage	Pass
6.8.8 B-OTG, Capable of ADP/HNP/SRP, State Transition Test	N/A
6.8.9 B-OTG, Capable of HNP and SRP, State Transition Test	Pass
6.8.10 OTG B-device, Capable of ADP and SRP only, State Transition Test	N/A
6.8.11 OTG B-device, Capable of SRP only, State Transition Test	N/A
6.8.12 OTG B-device, Capable of No Protocol, State Transition Test	N/A
6.8.16 B-UUT "Device no response" for SRP	Pass
6.8.17 B-UUT "Unsupported Device"	Pass
6.8.18 B-UUT "Device No Response" for HNP	Pass







On-The-Go Manual Interoperability Tests (CH 7)

This section will perform DUT interoperability with peripheral that on the vendor's Target Peripheral List.

Test Item	Result
7.3.1 A-UUT Functionality B-device	N/A
7.3.2 A-UUT Category Functionality B-device	Pass
7.3.3 A-UUT Boot test	Pass
7.3.4 A-UUT Legacy Speed test	Pass
7.3.5 A-UUT Concurrent and Independently test	N/A
7.3.6 A-UUT Unsupported device Message test	Pass
7.3.7 A-UUT Hub Error message test	N/A
7.3.8 A-UUT Hub Functionality test	Pass
7.3.9 A-UUT Hub maximum tier test	Pass
7.3.10 A-UUT Hub Concurrent and Independent test	Pass
7.3.11 A-UUT Bus powered hub power exceeded test	Pass
7.3.12 A-UUT Maximum concurrently device exceed message test	Pass
7.3.13 A-UUT Standby test	Pass
7.3.14 A-UUT Standby Disconnect test	Pass
7.3.15 A-UUT Standby Attach test	Pass
7.3.16 A-UUT Standby Topology Change test	Pass
7.3.17 A-UUT Standby Remote Wakeup test	N/A
7.3.18 OTG to OTG test	N/A







Battery Charging 1.2 Compliance Test

<mark>A-UUT</mark>

Dedicated Charging Port (DCP)	Pass	🗌 Fail	🖂 N/A
DCP Overshoot and Undershoot Voltage Test	Pass	🗌 Fail	⊠ N/A
DCP Handshaking Test	Pass	🗌 Fail	⊠ N/A
DCP Resistance and Capacitance Tests	Pass	🗌 Fail	⊠ N/A
DCP Voltage and Current	Pass	🗌 Fail	⊠ N/A
Charging Downstream Port (CDP)	Pass	🗌 Fail	🛛 N/A
CDP Overshoot and Undershoot Voltage Test	Pass	🗌 Fail	⊠ N/A
CDP Voltage and Current Test	Pass	🗌 Fail	⊠ N/A
CDP Handshaking Test	Pass	🗌 Fail	⊠ N/A
CDP Ground Offset Test – Full Speed	Pass	🗌 Fail	🖂 N/A
CDP Ground Offset Test – High Speed	Pass	🗌 Fail	⊠ N/A
Standard Downstream Port (SDP)	Pass	🗌 Fail	🖂 N/A
SDP Handshaking Test	Pass	🗌 Fail	⊠ N/A
Multiple Role Port (MRP)	Pass	🗌 Fail	⊠ N/A
MRP Functional Test	Pass	🗌 Fail	⊠ N/A







<mark>B-UUT</mark>

Portable Device (PD)	Pass	🗌 Fail	🖂 N/A
B-UUT Initial Power-up Test	Pass	🗌 Fail	⊠ N/A
Data Contact Detect Test – With Current Source	Pass	🗌 Fail	⊠ N/A
Data Contact Detect Test – No Current Source	Pass	🗌 Fail	⊠ N/A
DCP Detection Test	Pass	🗌 Fail	⊠ N/A
CDP Detection Test	Pass	🗌 Fail	⊠ N/A
SDP Detection Test	Pass	🗌 Fail	⊠ N/A
ACA-Dock Detection Test	Pass	🗌 Fail	⊠ N/A
ACA-A Detection Test	Pass	🗌 Fail	⊠ N/A
ACA-B Detection Test	Pass	🗌 Fail	⊠ N/A
ACA-C Detection Test	Pass	🗌 Fail	⊠ N/A
ACA-GND Detection Test	Pass	🗌 Fail	⊠ N/A
Common Mode Test - Full Speed	Pass	🗌 Fail	⊠ N/A
Common Mode Test - High Speed	Pass	🗌 Fail	⊠ N/A
Dead Battery Provision Test	Pass	🗌 Fail	⊠ N/A







More Detail Test Result:

- 1. Low Speed Downstream Signal Quality: Pass
 - Overall result: pass!
 - Sync result: sync passes
 - Signal eye: eye passes
 - EOP width: 1.33 us EOP width passes
 - Measured signaling rate: 1.5001 MHz signal rate passes
 - Edge Monotonicity: 100 mV Monotonic Edge passes
 - Crossover voltage range: 1.52 V to 1.58 V, mean crossover 1.55 V (first crossover at 1.55 V, 22 other differential crossovers checked) crossover voltages pass
 - Consecutive jitter range: -0.929 ns to 0.938 ns, RMS jitter 0.559 ns
 - Paired JK jitter range: -0.511 ns to 0.489 ns, RMS jitter 0.362 ns
 - Paired KJ jitter range: -0.711 ns to 0.653 ns, RMS jitter 0.448 ns jitter passes

Additional Information

- Rising Edge Rate: 19.32 V/us (Equivalent risetime = 136.67 ns)
- Falling Edge Rate: 20.54 V/us (Equivalent falltime = 128.53 ns)
- Edge Rate Match: 6.14% (limit +/-20%)







SignalData and Eye





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- 2. Basic Speed Upstream Signal Quality: Pass
 - Overall result: pass!
 - Sync result: sync passes
 - Signal eye: eye passes
 - EOP width: 167.27 ns EOP width passes
 - Measured signaling rate: 11.9993 MHz signal rate passes
 - Edge Monotonicity: 80 mV Monotonic Edge passes
 - Crossover voltage range: 1.56 V to 1.60 V, mean crossover 1.58 V (first crossover at 1.58 V, 10 other differential crossovers checked) crossover voltages pass
 - Consecutive jitter range: -335.721 ps to 322.279 ps, RMS jitter 260.434 ps
 - Paired JK jitter range: 17.667 ps to 101.000 ps, RMS jitter 72.502 ps
 - Paired KJ jitter range: -86.000 ps to 116.000 ps, RMS jitter 75.802 ps jitter passes

Additional Information

- Rising Edge Rate: 232.95 V/us (Equivalent risetime = 11.33 ns)
- Falling Edge Rate: 266.75 V/us (Equivalent falltime = 9.90 ns)
- Edge Rate Match: 13.53% (limit +/-10%)







SignalData and Eye



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- 3. Full Speed Downstream Signal Quality: Pass
 - Overall result: pass!
 - Sync result: sync passes
 - Signal eye: eye passes
 - EOP width: 166.59 ns EOP width passes
 - Measured signaling rate: 12.0008 MHz signal rate passes
 - Edge Monotonicity: 40 mV Monotonic Edge passes
 - Crossover voltage range: 1.50 V to 1.59 V, mean crossover 1.55 V (first crossover at 1.56 V, 18 other differential crossovers checked) crossover voltages pass
 - Consecutive jitter range: -140.484 ps to 133.654 ps, RMS jitter 92.011 ps
 - Paired JK jitter range: -69.253 ps to 58.621 ps, RMS jitter 50.772 ps
 - Paired KJ jitter range: -113.506 ps to 83.621 ps, RMS jitter 67.401 ps jitter passes

Additional Information

- Rising Edge Rate: 275.03 V/us (Equivalent risetime = 9.60 ns)
- Falling Edge Rate: 308.94 V/us (Equivalent falltime = 8.55 ns)
- Edge Rate Match: 11.62% (limit +/-10%)







SignalData and Eye



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- 4. High Speed Upstream Signal Quality: Pass
 - Overall result: pass!
 - Sync result: sync passes
 - Signal eye: eye passes
 - EOP width: 8.10 bits EOP width passes
 - Measured signaling rate: 480.0259 MHz signal rate passes
 - Edge Monotonicity: 0 mV Monotonic Edge passes
 - Rising Edge Rate: 921.02 V/us (694.88 ps equivalent risetime) passes
 - Falling Edge Rate: 926.50 V/us (690.77 ps equivalent falltime) passes

Additional Information

- Consecutive jitter range: -52.825 ps to 51.236 ps, RMS jitter 21.334 ps
- Paired JK jitter range: -30.446 ps to 38.190 ps, RMS jitter 9.724 ps
- Paired KJ jitter range: -36.472 ps to 28.792 ps, RMS jitter 10.370 ps







SignalData and Eye













- 5. High Speed Downstream Signal Quality: Pass
 - Overall result: pass!
 - Sync result: sync passes
 - Signal eye: eye passes
 - EOP width: 8.08 bits EOP width passes
 - Measured signaling rate: 480.0258 MHz signal rate passes
 - Edge Monotonicity: 0 mV Monotonic Edge passes
 - Rising Edge Rate: 850.06 V/us (752.89 ps equivalent risetime) passes
 - Falling Edge Rate: 863.16 V/us (741.46 ps equivalent falltime) passes

Additional Information

- Consecutive jitter range: -73.440 ps to 69.686 ps, RMS jitter 32.851 ps
- Paired JK jitter range: -30.004 ps to 27.925 ps, RMS jitter 9.597 ps
- Paired KJ jitter range: -28.661 ps to 35.304 ps, RMS jitter 8.887 ps







SignalData and Eye











- 6. Inrush Current: Pass
 - Overall result: pass!
 - Inrush at 5.000 V: 20.2111 μC Inrush passes
 - Region 1 Start: 0.00000 ms End: 0.108 ms = 20.21 μ C

Hot Plug (Attach) Current Draw



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Test Procedure Reference:

- 1. USB On-The-Go and Embedded Host Automated Compliance Plan for the On-The-Go & Embedded Host Supplement Revision 2.0, Version 1.2
- 2. Universal Serial Bus Implementers Forum High-speed System/Motherboard Compliance Test Procedure, Version: 1.4
- 3. Universal Serial Bus Implementers Forum Device High-speed Electrical Test Procedure For Tektronix Test Equipment, version: 1.5
- 4. Universal Serial Bus Implementers Forum Full and Low Speed Electrical and Interoperability Compliance Test Procedure, Version: 1.3
- USB-IF Compliance Update Page---Interoperability Gold Tree Update <u>http://compliance.usb.org/resources/GoldSuite%20Test%20Procedure.pdf</u>
- 6. USB Battery Charging 1.2 Compliance Plan, Revision: 1.1

Notice: Test result is valid only to the original tested device model. The content of test report may not be copied or re-transmitted (except for the entire report) unless it is prior approved by Allion.



