Packet-Master USB-PET Report on Product
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Scripts OTG 2.0 Rel:1.4.1.0, BC 1.2 Rel:1.2.1.5
Test run on Wednesday, October 17, 2018 14:54:13

Opening script: CT_PD_DCD_CS.mpet
Compile successful

[0.166,890] PD - Data Contact Detect Test with Current Source
[0.166,891] Purpose: Check that IDP_SRC is maintained for TDCD_DBNC after D+ is pulled low,and that TDCD_TIMEOUT is complied with.

[0.166,916]
[0.166,916] DCD using IDP_SRC.

[0.166,945] 1. PET applies CADP_VBUS max (6.5 uF) and a pull-down resistor of ROTG_VBUS min (10k) to VBUS and turns on VBUS to VB_VBUS nom (5V).
[1.167,041] 2. Start timer as VBUS reaches 0.8V.
[1.167,041] 3. Wait for D+ to rise above 2V.(If it doesn't within 0.9 second - test fails.) This proves that IDP_SRC is sufficiently large to overcome the UUT's own leakage current. [PD5]
[1.167,042] 4. Measure and report time till it does.
[1.175,324] - D+ reached 2V within 8,282 us of VBUS reaching 0.8V.
[1.175,325] 5. After 1ms of D+ exceeding 2V, measure and report voltage on D+.
[1.176,329] - D+ then reached 0.014V (measured after a further 1ms).
[1.176,330] 6. Connect 0.8V via 15k to D-. Check voltage at D- is in correct range for a pull-down value meeting the specification.
[1.176,330] Note: For worst case RDM_DWN of 24.8K we need a max voltage at D- of 0.498V. For worst case min RDM_DWN of 14.25K we need a min voltage at D- of 0.390V.
[1.186,358] - Voltage measured at D- is 0.074V
[1.186,363] FAIL: D- pulldown RDM_DWN too large.
[1.186,364] 7. Disconnect components in previous step.
[1.186,376] 8. Connect 15k from D+ to 0V.
[1.186,382] 9. Wait just less than TDCD_DBNC min (9.5ms).
[1.195,883] 10. Check voltage on D+ is less than 0.375V. This proves that IDP_SRC and leakage, together, are low enough to provide a low logic level on D+, even after nearly TDCD_DBNC min (10ms). 0.380V used in actual test script to allow for small tester leakage.) [PD9]
[1.195,887] - Voltage on D+ is 0.593V.

[1.195,889] FAIL: Worst-case pulldown is not able to pull D+ low enough.
[1.195,890] 11. Disconnect everything from VBUS, and switch VBUS off.
[1.195,953] 12. Wait 2 seconds for disconnect to be detected.
[3.195,954]
[3.195,954] DCD using Timeout.

[3.195,983] 13. PET applies CADP_VBUS max (6.5 碾) and a pull-down resistor of ROTG_VBUS min (10k) to VBUS and turns on VBUS to VB_VBUS nom (5V).
[4.196,079] 14. Starting timer as VBUS reaches 0.8V.
[4.196,079] 15. Wait for D+ to rise above 2V.(If it doesn't within 0.9 second of VBUS reaching 0.8V - test fails.) This proves that IDP_SRC is sufficiently large to overcome the UUT's own leakage current.
[4.204,362] - D+ reached 2V within 8,281 us of VBUS reaching 0.8V.
[4.204,380] 16. Check that D+ goes down to voltage in the range VDP_SRC (0.5 to 0.7V) within TDCD_TIMEOUT (0.3 to 0.9 sec) of VBUS going on. [PD6]
[10.221,406] - D+ went down to 0.7V after 6025.4ms of VBUS reaching 0.8V.
[10.221,406] FAIL: TDCD_TIMEOUT does not lie in range 0.3s - 0.9s.
[10.221,410] FAIL: Primary Detection was not detected within TSVLD_CON_PWD max (1 sec).
[10.221,413] 17. Disconnect everything from VBUS, and switch VBUS off.
[10.221,476] 18. Wait 8 seconds, ignoring SRP pulse, to allow disconnection to be detected.
[18.221,506] FAILED TEST - (Does not prevent further tests).

===End of Script==========

===End of Test Sequence==========

----RESULT SUMMARY----
FAIL - CT_PD_DCD_CS.mpet

===End of Report==========