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Setlak

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(54) **ELECTRONIC DEVICE INCLUDING FINGER BIOMETRIC SENSOR CARRIED BY A TOUCH DISPLAY AND RELATED METHODS**

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G06F 3/044	(2006.01)
G06K 9/00	(2006.01)

(52) **U.S. Cl.**

CPC ***G06F 3/0416*** (2013.01); ***G06F 3/044*** (2013.01); ***G06F 3/0412*** (2013.01); ***G06K 9/00033*** (2013.01)

(58) **Field of Classification Search**

CPC G06F 3/0416; G06F 3/0412; G06F 3/044; G06K 9/00033

See application file for complete search history.

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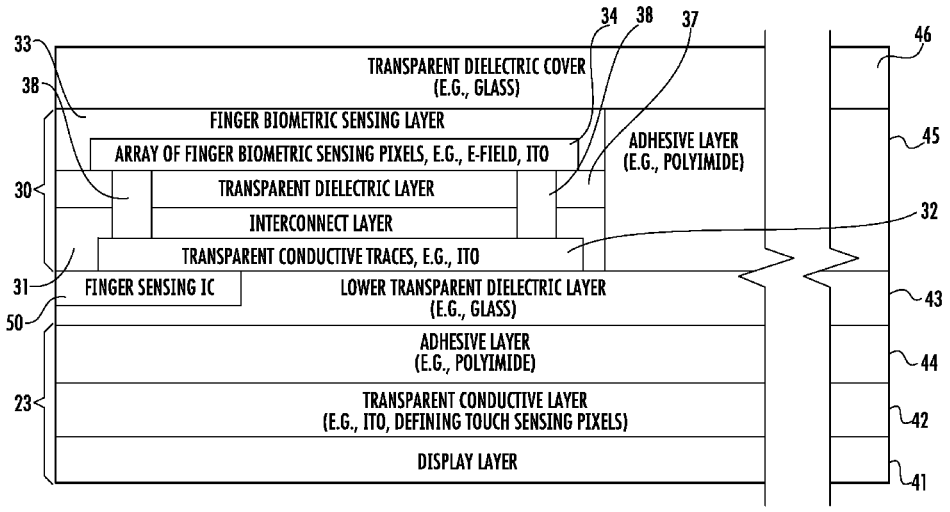
(57) **ABSTRACT**

An electronic device may include a touch display that includes at least one display layer, and at least one transparent conductive layer thereon defining touch sensing pixels. The electronic device may also include a finger biometric sensor carried by the touch display and that may include an interconnect layer that includes transparent conductive traces, and a finger biometric sensing layer adjacent the interconnect layer and that includes an array of transparent conductive finger biometric sensing pixels capacitively coupled to the at least one transparent conductive layer of the touch display. The finger biometric sensor may also include a transparent dielectric layer between the interconnect layer and the finger biometric sensing layer, and transparent conductive vias extending through the transparent dielectric layer and coupling the array of transparent conductive finger biometric sensing pixels to respective ones of the transparent conductive traces.

38 Claims, 6 Drawing Sheets