CLAIMS

1. A microbattery, comprising:

a microbattery structure formed in a stack, the stack comprising multiple surfaces fashioned using multiple layers, the multiple layers including a substrate layer and a cover plate layer, a face side of the multiple surfaces being a surface of the substrate layer, a second side of the multiple surfaces being a surface of the cover plate layer, the face and second sides on opposite sides of the stack, and side surfaces of the multiple surfaces being opposite edges of the stack spanning between the surfaces of the face side and second side;

a first terminal on the face side and coupled to an anode of a battery in the microbattery structure;

a second terminal on the face side and coupled to a cathode of the battery in the microbattery structure; and

a metal-containing film covering the side surfaces, the second side, and a portion of the face side of the stack but not covering the first or second terminals,

wherein:

the stack comprises layers of the substrate layer, a polymer layer, and the cover plate layer;

the stack has a length between the face and second sides and the layers are parallel along the length;

the metal-containing film comprises a metal;

a solder film covers surfaces of the metal-containing film;

the substrate layer on the face side is at least partly covered with adhesive, and the part covered with adhesive on the face side comprises the first and second terminals coupled to through-vias that extend through the substrate layer;

a polymer film covers surfaces of the solder film and a surface of the adhesive opposite a surface of the adhesive that covers the substrate layer; and

openings are formed in the polymer film to uncover at least a portion of corresponding terminals.

2. The microbattery of claim 1, wherein the openings are filled with a conductor.

3. The microbattery of claim 1, wherein a thickness of the microbattery ranges in thickness from 0.01 mm to 1 mm.

4. The microbattery of claim 1, wherein the metal-containing film covering the portion of the face side, but not the first or second terminals, covers parts of the face side adjacent the edges.