

# USB Type-C ENGINEERING CHANGE NOTICE

**Title: Source Rp Clarification**

**Applied to: USB Type-C Specification Release 2.4, Oct 2024**

<b>Brief description of the functional changes proposed:</b>
Attached.SRC State Requirements mandate that a source shall always supply VBUS current at the level advertised by Rp, but does not acknowledge the significance of Rp changes after USB PD Communications begin. Per PD Spec, once an explicit contract is active, "The Protocol Layer in the Source will request the PHY to set the Rp value to SinkTxOK when it is not actively sending messages." SinkTxOK Rp value has no obligation to align with the explicit contract's MaxCurrent value.  Revise the wording to acknowledge that the VBUS sourcing current does not necessarily correspond to Rp if an explicit contract is in place.

<b>Benefits as a result of the proposed changes:</b>
Newcomers to the Type-C Spec may be led astray by the current wording, thinking that Rp always signifies current advertisement. This sentence may delay their understanding of the spec and also mislead their interpretation of CC waveforms during system debug.

<b>An assessment of the impact to the existing revision and systems that currently conform to the USB specification:</b>
This is a clarification of the existing behavior and should not impart any functional change

<b>An analysis of the hardware implications:</b>
This is a clarification of the existing behavior and should not impart any functional change

<b>An analysis of the software implications:</b>
This is a clarification of the existing behavior and should not impart any functional change

<b>An analysis of the compliance testing implications:</b>
This is a clarification of the existing behavior and should not impart any functional change

# USB Type-C ENGINEERING CHANGE NOTICE

## Actual Change Requested

### (a). Section 4.5.2.2.9.1, Page 187

#### From Text:

##### Attached.SRC State Requirements

If the port needs to determine the orientation of the connector, it shall do so only upon entry to the Attached.SRC state by detecting which of the CC1 or CC2 pins is connected through the cable, i.e., which CC pin is in the SRC.Rd state.

If the port has entered this state from the AttachWait.SRC state or the Try.SRC state, the SRC.Rd state will be on only one of the CC1 or CC2 pins. The port shall source current on this CC pin and monitor its state.

If the port has entered this state from the Attached.SNK state as the result of a USB PD PR\_Swap, the port shall source current on the connected CC pin and monitor its state.

The port shall provide an  $R_p$  as specified in Table 4-27.

The port shall supply VBUS current at the level it advertises on  $R_p$ .

#### To Text:

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The port shall supply VBUS current at the level it advertises on  $R_p$ .

**Note:** When the port is in a **USB PD** contract, the supply level of VBUS current is no longer associated with  **$R_p$** , and the behavior of  **$R_p$**  may differ as defined in the **USB PD** specification.