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(54) **ELECTRONIC DEVICE CARRIER
STRUCTURES INCLUDING POLYMER
LAYERS AS BARRIERS TO SOLID STATE
SOLDER DIFFUSION AND METHODS OF
FORMING THE SAME**

(71) Applicants: **Georgia Tech Research Corporation**,
Atlanta, GA (US); **Intel Corporation**,
Santa Clara, CA (US)

(72) Inventors: **Omkar Gupte**, Atlanta, GA (US);
Vanessa Smet, Atlanta, GA (US);
Gregorio R. Murtagian, Phoenix, AZ
(US)

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(57) ABSTRACT

An electronic device carrier structure can include a substrate including a plurality of electrical contacts spaced apart on the substrate, a plurality of electrically conductive balls, each of the electrically conductive balls being on a respective one of the plurality of electrical contacts, solder attaching each of the electrically conductive balls to respective ones of the electrical contacts to form an attachment boundary where the solder ends on a surface of each of the plurality of electrically conductive balls, and a polymer layer extending on the substrate onto the plurality of electrically conductive balls to form a surface of the polymer layer at a contact point on the plurality of electrically conductive balls that is above the attachment boundary and below an apex of each of the plurality of electrically conductive balls.

