

U.S. Patent No. 8,604,471 (“’471 Patent”)

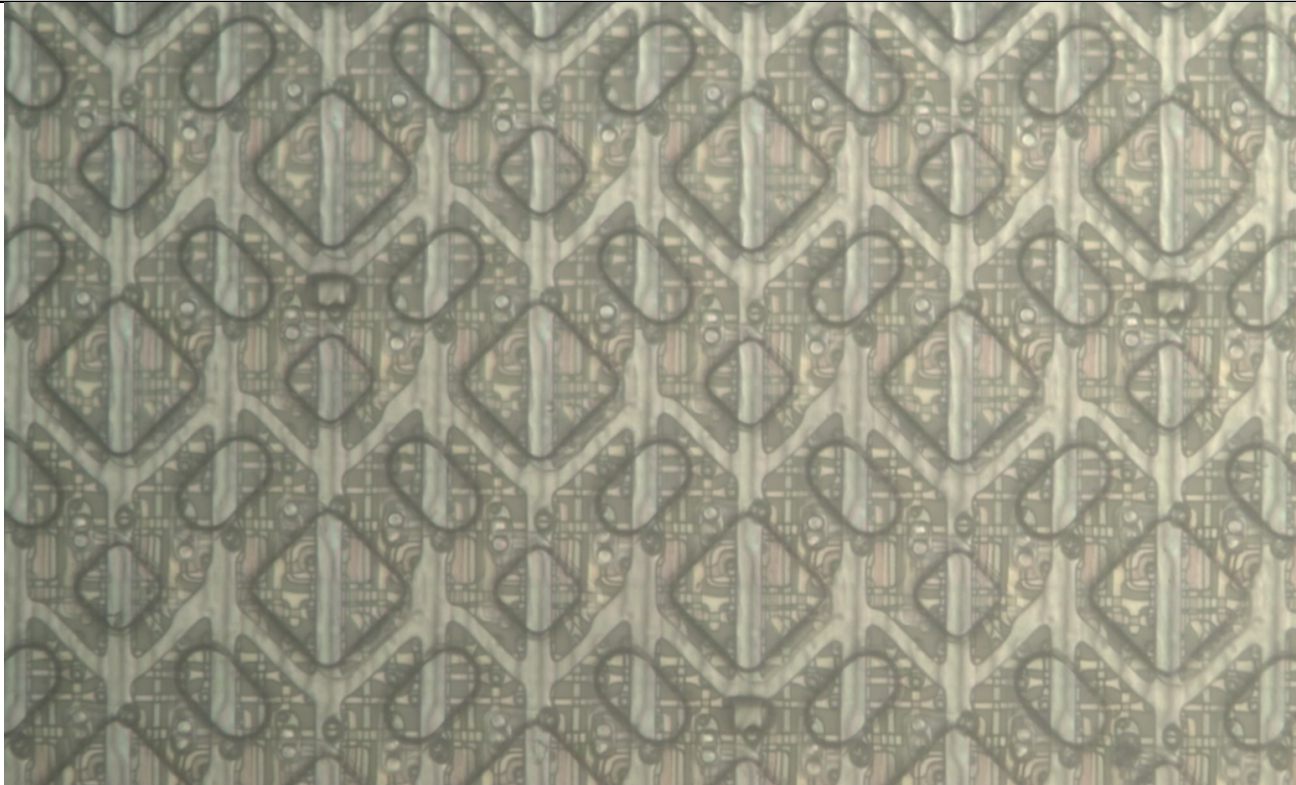
Accused Products

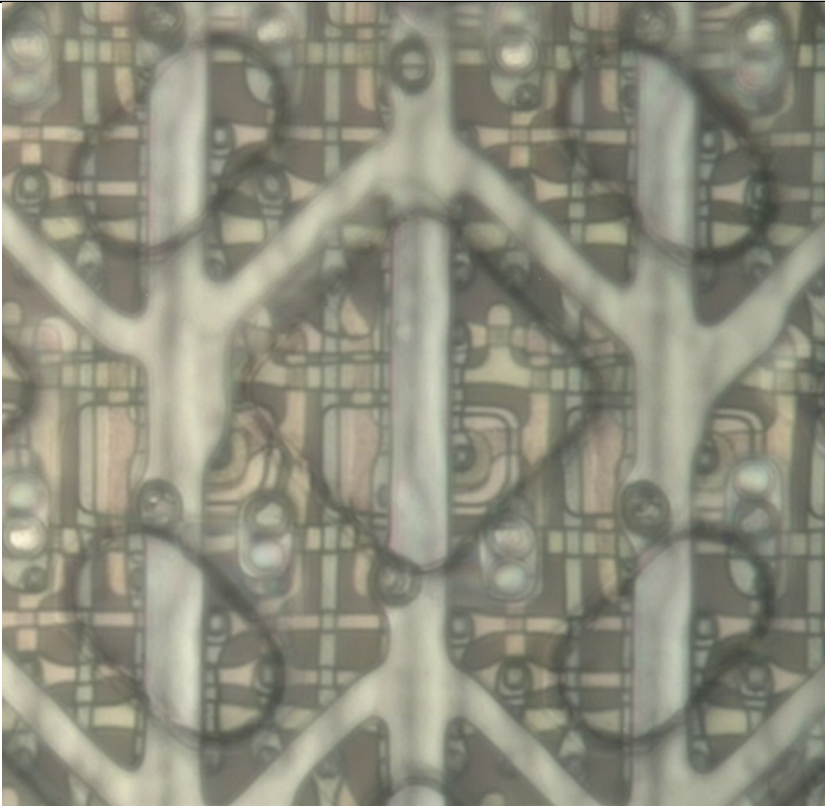
BOE OLED panels including the claimed semiconductor structure, including without limitation the BOE OLED panel supplied to Apple and included in the iPhone 14, and all versions and variations thereof since the issuance of the asserted patent.

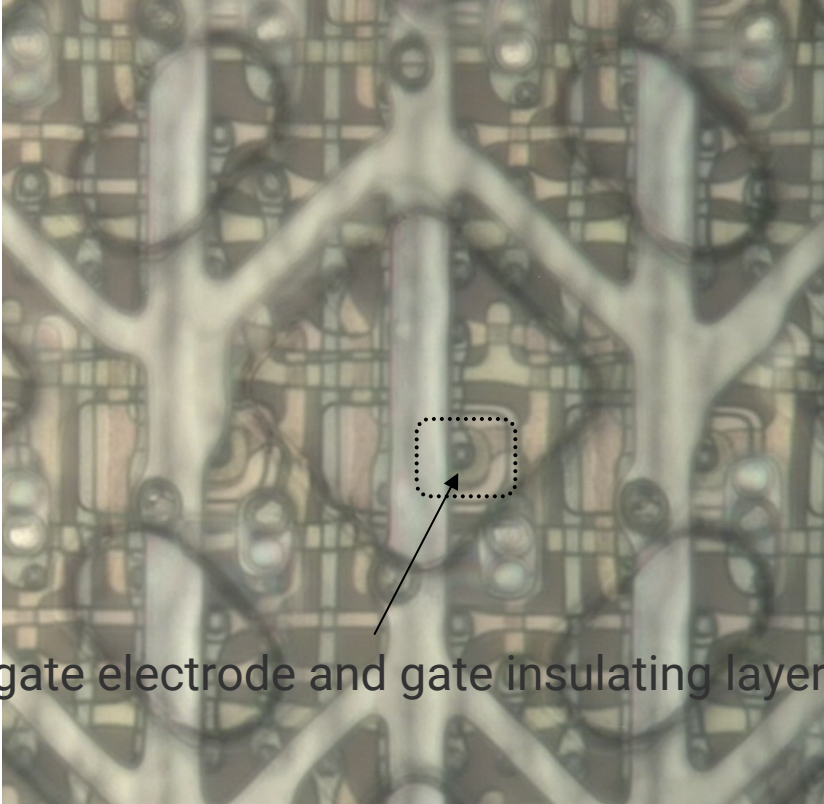
Each Accused Product infringes the claims in substantially the same way, and the evidence shown in this chart is similarly applicable to each Accused Product. Each claim limitation is literally infringed by each Accused Product. However, to the extent any claim limitation is not met literally, it is nonetheless met under the doctrine of equivalents because the differences between the claim limitation and each Accused Product would be insubstantial, and each Accused Product performs substantially the same function, in substantially the same way, to achieve the same result as the claimed invention. Notably, Defendant has not yet articulated which, if any, particular claim limitations it believes are not met by the Accused Products.

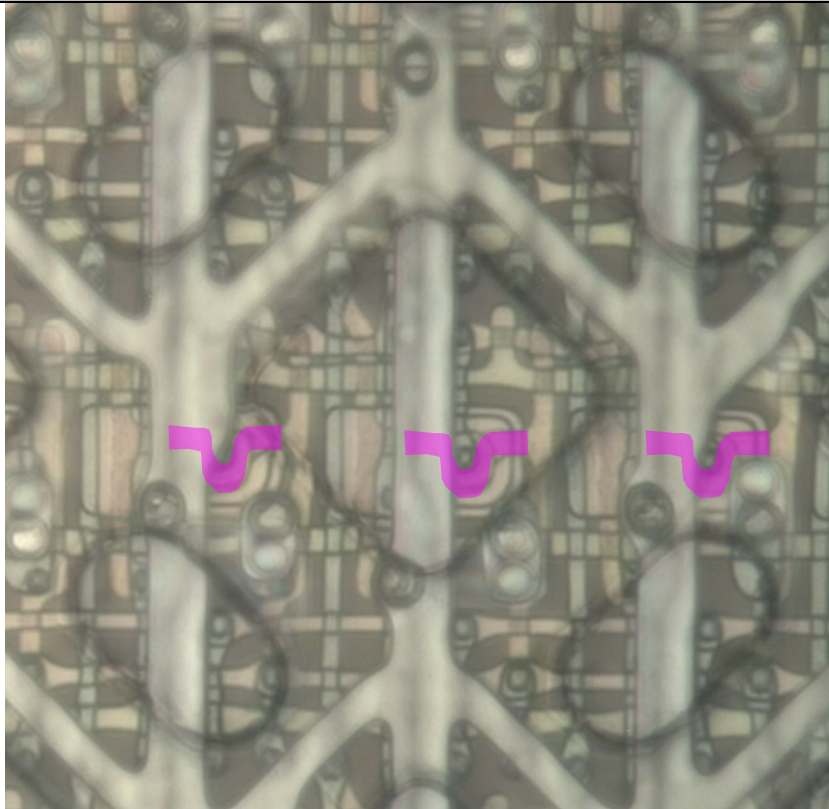
Claim 1

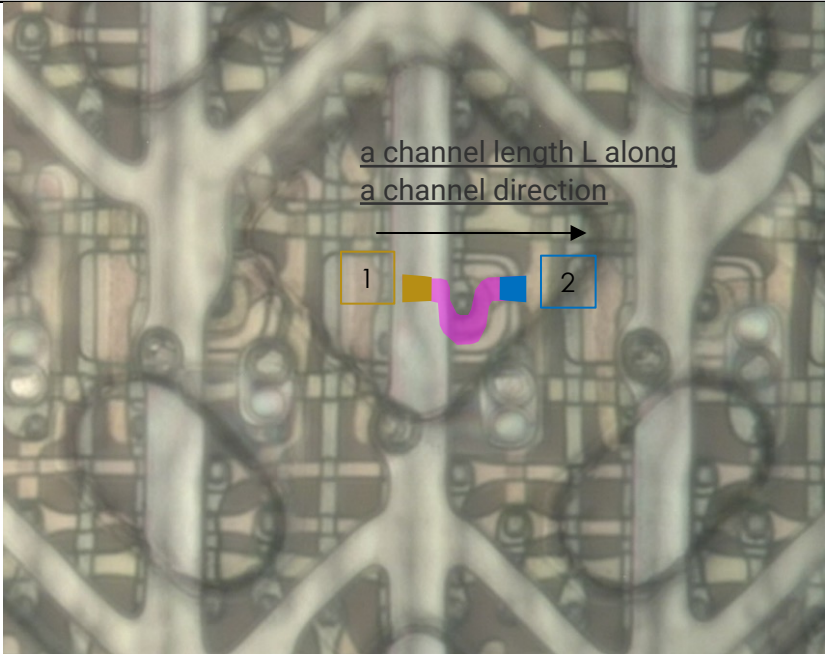
Claim 1	Accused Products
[1pre] A semiconductor structure, disposed on a substrate, and comprising:	To the extent the preamble is limiting, each Accused Product comprises a semiconductor structure, disposed on a substrate. <i>See individual limitations below.</i> <i>See also, e.g.:</i>  Publicity photo of iPhone 14 containing BOE OLED panel.

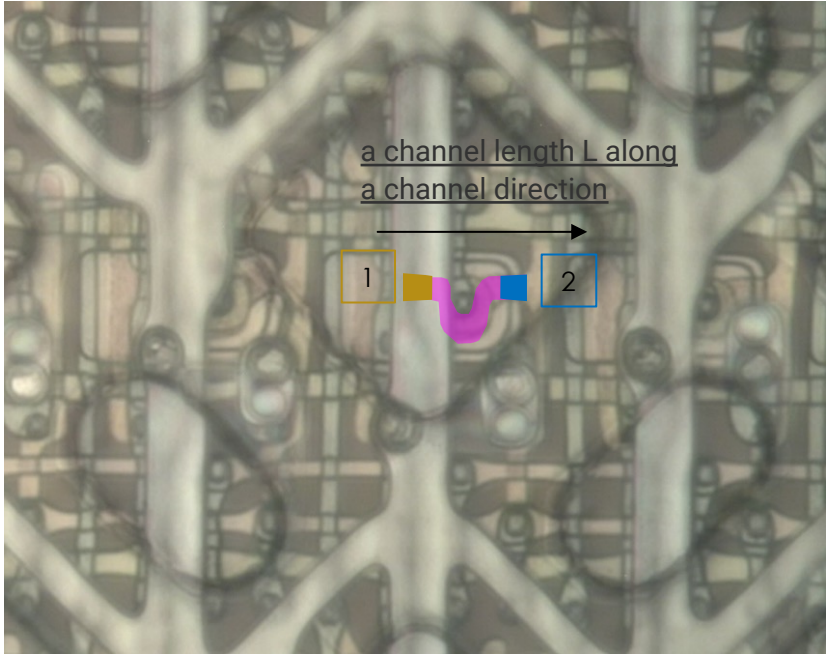
Claim 1	Accused Products
	An optical microscope image showing a dense, repeating pattern of pixel circuitry. The pattern consists of a grid of diamond-shaped or hexagonal units. Each unit contains a central circular or oval feature, likely a transistor gate, surrounded by intricate circuit lines and smaller circular elements. The overall color is a mix of brown, tan, and grey, typical of a microscopic view of a printed circuit board or semiconductor surface. Optical microscope image of a portion of the pixel circuit in BOE iPhone 14 OLED panel, with cathode and anode removed.

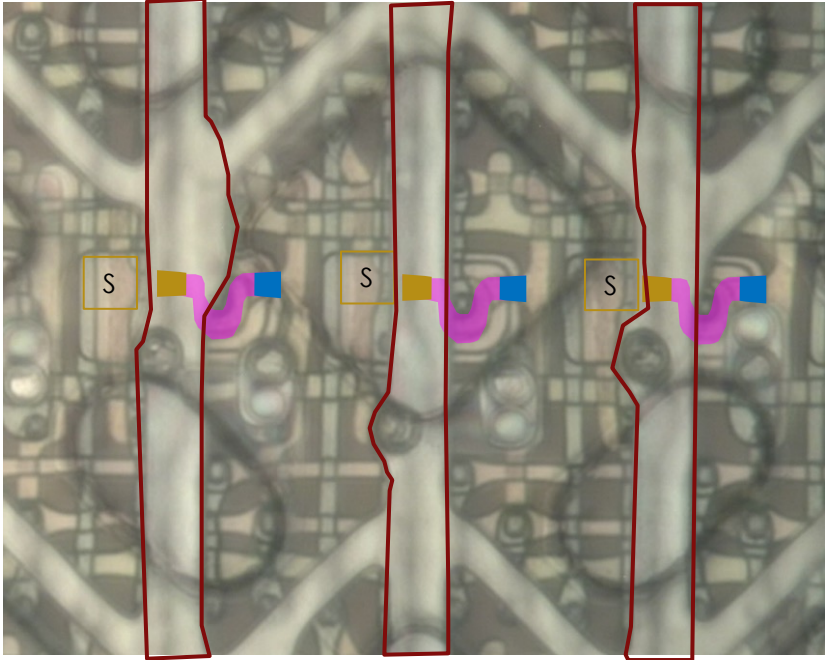
Claim 1	Accused Products
	 Optical microscope image of a portion of the pixel circuit in BOE iPhone 14 OLED panel, with cathode and anode removed.

Claim 1	Accused Products
[1a] a gate electrode, disposed on the substrate; [1b] a gate insulating layer, disposed on the substrate, and covering the gate electrode; [1c] a channel layer, disposed on the gate insulating layer and located above the gate electrode, wherein the channel layer has a channel length L along a channel direction and has a first side and a second side opposite to the first side;	Each Accused Product comprises a gate electrode, disposed on the substrate; a gate insulating layer, disposed on the substrate, and covering the gate electrode; and a channel layer, disposed on the gate insulating layer and located above the gate electrode, wherein the channel layer has a channel length L along a channel direction and has a first side and a second side opposite to the first side. <i>See, e.g.:</i>  a gate electrode and gate insulating layer Annotated optical image of a portion of the BOE iPhone 14 OLED panel, showing gate electrode and gate insulating layer in plan view.

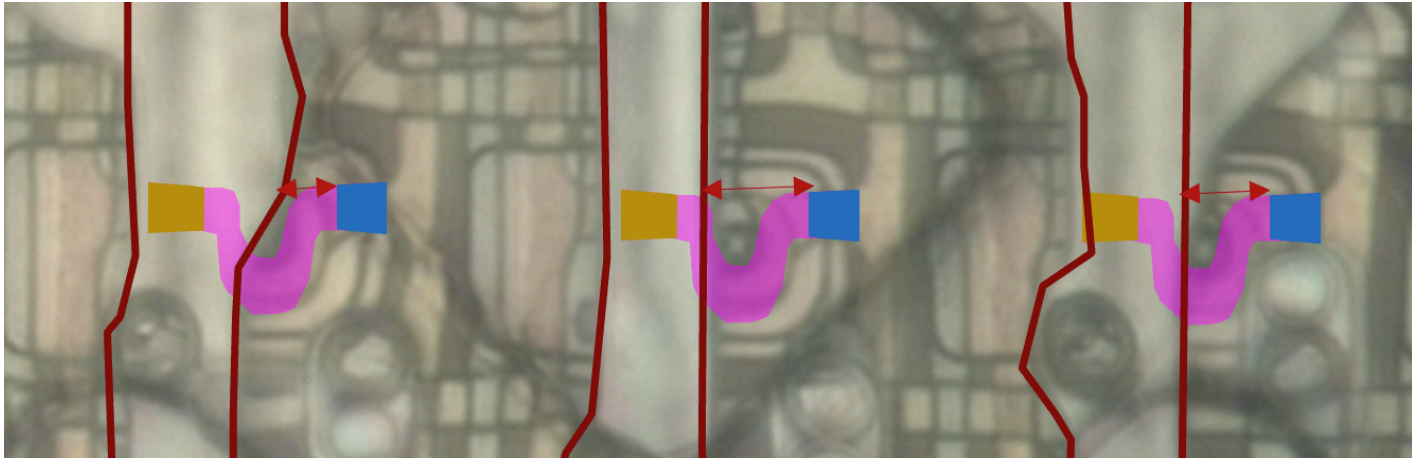
Claim 1	Accused Products
	An optical micrograph of an OLED panel showing a grid of gate electrodes and channel layers. Three red wavy lines are overlaid on the image, highlighting the channel layer disposed on the gate insulating layer above the gate electrode. Annotated optical image of a portion of the BOE iPhone 14 OLED panel, highlighting channel layer disposed on gate insulating layer above gate electrode.

Claim 1	Accused Products
	 Annotated optical image of a portion of the BOE iPhone 14 OLED panel, showing channel length L along the channel direction, along with first side and second side (1 and 2 respectively).

Claim 1	Accused Products
[1d] a source electrode and a drain electrode, located at the two opposite sides of the channel layer, and electrically connected to the first side and the second side of the channel layer, respectively; [1e] a dielectric layer, covering the source electrode, the drain electrode and the channel layer; and	Each Accused Product comprises a source electrode and a drain electrode, located at the two opposite sides of the channel layer, and electrically connected to the first side and the second side of the channel layer, respectively; and a dielectric layer, covering the source electrode, the drain electrode and the channel layer. <i>See, e.g.:</i>  Annotated optical image of a portion of the BOE iPhone 14 OLED panel, showing source electrode (at the first side, on left) and drain electrode (at the second side, on right).

Claim 1	Accused Products
[1f] a conductive light-shielding pattern layer, disposed on the dielectric layer, and overlapped to a portion of the source electrode and a portion of the channel layer in a vertical projection, wherein the conductive light-shielding pattern layer does not overlap to the drain in the vertical projection, and the conductive light-shielding pattern layer and the channel layer have an overlapping length $d1$, and $0.3 \leq d1/L \leq 0.85$.	Each Accused Product comprises a conductive light-shielding pattern layer, disposed on the dielectric layer, and overlapped to a portion of the source electrode and a portion of the channel layer in a vertical projection, wherein the conductive light-shielding pattern layer does not overlap to the drain in the vertical projection, and the conductive light-shielding pattern layer and the channel layer have an overlapping length $d1$, and $0.3 \leq d1/L \leq 0.85$. <i>See, e.g.:</i>  Annotated optical image of a portion of the BOE iPhone 14 OLED panel, showing conductive light-shielding pattern layer (outlined in red), overlapping a portion of the source electrode and a portion of the channel layer, not overlapping drain. Based on microscope measurements, the overlapping length $D1$ ranges from 43% to 48% of the length L.

Claim 17

Claim 17	Accused Products
17. The semiconductor structure as claimed in claim 1, wherein the conductive light-shielding pattern layer and the drain electrode are spaced by a distance along the channel direction in the vertical projection.	Each Accused Product comprises the semiconductor structure as claimed in claim 1, wherein the conductive light-shielding pattern layer and the drain electrode are spaced by a distance along the channel direction in the vertical projection. <i>See analysis and evidence of claim 1, above.</i> <i>See also, e.g.:</i>  Annotated optical image of a portion of the BOE iPhone 14 OLED panel, showing conductive light-shielding pattern layer (outlined in red), channel (magenta), and drain electrode (blue), with conductive light-shielding pattern layer and drain electrode spaced by a distance (approximately indicated with red arrows) along the channel direction in the vertical projection.