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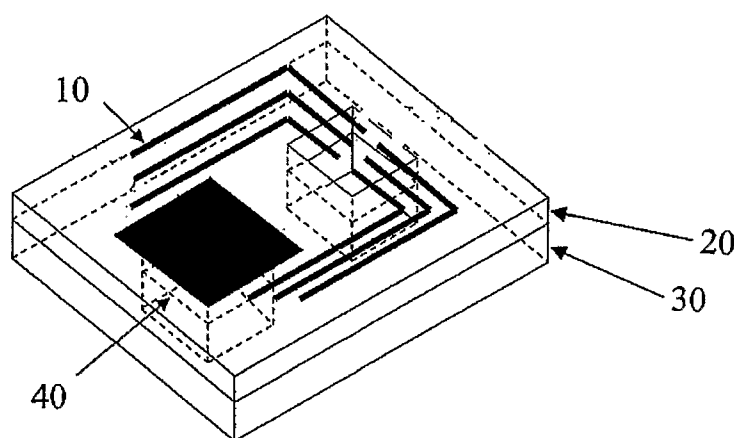
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(54) Title: POLYESTER FLEX CIRCUIT CONSTRUCTIONS AND FABRICATION METHODS FOR INK-RESISTANT FLEX CIRCUITS USED IN INK JET PRINTING



(57) Abstract: Flex circuits for use in ink jet printers. In particular, flex circuits for use in ink jet printers that include a polyester material layer supporting a plurality of metal conductors, with the polyester material being a material suitable for use in an ink environment with lower ink permeability and low moisture and ink absorption than polyimide (PI) material. The polyester layer having low ink permeability and moisture and ink absorption to prevent: catastrophic "ink shorting of conductors" failures; adhesion failures; corrosion failures by direct ink contact with the conductors; and material degradation failures that may result if any of the materials are degraded by or react with the ink. Preferably, the polyester

material is polyethylene naphthalate (PEN). The polyester base layer is suitable for use in many major flex circuit construction types, including: both adhesive-less and adhesive-based circuits; and one-metal and two-metal layer circuits. Also, a method of producing an improved splice in a continuous Tab Automated Bonding (TAB) style strip of circuits, using a suitable polymer material layer, that is stronger per area than other splices.