## IPC-2223D

# Sectional Design Standard for Flexible/Rigid-Flexible Printed Boards

Developed by the Flexible Circuits Design Subcommittee (D-11) of the Flexible Circuits Committee (D-10) of IPC

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Users of this publication are encouraged to participate in the development of future revisions.

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# Sectional Design Standard for Flexible/ Rigid-Flexible Printed Boards

## 1 SCOPE

This standard establishes the specific requirements for the design of flexible and rigid-flexible printed board applications and its forms of component mounting and interconnecting structures. The flexible materials used in the structures are comprised of insulating films, reinforced and/or non-reinforced, dielectric in combination with metallic materials. These interconnecting boards may contain single, double, multilayer, or multiple conductive layers and can be comprised wholly of flex or a combination of both flex and rigid.

**1.1 Purpose** The requirements contained herein are intended to establish specific design details that **shall** be used in conjunction with IPC-2221 and may also be used in conjunction with IPC-2222 for the rigid sections of rigid-flex circuits.

**1.2 Classification of Products** Classification type and use of products **shall** be in accordance with IPC-2221 and as stated in 1.2.1 and 1.2.2.

**1.2.1 Printed Board Type** This standard provides design information for different flexible and rigid-flex printed board types. Printed board types are classified as:

**Type 1** Single-sided flexible printed board containing one conductive layer, with or without stiffener, and constructed using an adhesive or adhesiveless substrate (see Figure 1-1 and Figure 1-2).

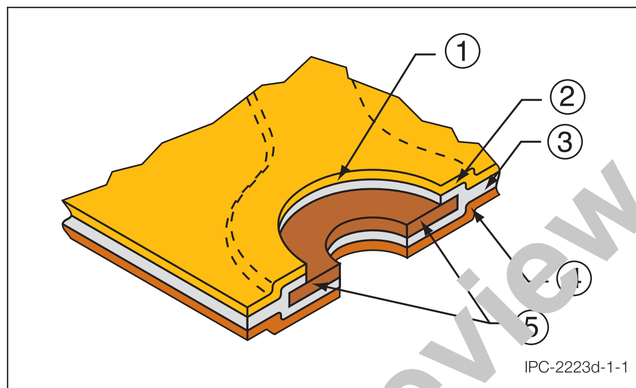


**Figure 1-1 Type 1 Single-Sided Flexible Printed Board – Adhesive Substrate Construction**
**Note 1:** Access Hole.
**Note 2:** Coverlay.
**Note 3:** Adhesive.
**Note 4:** Substrate.
**Note 5:** Copper Pad.

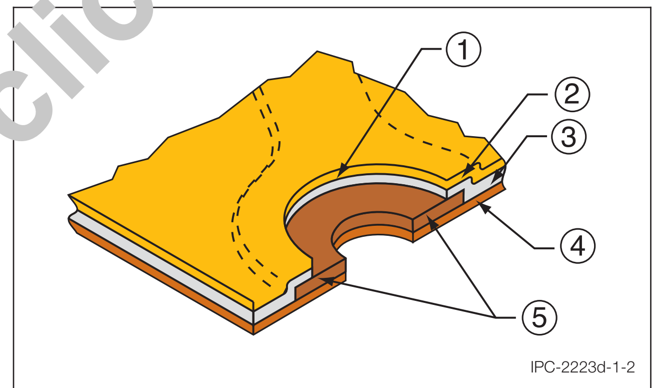


**Figure 1-2 Type 1 Single-Sided Flexible Printed Board - Adhesiveless Substrate Construction**
**Note 1:** Access Hole.
**Note 2:** Coverlay.
**Note 3:** Adhesive.
**Note 4:** Adhesiveless Substrate.
**Note 5:** Copper Pad.

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