

# USB Type-C ENGINEERING CHANGE NOTICE

**Title: External ground springs**

**Applied to: USB Type-C Specification Release 1.0, August 11, 2014**

<b>Brief description of the functional changes:</b>
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The text in reference to external grounding springs requires a minimum of six points instead of four points as illustrated in the figures. The text is incorrect and should be changed to four locations as defined by Figure 3-2 and as illustrated in the reference design in section 3.2.2.4.
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<b>Benefits as a result of the changes:</b>
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Editorial change to update text to be in conformance with actual requirements and figures.
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<b>An assessment of the impact to the existing revision and systems that currently conform to the USB specification:</b>
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Editorial only. No impact.
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<b>An analysis of the hardware implications:</b>
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Editorial only. No impact.
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<b>An analysis of the software implications:</b>
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N/A
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<b>An analysis of the compliance testing implications:</b>
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N/A
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# USB Type-C ENGINEERING CHANGE NOTICE

## Actual Change

### (a). Section 3.2.1, Page 26

#### From Text:

6. The USB Type-C receptacle shall provide an EMC ground return path through one of the following options:
- Fingers in the receptacle outer shell
  - Internal EMC pads
  - Both external fingers in the shell and internal EMC pads

If fingers in the receptacle outer shell are used, then the mated plug for receptacle springs shall make contact within the zones defined in Figure 3-2. A minimum of six separate contact points are required. Additional fingers and points of contact are allowed. See Section 3.2.2.4 for a reference design of the shell fingers.

If internal EMC pads are present in the receptacle, then they shall comply with the requirements defined in Figure 3-1. The shielding pads shall be connected to the receptacle shell. If no receptacle shell is present, then the receptacle shall provide a means to connect the shielding pad to ground. See Section 3.2.2.3 for a reference design of the shielding pad and ground connection.

#### To Text:

6. The USB Type-C receptacle shall provide an EMC ground return path through one of the following options:
- Fingers in the receptacle outer shell
  - Internal EMC pads
  - Both external fingers in the shell and internal EMC pads

If fingers in the receptacle outer shell are used, then the ~~mated plug for~~ receptacle springs shall ~~make~~ contact ~~the mated plug~~ within the zones defined in Figure 3-2. A minimum of ~~six~~ four separate contact points are required. Additional fingers and points of contact are allowed. See Section 3.2.2.4 for a reference design of the ~~receptacle outer~~ shell fingers.

If internal EMC pads are present in the receptacle, then they shall comply with the requirements defined in Figure 3-1. The shielding pads shall be connected to the receptacle shell. If no receptacle shell is present, then the receptacle shall provide a means to connect the shielding pad to ground. See Section 3.2.2.3 for a reference design of the shielding pad and ground connection.