# **USB Type-C ENGINEERING CHANGE NOTICE**

Applied to: USB Type-C Specification Release 1.1, April 3,

**Title: CC Max DC Resistance** 

2015
Brief description of the functional changes:
Define the max CC wire DC resistance to be 15 ohm
Benefits as a result of the changes:
Support the new function of Power Fast Role Swap with the new Power Fast Role Swap transmit driver resistance parameters defined in USB Power Delivery Spec Rev 3.0 Table 5-18
An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
Likely no impact. The proposed value is likely the practical upper bound for a cable with the max latency of 26 ns among the known wire metal materials.
An analysis of the hardware implications:
None
An analysis of the software implications:
None
An analysis of the compliance testing implications:
The CC wire DC resistance measurement shall be added into the Type C Compliance tool.

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### **Actual Change**

#### (a). From, Section 3.7.3.3, Page 82

The CC wire shall have a characteristic impedance of 32  $\Omega$  to 93  $\Omega$ .

#### (a). To, Section 3.7.3.3, Page 82

The CC wire shall have a characteristic impedance of 32  $\Omega$  to 93  $\Omega$ . The CC wire DC resistance of the cable assembly shall not exceed 15  $\Omega$ .