

USB PD CTS ENGINEERING CHANGE NOTICE FORM

NOTICE: Any Company or Companies submitting a USB Power Delivery ECN 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".

USB PD CTS ENGINEERING CHANGE NOTICE FORM

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Address: _____

City: Folsom State/Province: CA

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Name: _____ Email: _____

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Name: _____ Email: _____

Company: _____ 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: _____

USB PD CTS ENGINEERING CHANGE NOTICE FORM

Title: PPS Source rejecting request below iPpsCLMin
Applied to: USB PD CTS Specification Version 1.4 Revision 5

Brief description of the functional changes proposed:
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Based on approved ECR in USB PD base spec titled "USB PD R3.1 V1.2 ECR_SRC_PPS_behavior_in_low_current_request", this ECR adds new test case to check whether PPS Source rejects an invalid Request below iPpsCLMin.
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Benefits as a result of the proposed changes:
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Aligns with USB PD base spec changes

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

None. Ensure that existing systems conform to USB PD Spec

An analysis of the hardware implications:
--

No impact

An analysis of the software implications:
--

An analysis of the compliance testing implications:
--

Compliance testers will have to be updated to adhere to new changes in USB PD CTS spec
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An analysis of the Vendor Info File (VIF) implications:
--

No impact

USB PD CTS ENGINEERING CHANGE NOTICE FORM

Actual Change Requested

New Text:

TEST.PD.PROT.SRC3.15 SPR PPS Minimum Current Limit Check – iPpsCLMin

Description: As a Sink, the Tester sends the second *Request* Message with Operating Current below iPpsCLMin and verifies that Source sends *Reject* message.

Test Specific Tester Behavior: N/A

Test Conditions:

	Consumer Only	Provider Only, C/P, P/C, DRP
Rev3ChkdSrc		✓

Test Procedures:

1. There are 2 possible bring-up procedures:

a. The UUT has VIF field PD_Port_Type set to Consumer/Provider, the Tester runs bring-up procedure with the Consumer-Provider as Source UUT PPS COMMON.PROC.BU.9.

b. The UUT has VIF field PD_Port_Type set to anything else, the Tester runs bring-up procedure with the UUT as a Source for PPS test COMMON.PROC.BU.4.

2. The Tester sends the second *Request* Message to request the Programmable Power Supply APDO at 4V with Operating Current below *iPpsCLMin*, within *tPPSRequest* to ensure SourcePPSCommTimer does not expire. The check fails if the Tester cannot send the second *Request* Message because the UUT has presented *SinkTxNG*. [TEST.PD.PROT.SRC3.15#1]

3. The check fails if the UUT does not respond with *Reject* Message. [TEST.PD.PROT.SRC3.15#2]