

USB Power Delivery ENGINEERING CHANGE NOTICE FORM

Title: PPS Source behavior for Requests below 1A

Applied to: USB Power Delivery Specification Revision 3.1

Version 1.2

Brief description of the functional changes proposed:

Clarification of PPS source behavior if it receives Request for current below 1A

Benefits as a result of the proposed changes:

The ECN's benefit is consistent behavior when a Request for less than 1A is made while the Source is operating in PPS mode.

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

Some existing implementations may accept Requests for less than 1A. However their behavior is not specified and may vary from implementation to implementation.

An analysis of the hardware implications:

None

An analysis of the software implications:

None

An analysis of the compliance testing implications:

A new Source PPS test with current Requests below 1A should be added

USB Power Delivery ENGINEERING CHANGE NOTICE FORM

Actual Change Requested

(a). Section 7.1.4.2.2

From Text:

7.1.4.2.2 SPR Programmable Power Supply Current Limit

The Programmable Power Supply operating in SPR PPS Mode **shall** limit its output current to the Operating Current value in the Programmable RDO when the Sink attempts to draw more current than the Output Current level. The programming step size for the Output Current is *iPpsCLStep*. All programming changes of the Operating Current **shall** settle to the new Operating Current value within *tPpsCLProgramSettle*. The SPR PPS Operating Current regulation accuracy during Current Limit is defined as *iPpsCLNew*. The minimum programmable Current Limit level is *iPpsCLMin*. A Source that supports SPR PPS **shall** support Current Limit programmability between *iPpsCLMin* and the Maximum Current value in the SPR PPS APDO.

To Text:

7.1.4.2.2 SPR Programmable Power Supply Current Limit

The Programmable Power Supply operating in SPR PPS Mode **shall** limit its output current to the Operating Current value in the Programmable RDO when the Sink attempts to draw more current than the Output Current level. The programming step size for the Output Current is *iPpsCLStep*. All programming changes of the Operating Current **shall** settle to the new Operating Current value within *tPpsCLProgramSettle*. The SPR PPS Operating Current regulation accuracy during Current Limit is defined as *iPpsCLNew*. The minimum programmable Current Limit level is *iPpsCLMin*. A Source that supports SPR PPS **shall** support Current Limit programmability between *iPpsCLMin* and the Maximum Current value in the SPR PPS APDO. **A Source which receives a request for current below *iPpsCLMin* shall reject the request.**