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TECHNIQUES TO FACILITATE USB ELECTROMECHANICAL BONDING AND MECHANICAL HOLDING

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ABSTRACT

Proposed herein is a spring-tab mechanism that can be provided for Universal Serial Bus (USB) connectors that can provide an improved electrical bond between USB connectors/housings for previously designed products that are already in-use/deployed in commercial environments. The electrical bond that can be created via the spring-tab connectors proposed herein may create a stronger hold than standard USB connectors that are typically used in products, which can help to prevent accidental and/or undesired removal of a USB device when it is in-use.

DETAILED DESCRIPTION

For devices that utilize USB connections, it is important that electrical connection is maintained between mating USB connectors.

Presented herein is a mechanism that can be provided either male or female USB connectors through which an electrical bond can be created between the USB connectors as presented herein and previously designed product housings that are already used/deployed in commercial environments.

In particular, a USB housing is proposed herein that can include mechanical spring-tab elements provided for the housing (referred to herein as a 'spring-tab USB housing') in which the spring-tab housing can be utilized with previously designed/deployed products having USB housings such that no modification of the existing products/USB housings may be needed in order to realize the improved electrical bonding characteristics that are provided by the spring-tab USB housings proposed herein.

Figure 1A, below, illustrates an example of a male spring-tab USB housing that can be provided in accordance with this proposal and Figure 1B illustrates an example of a

female spring-tab USB housing that can be provided in accordance with this proposal in which two spring-tabs can be provided on the top of each USB housing.

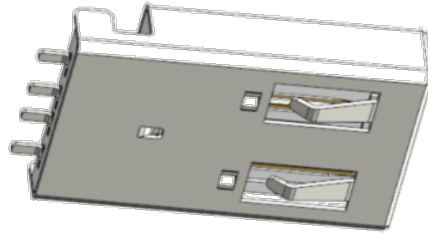


Figure 1A: Male Spring-Tab USB Housing

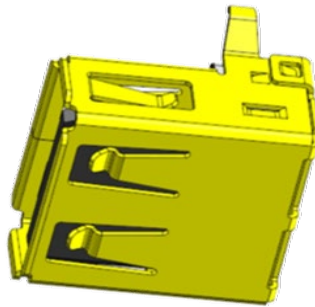


Figure 1B: Female Spring-Tab USB Housing

Figures 2A and 2B, below, illustrates an example USB assembly in which the male and female spring-tab USB housings can be coupled together.

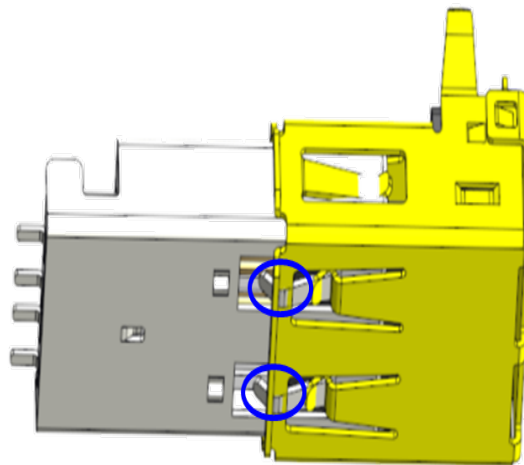


Figure 2A: Male/Female Spring-Tab USB Coupling

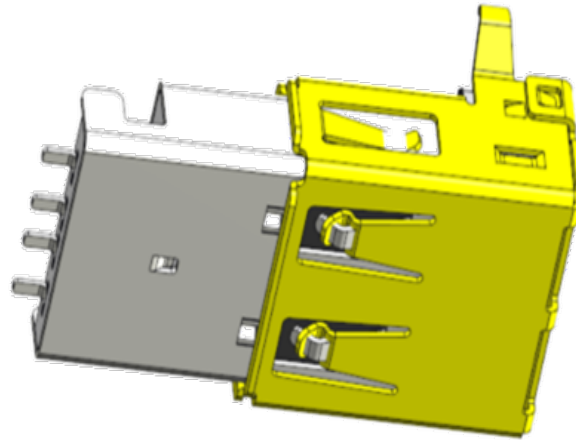


Figure 2B: USB Assembly with Male/Female Spring-Tab Housings Coupled Together

Although Figures 1A–1B and 2A–2B illustrate examples involving both male and female spring-tab USB housings, the spring-tab housings as provided herein can be utilized with non-spring-tab USB housings/connectors.

Accordingly, the spring-tab USB housings may provide for the ability to create an electrically conductive bond between a USB connector and the metallic housing of a device and may provide for the ability to increase the mechanical hold of connected devices.

The electrical bond that can be created in accordance with techniques proposed herein may create a stronger hold than standard USB connectors that are typically used in products, which can help to prevent accidental and/or undesired removal of a USB device when it is in-use.