

One-Time Deformable Thermoplastic Devices Based on Flexible Circuit Board Technology

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"This contribution describes the current state of developments for a technology to fabricate deformable electronics and sensor circuits, with the intention of achieving the reliable fabrication of 2.5D free-form rigid smart objects. This technology offers a weight and space-saving alternative to 3D molded interconnect devices (MID) that is based on existing flexible circuit technology and makes use of component assembly on a flat surface. After fabrication in a flat state, a thermoforming step gives the device its final shape. The feasibility to fabricate simple circuits embedded in various thermoplastic materials using common off-the-shelf circuit components is demonstrated."

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