



IPC-4202B

Flexible Base Dielectrics for Use in Flexible Printed Boards

Developed by the Flexible Circuits Base Materials Subcommittee (D-13)
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.

Contact:

IPC

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Flexible Base Dielectrics for Use in Flexible Printed Boards

1 SCOPE

This standard establishes the classification system, the qualification and quality conformance requirements for flexible base dielectric materials to be used for the fabrication of flexible printed boards. This specification supersedes IPC-4202 which, in turn superseded IPC-FC-231C and the requirements herein meet or exceed the requirements for Class 3 in this superseded document. Note that conformance to Class 3 met or exceeded conformance to Classes 1 and 2. IPC-4202 no longer utilizes the 3-class system.

1.1 Classification System The system described in 1.1.1 through 1.1.2.4 identifies flexible base dielectrics.

1.1.1 Nonspecific Designation A nonspecific designation is intended for use by *designers* on master drawings to designate their material choice. At the end of this standard is a series of material specification sheets identified by specification sheet numbers. Each sheet outlines engineering and performance data for a flexible base dielectric, indicating base material type and method of reinforcement.

Example of nonspecific designation: *IPC-4202/1*, Where “1” refers to the specification sheet detailing unsupported polyimide flexible base dielectrics.

If further material specification details (such as dielectric thickness) are required, they should be highlighted in cross sectional views or notes on the master drawing.

1.1.2 Specific Designation The specific designation should be in the form shown in the following example, and is intended for use on material purchase orders by *fabricators* (see 6.1). The specific designation should not be used by designers on master drawings to indicate their material selection. Master drawings **shall** indicate the material design by designers on master drawings to indicate their material selection, as the designation is lengthy and requires fabricator level knowledge in making the detailed selections.

Example of specific designation:

IPC-4202/1 – E1E2

Where:

IPC-4202/1 – Nonspecific Designation (see 1.1.1), for unsupported polyimide flexible base dielectrics.

E – Base Dielectric Material Type Designation (see 1.1.2.1), specifying polyimide.

1 – Reinforcement Method Designation (see 1.1.2.2), specifying nonreinforced.

E – Reinforcement Type Designation (see 1.1.2.3), specifying nonreinforced film.

2 – Base Dielectric Material Thickness Designation (see 1.1.2.4), specifying 50 μm [1970 μin] thickness.