

**NOTICE:** Any Company or Companies submitting a USB Power Delivery ECR proposal must be one of the following: a Promoter or Contributor of the USB 3.0 and 2.0 Specifications who have completed the USB Power Delivery addendum. If a group of Companies is submitting an ECR proposal, each company must be either a Promoter or Contributor of the USB 3.0 and 2.0 Specifications who have completed the USB Power Delivery addendum.

**SPECIFICATION REVISIONS AND ADDENDA:** At any point in time, there shall only be one current version of the USB PD CTS, termed the production version. At the same time, there may also be proposed revisions to the specification's design which are not yet approved and shall be held confidential as deemed necessary by the USB 3.0 and USB 2.0 Promoters and within the Group of Working Committee(s).

**PROCEDURES FOR SUBMITTING PROPOSALS:** Both members of the USB Implementers Forum as a whole and members of the USB 3.0 and USB 2.0 Promoters may submit requests to revise the USB PD CTS Specification. Such a request may be rejected or may result in a USB PD Engineering Change Notice (ECN), which is the official way USB specifications may be changed.

**FORMAT OF PROPOSAL:** The originator of a request to alter the USB PD CTS Specification may do so by posting this to the USB Power Delivery Compliance working group for review. Once the proposal has been reviewed by the working group it will be passed to the USB 3.0 and 2.0 Promoters for approval to publish.

**RESUBMISSION AND APPEAL:** The originator of a request that was not approved can redraft the original request. Rewritten proposal will be treated as a new proposal and will be evaluated using the procedures described above. The originator of a request that was not approved can also submit an appeal to the USB 3.0 and 2.0 Promoters. The appeal must be made in writing and addressed to the Secretary of the USB Implementers Forum.

#### **ABOUT THE ENGINEERING CHANGE REQUEST FORM:**

The Purpose of this Engineering Change Request Form is to expedite the review process of the proposal by providing explanations, background information, and examples of the proposed changes at a high level. This form serves as an executive summary to the actual proposal.

#### **STEPS ON HOW TO SUBMIT A USB PD ENGINEERING CHANGE REQUEST:**

- 1) Please fill out the Engineering Change Request Form on the following pages completely:
  - a) Detail the names and contact details for each of the ECR contributors
  - b) Update the ECR Title
  - c) Give a minimum of 2-3 sentences for each description on the form outlining the background to the ECR
- 2) For each section/table/figure to be updated:
  - a) Detail the section number, starting page and figure/table number to be updated as appropriate.
  - b) Detail existing text under "From Text"
  - c) Detail changed text under "To Text"
- 3) Save the file as "USB PD CTS 1.0 R 1" followed by the ECR Title as per step 1)b)
- 4) Post the ECR in the USB PD CTS Documents section under "ECR | New ECRs".
  - a) This ECR will then be reviewed by the Power Delivery Compliance Working Group.
  - b) Revisions to the ECR originating from the review should be submitted as document revision of the original ECR using "Add new document".

Name: Pat Crowe \_\_\_\_\_ Email: \_\_\_\_\_

Company: MQP \_\_\_\_\_ Mailstop: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_

Country: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ FAX: \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Company: \_\_\_\_\_ Mailstop: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_

Country: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ FAX: \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

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State/Province: \_\_\_\_\_

Country: \_\_\_\_\_

Zip/Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_

FAX: \_\_\_\_\_

**Title: COMMON.CHECK.PD.14**

**Applied to: USB PD CTS Specification r1.p4 v6**

**Brief description of the functional changes proposed:**

Add a common check for correct length of VBUS being off for Hard Reset

**Benefits as a result of the proposed changes:**

If Hard Reset results in VBUS low for longer than allowed for in test we have a valid reason to fail test.

**An assessment of the impact to the existing revision and systems that currently conform to the USB specification:**

**An analysis of the hardware implications:**

**An analysis of the software implications:**

**An analysis of the compliance testing implications:**

<b>An analysis of the Vendor Info File (VIF) implications:</b>

*ADD:*

*COMMON.CHECK.PD.14 Check Hard Reset*

Description: The Tester checks whether the basic timing for a Hard Reset are correctly followed.

Check Applicability: In PD2 or PD3 mode only, when testing a Source.

Perform the following checks on the Hard Reset Sequences: [COMMON.CHECK.PD.14#1]

1. If the Tester sees or sends a Hard Reset Signal:
  - a. Check that VBUS does not go below valid range of initial voltage before tPSHardReset min.
  - b. Check that VBUS reaches vSafe0V before tPSHardReset max plus tSafe0V max from leaving the valid range of initial voltage.
  - c. Check that VBUS remains below vSafe0V for between tSrcRecover min and max.
  - d. Check that VBUS reaches vSafe5V before tSrcTurnOn max after rising above vSafe0V.