

USB 'A' Plug Form Factor

Revision 0.9

A Form Factor Guideline for Embedded USB Device Applications

DEFINITION

For the purposes of this document, a USB 'A' Plug shall be defined as any physical topology capable of connecting a "downstream device" to the "upstream port" of another device using a single USB 'A' series connection.

FEATURES

- Is a mechanical form factor specification ONLY
 - No device electronics are defined
- Attaches to any USB 'A', compliant, host receptacle in production today
- Fully conforming with USB 2.0 'A' side connector electrical and mechanical specifications with the following additional constraints,
 - Has a defined total length of 1.25 inches.
 - Body length is fully 12mm in width by 4.5mm in height with no deviations
 - Length, width and height measurements have a tolerance of 0.10mm for the entire length of the device
- Designed for manufacturability; extremely low cost by design

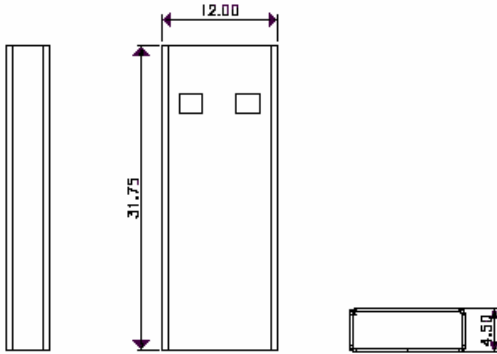
DESIGN GOALS

1. To define an industry standard, rugged, low-cost, small USB device form factor that enables USB device vendors to penetrate the ever growing Consumer Electronic (CE) and Embedded Host market in addition to the computing market and thereby growing the overall USB device market.
2. To require no adapter technology when attached to a standard USB PC Host port.
3. To allow a USB "A" Form Factor compliant device to be certified as a USB 'A' Series Connector.
 - For USB "A" Form Factor compliant devices, USB Connector Certification is accomplished in passing the USB 2.0 Specification, USB-DWG Connector & Cable Class Document 1.1, Groups 1-5 and 7. While Groups 6 and 8 are deemed out of scope for this form factor.
 - USB Device Certification is device implementation specific and therefore, out of this document's scope.
4. To be competitive with other existing small form factor device mechanical designs in cost, simplicity, manufacturability, usability and ruggedness.
5. Through proper device mechanical design, to encourage host-side sockets that are equally simple, low-cost, highly usable and rugged.

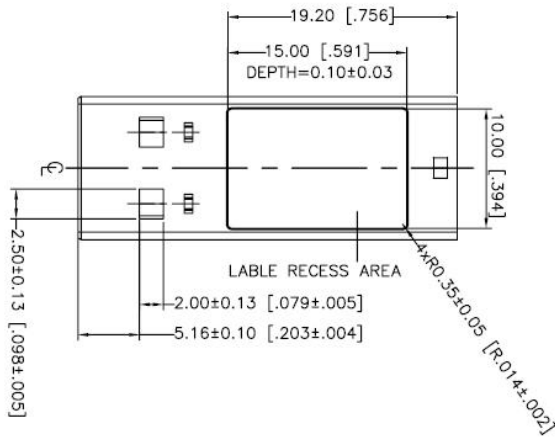
DESIGN DESCRIPTION

The USB 'A' Plug form factor is fully compliant with the USB 2.0 specification, 'A' Series Plug Interface. To extend the Plug Interface description into a fully defined device form factor, the following constraints apply.

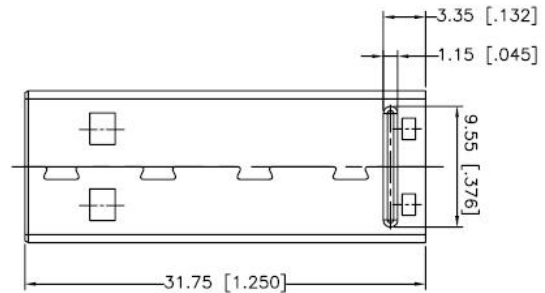
Main Body Dimensions:



Top View with Label Recess:



Bottom View with Finger Grip:



Dimension	Millimeters
Length	31.75 +/- 0.10
Width	12.00 +/- 0.10
Height	4.50 +/- 0.10
<ul style="list-style-type: none"> Only the USB 2.0, 'A' Series Plug interface materials are defined, Chapter 6 applies. The 'Body' of the device may utilize whatever material makes sense to the implementation 	

RELATED DOCUMENTS

- Universal Serial Bus Specification, revision 2.0
- USB-DWG Connector & Cable Class Document 1.1

Appendix A

USB Series "A" Plug Interface Drawing

For further details on the USB "A" Series plug, please refer to Chapter 6 of the USB 2.0 Specification. The USB 2.0 Specification is available for download at <http://www.usb.org>.

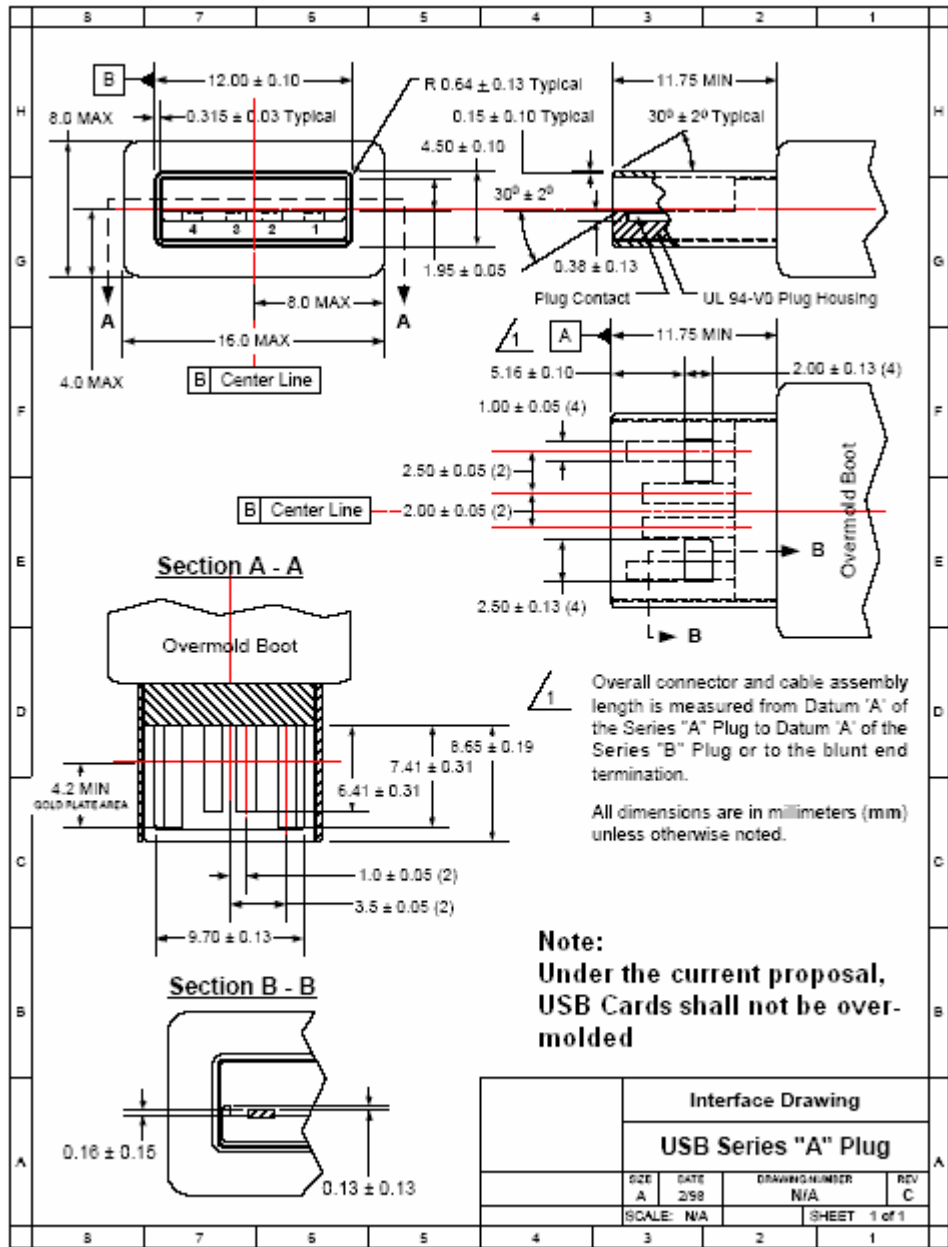


Figure 6-9. USB Series "A" Plug Interface Drawing

Revision History:

Rev. 0.8:

- Added Label Recess and Finger Grip based on CCWG recommendations.

Rev. 0.8a:

- Removed all references to various memory card specifications.
- Changed title and footers from "USB Card" to "**USB 'A' Plug Form Factor; Revision 0.8a**"
- Added CCWG Group Requirements to 'Design Goals'
- Moved 'Revision History' to end of document
- Added USB 'A' Plug definition
- Added Cable and Connector document to list of Related Documents

Rev. 0.8b:

- Removed "USB Card" reference from DESIGN DESCRIPTION paragraph.

Rev. 0.9:

- Revision Number changed from 0.8b to 0.9 only.