USB Type-C ENGINEERING CHANGE NOTICE

Title: Plug Dimensions Update
Applied to: USB Type-C Spec R2.2 – October 2022

Brief description of the functional changes proposed:
Plug overmold width and height for USB Type C cable assemblies. Recommended minimum port spacing is increased to match overmold increase. Cable mating considerations are clarified to include shape of overmold.

Benefits as a result of the proposed changes:
Maintains USB cable lengths when dielectric materials are switched to fluoropolymer alternatives to comply with EU PFAS restriction. Reduces confusion about overmold profile control.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
The requirements are relaxed. Current cables that conform to the USB Spec. will meet the new requirement. Cables designed to the limit of new requirements may have physical incompatibility with existing systems designed at the limit of current requirements.

An analysis of the hardware implications:
This change will allow current cable lengths to be maintained for USB4 cables. Systems and accessories with recesses at current overmold sizes or closely spaced receptacles would need to be redesigned to accommodate new cables with a larger overmold.

An analysis of the software implications:
None

An analysis of the compliance testing implications:
USB4 test fixtures may be affected if spacing between plugs is too tight to support new wider overmold. Compliance test B-5-1 critical dimension inspection values in Appendix B will need to be updated.

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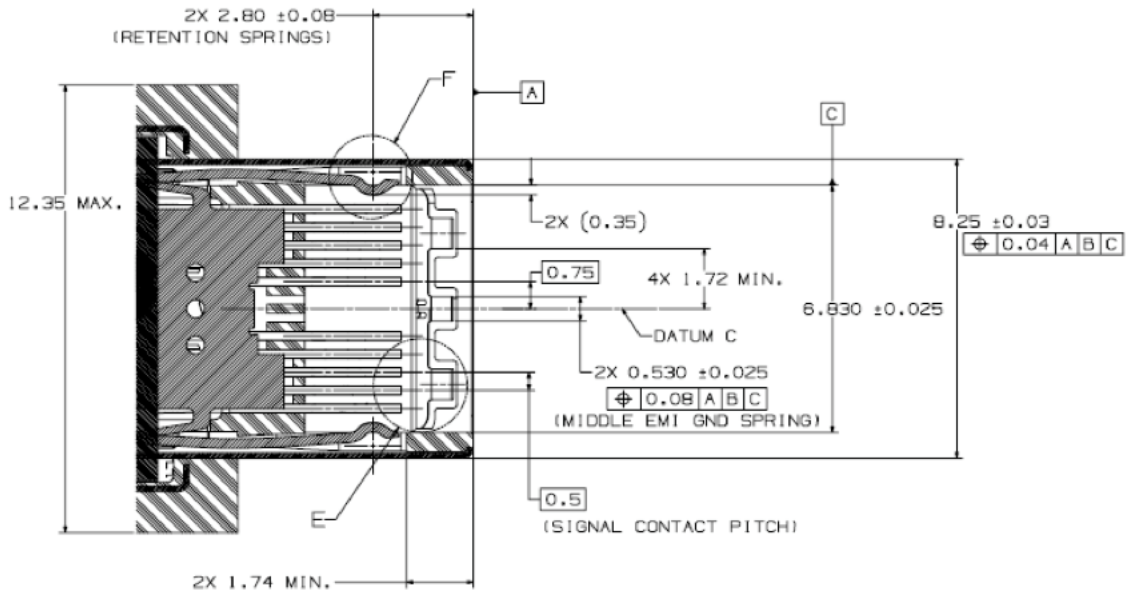
Actual Change Requested

(a). For Figure 3-3 Section A-A in Section 3.2.1

From Text:



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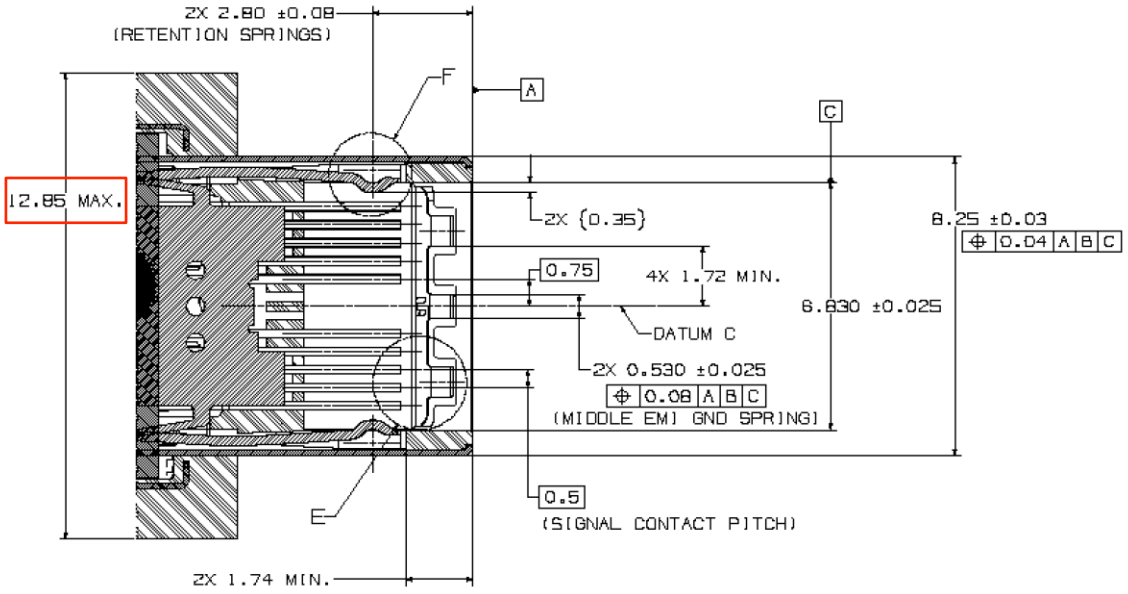

(b). For Figure 3-3 Section C-C in Section 3.2.1

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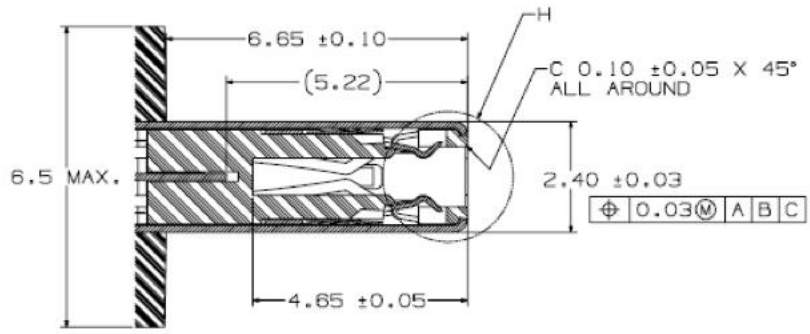

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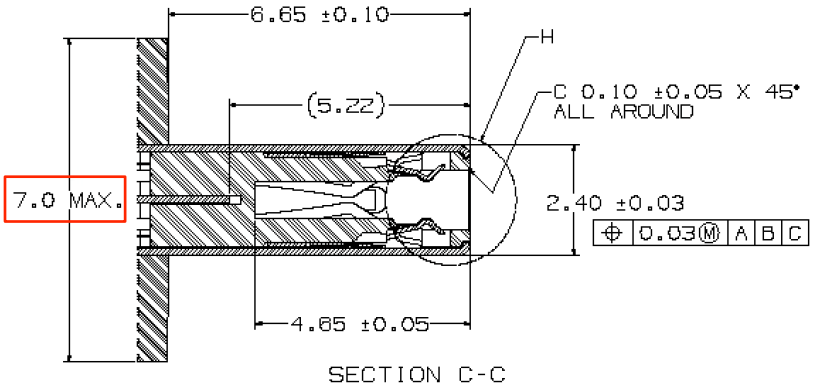

(c). For Figure 3-11 Section A-A in Section 3.2.1

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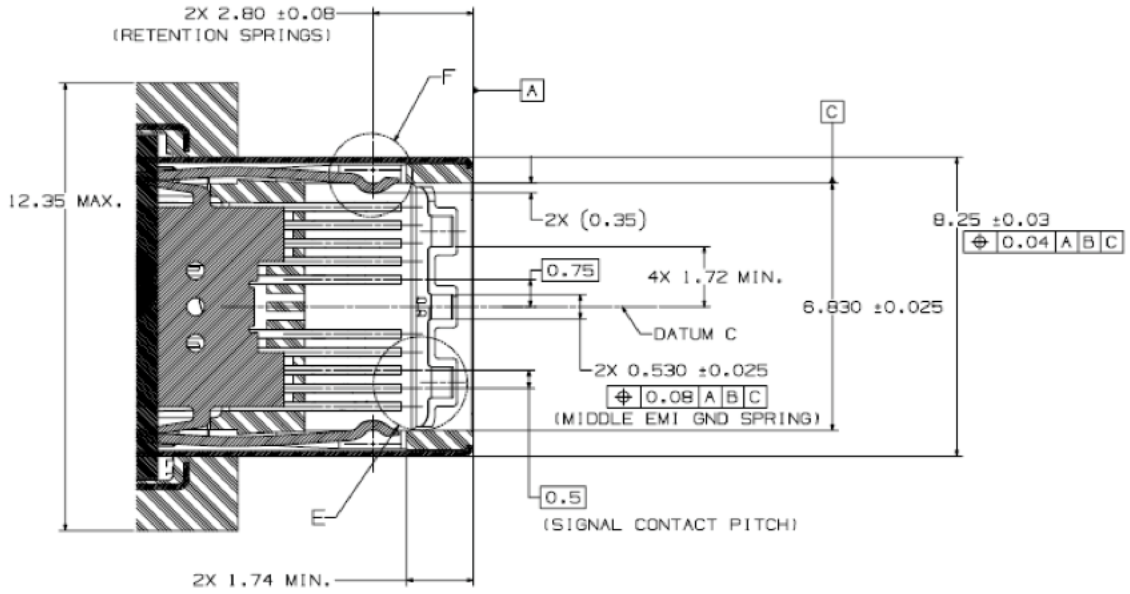

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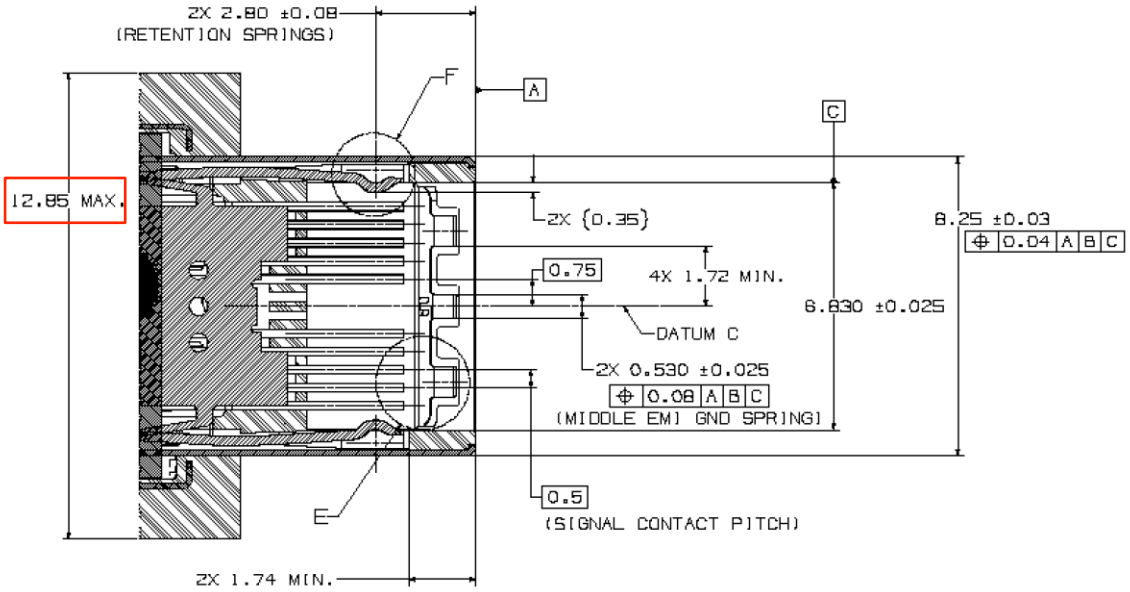

(d). For Figure 3-11 Section C-C in Section 3.2.1

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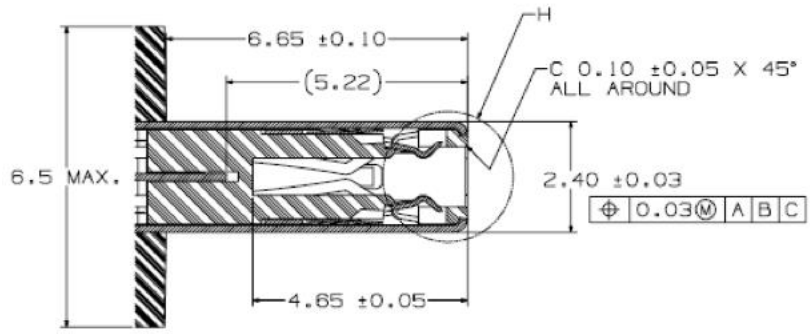

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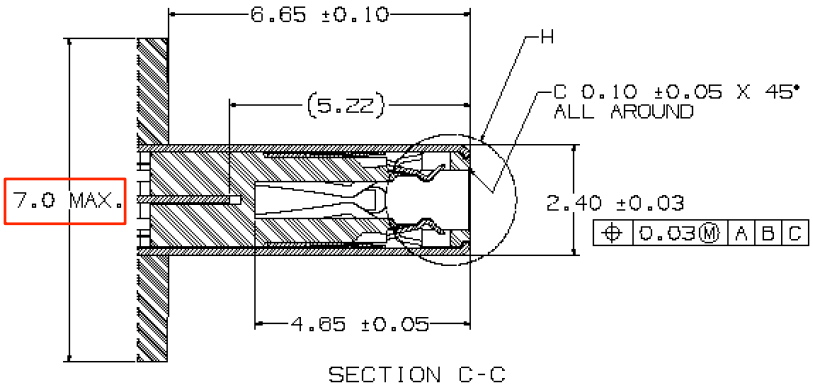

(e). For Figure 3-79 in Section 3.10.2

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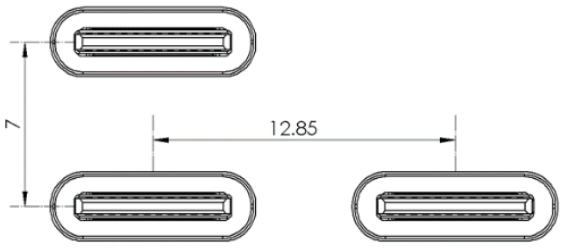

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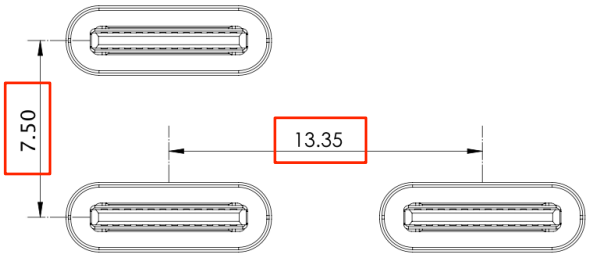

(f). Section 3.10.3

From Text:

3.10.3 Cable Mating Considerations (Informative)

The receptacle mounting location, exterior product surfaces, cable overmold, and plug mating length need to be considered to ensure the USB Type-C plug is allowed to fully engage the USB Type-C receptacle. Figure 3-80 illustrates the recommended minimum plug overmold clearance to allow the cable plug to fully seat in the product receptacle.

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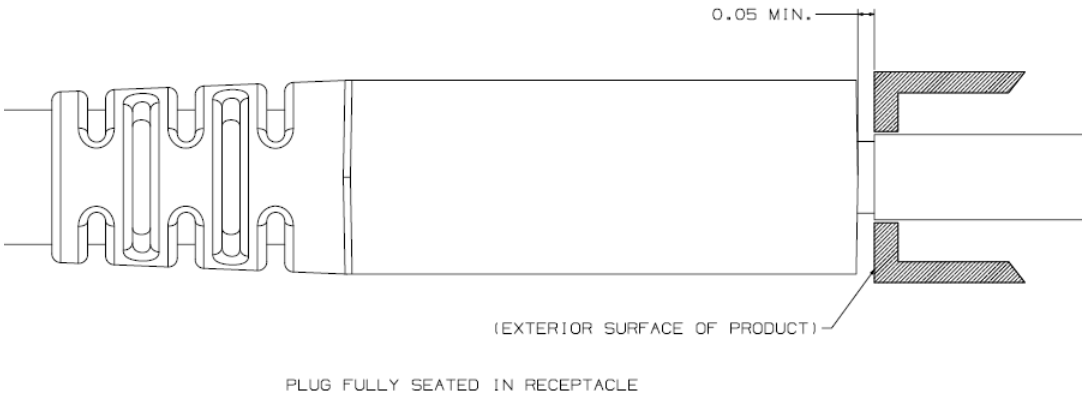
3.10.3 Cable Mating Considerations (Informative)

The receptacle mounting location, exterior product surfaces, cable overmold, and plug mating length need to be considered to ensure the USB Type-C plug is allowed to fully engage the USB Type-C receptacle. Figure 3-80 illustrates the recommended minimum plug overmold clearance to avoid interference between the plug overmold and enclosure opening, allowing the cable plug to fully seat in the product receptacle.

(g). Section 3.10.3, Figure 3-80

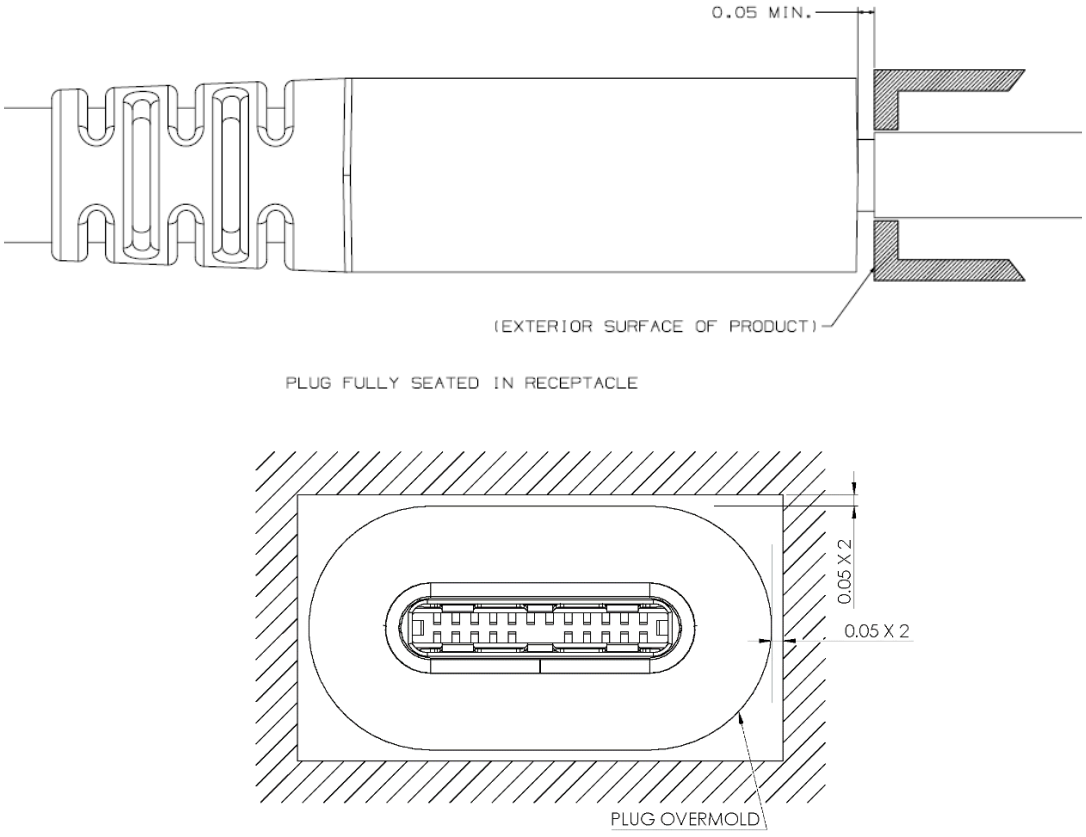
From Figure 3-80:

. Figure Error! No text of specified style in document.**-80 Recommended Minimum Plug Overmold Clearance**



To Figure 3-80:

Figure Error! No text of specified style in document.**-80 Recommended Minimum Plug Overmold Clearance**



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