


U.S. Patent No. 8,502,757 (“757 Patent”)

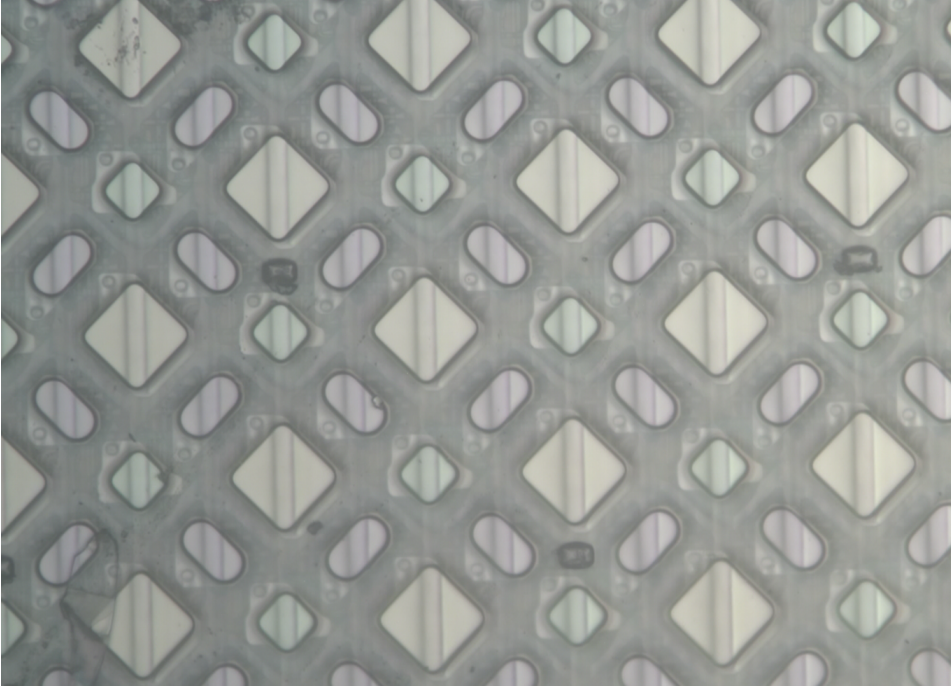
Accused Products


BOE OLED panels including the claimed organic light emitting display, 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.

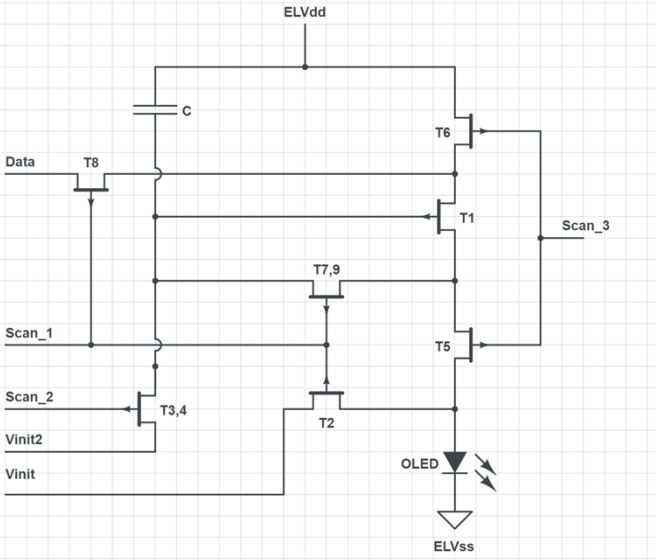
Each Accused Product infringes the claims in substantially the same way, and the evidence shown in this chart is similarly applicable to each Accused Product. Each claim limitation is literally infringed by each Accused Product. However, to the extent any claim limitation is not met literally, it is 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.

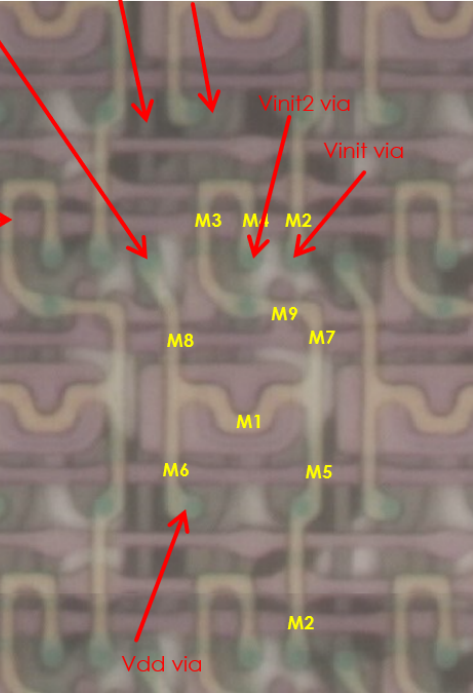
Claim 1

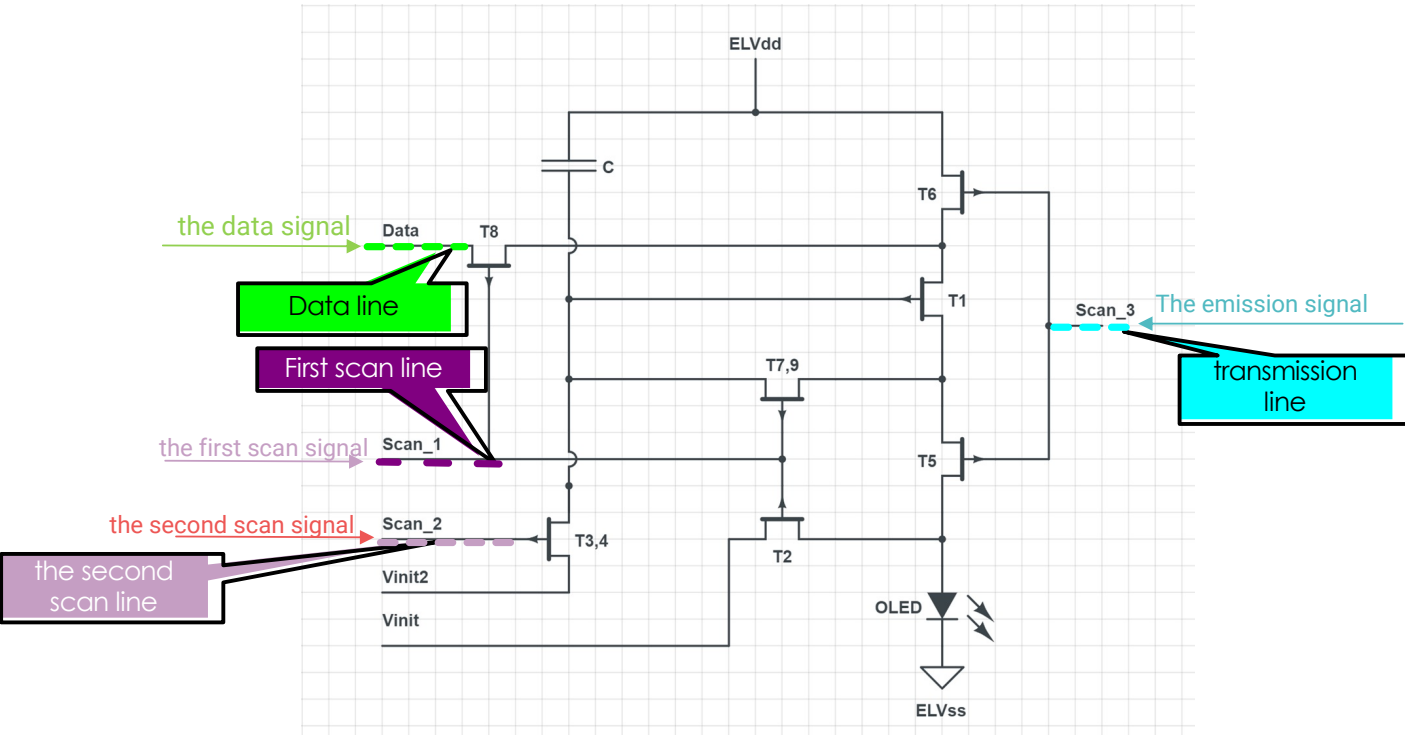
Claim 1	Accused Products
[1pre] An organic light emitting display, comprising:	<p>To the extent the preamble is limiting, each Accused Product comprises an organic light emitting display.</p> <p><i>See individual limitations below.</i></p> <p><i>See also, e.g.:</i></p>  <p>Publicity photo of iPhone 14 containing BOE OLED panel.</p>

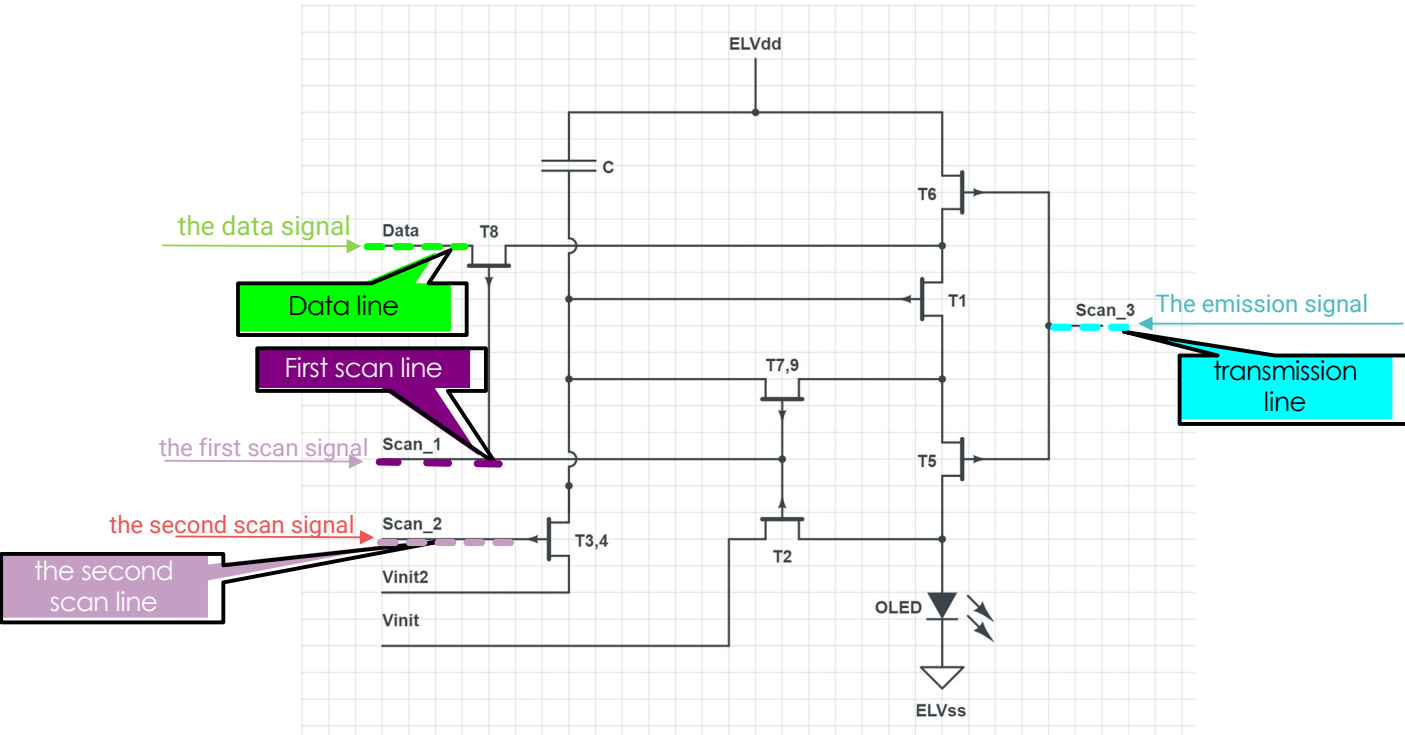
Claim 1	Accused Products
	 <p data-bbox="491 922 1696 958">Optical microscope image of a portion of the AMOLED layer in BOE iPhone 14 OLED panel.</p>

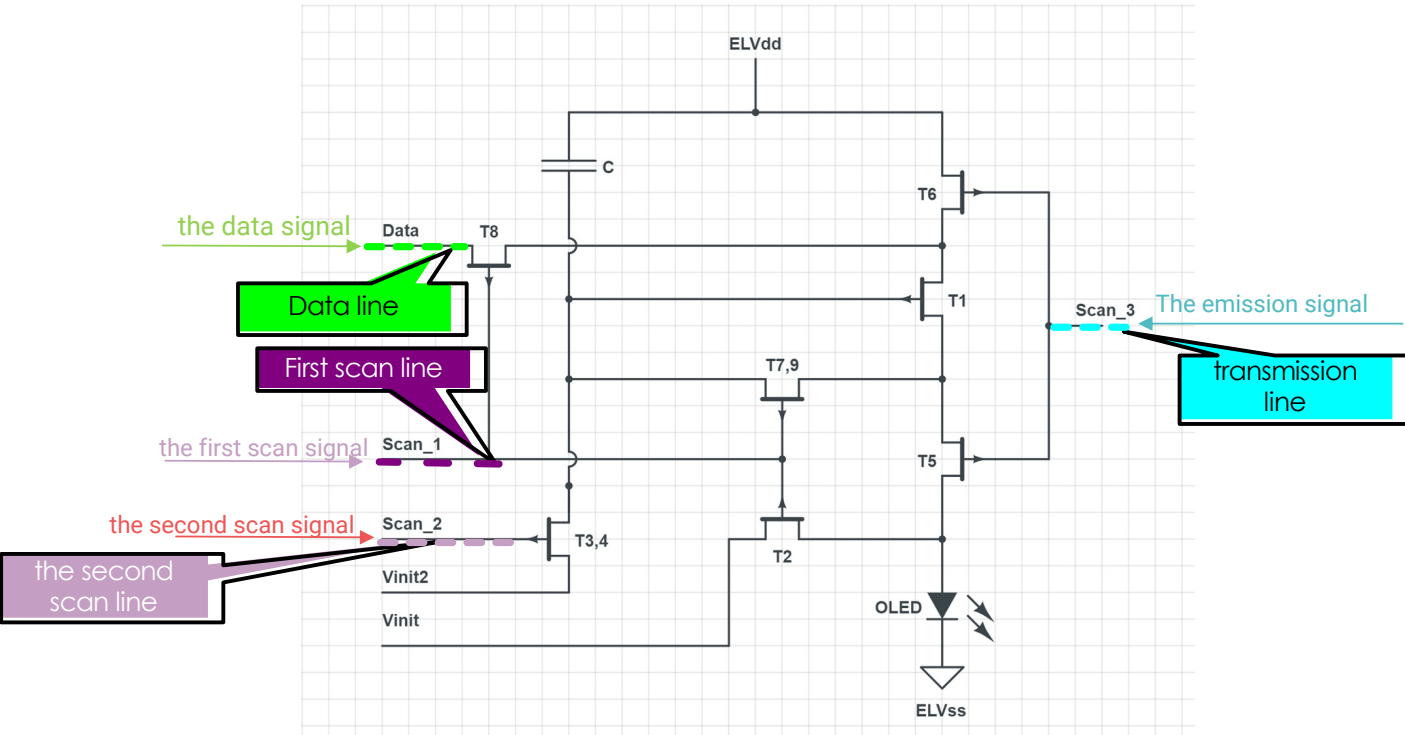
Claim 1	Accused Products
	 <p data-bbox="491 808 1814 883">Optical microscope image of a portion of the AMOLED layer, with polyimide substrate etched, in BOE iPhone 14 OLED panel.</p>

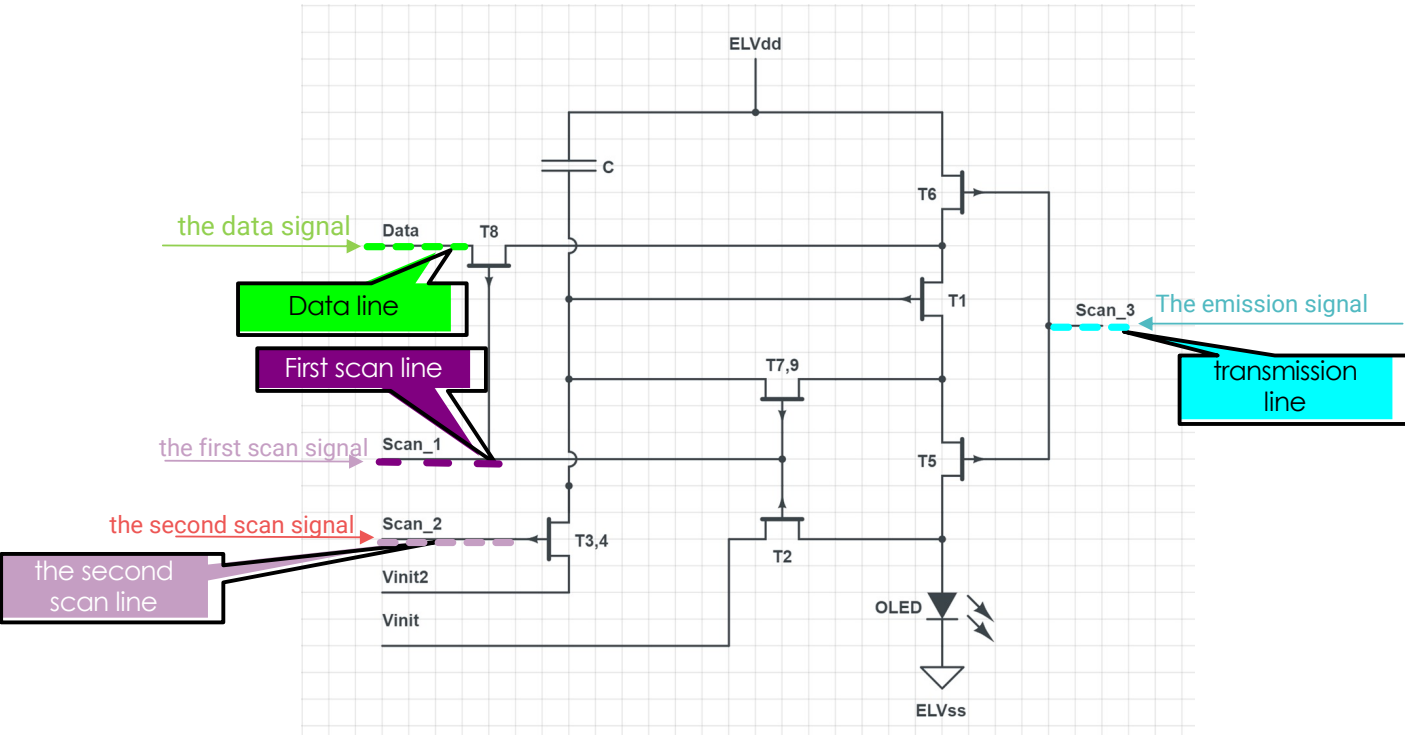
Claim 1	Accused Products
	 <p data-bbox="489 824 1570 862">Reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel.</p>

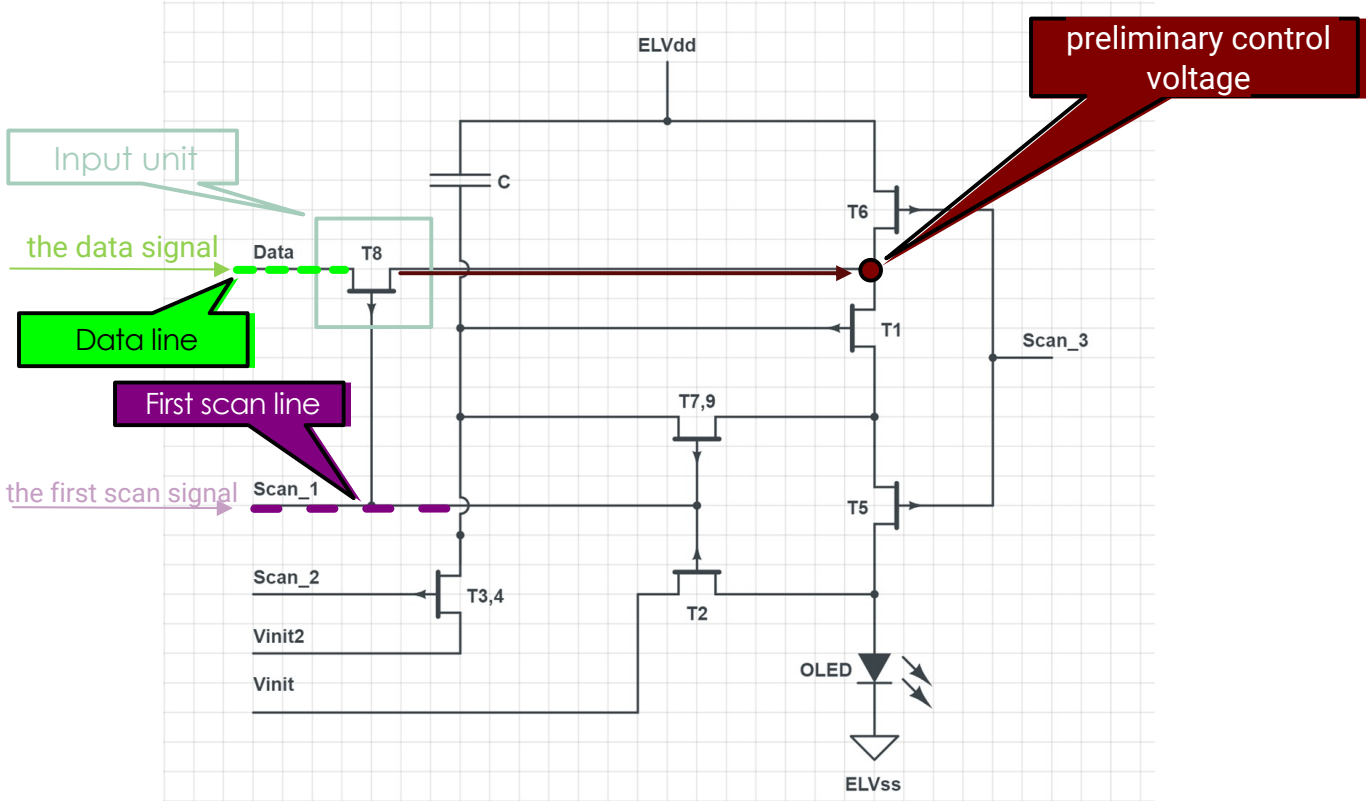
Claim 1	Accused Products
	<div data-bbox="493 233 1297 961">  <p>The image shows a complex circuit layout with various components labeled in yellow and red. Red arrows point from text labels to specific features in the image. The labels include: 'Data via' (pointing to a vertical line), 'Data' (pointing to a horizontal line), 'Vdd' (pointing to a horizontal line), 'Scan_3 (transmission line)' (two arrows pointing to horizontal lines), 'Vinit2' (pointing to a horizontal line), 'Vinit' (pointing to a horizontal line), 'Scan_2' (pointing to a horizontal line), 'Scan_1' (pointing to a horizontal line), 'Scan_3 (transmission line)' (pointing to a horizontal line), 'Vdd via' (pointing to a vertical line), 'Vinit2 via' (pointing to a vertical line), 'Vinit via' (pointing to a vertical line), and several metal pads labeled M1 through M9.</p> </div> <p data-bbox="493 966 1726 998">Annotated optical microscope image showing elements from reverse-engineered circuit diagram.</p>

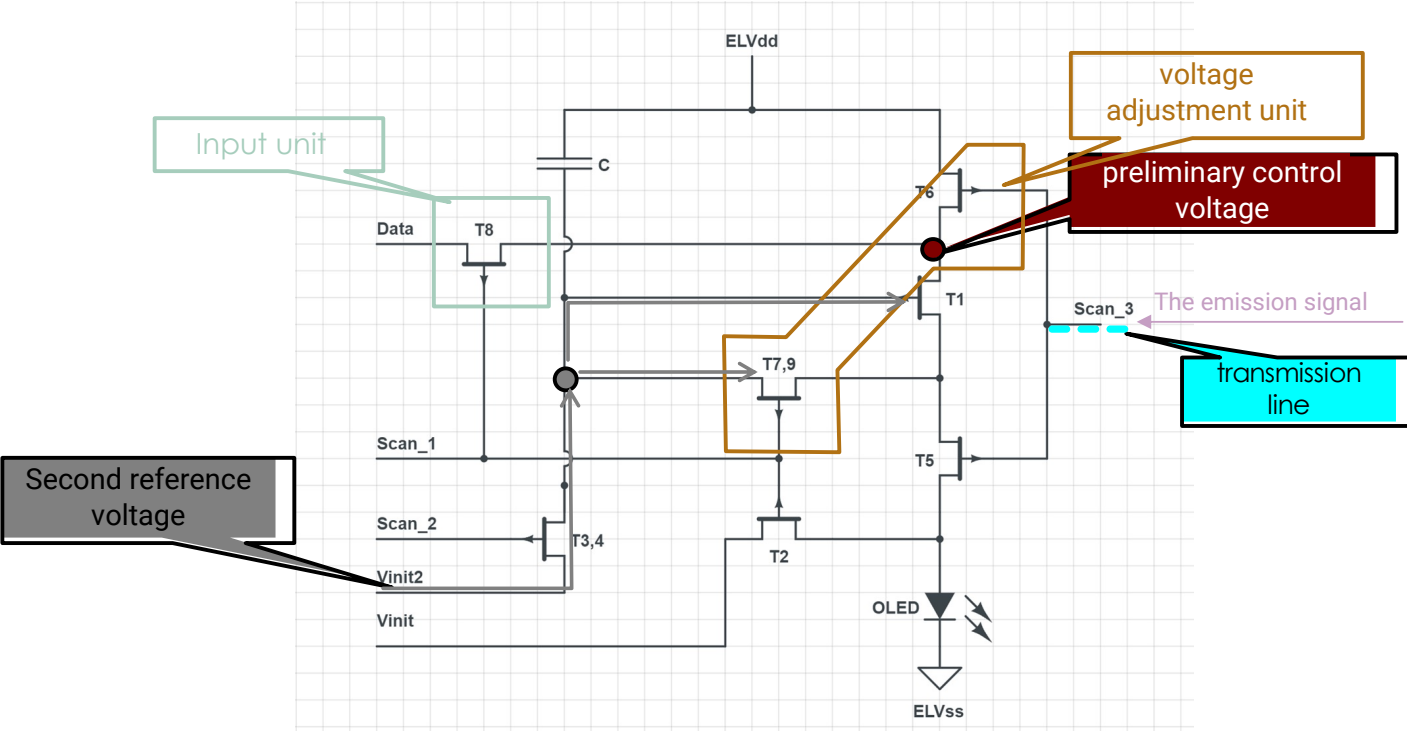
Claim 1	Accused Products
<p>[1a] a data line for transmitting a data signal;</p>	<p>Each Accused Product comprises a data line for transmitting a data signal.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing data line and data signal.</p>

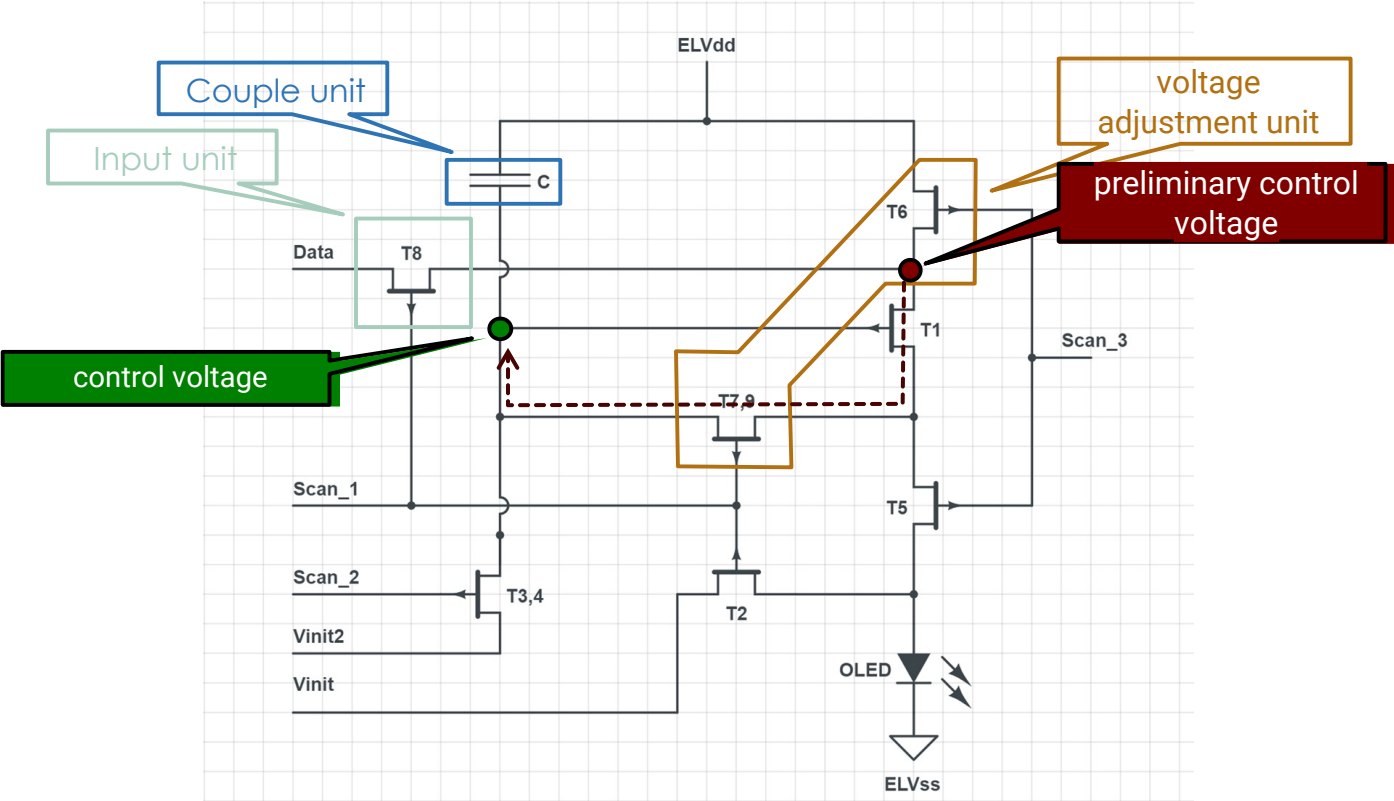
Claim 1	Accused Products
<p>[1b] a first scan line for transmitting a first scan signal;</p>	<p>Each Accused Product comprises a first scan line for transmitting a first scan signal.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing first scan line and first scan signal.</p>

Claim 1	Accused Products
<p>[1c] a second scan line for transmitting a second scan signal;</p>	<p>Each Accused Product comprises a second scan line for transmitting a second scan signal.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing second scan line and second scan signal.</p>

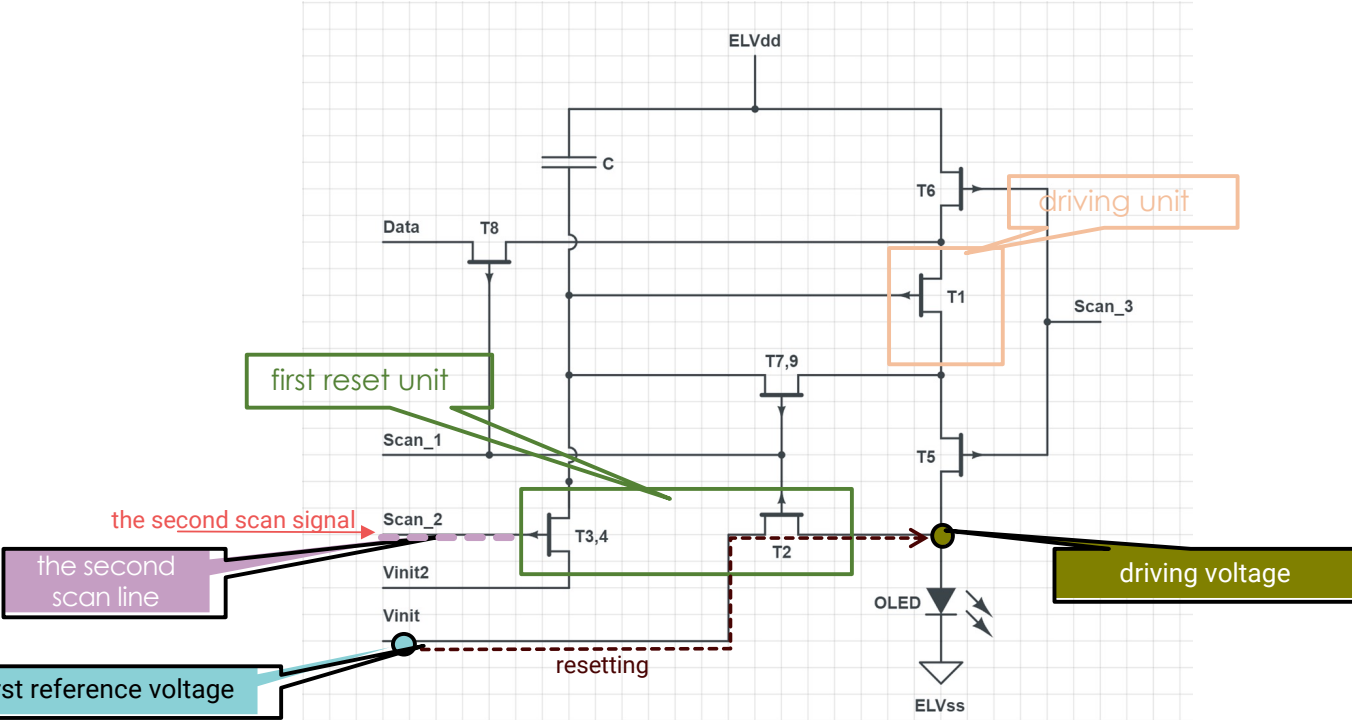
Claim 1	Accused Products
<p>[1d] a transmission line for transmitting an emission signal;</p>	<p>Each Accused Product comprises a transmission line for transmitting an emission signal.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing transmission line and emission signal.</p>

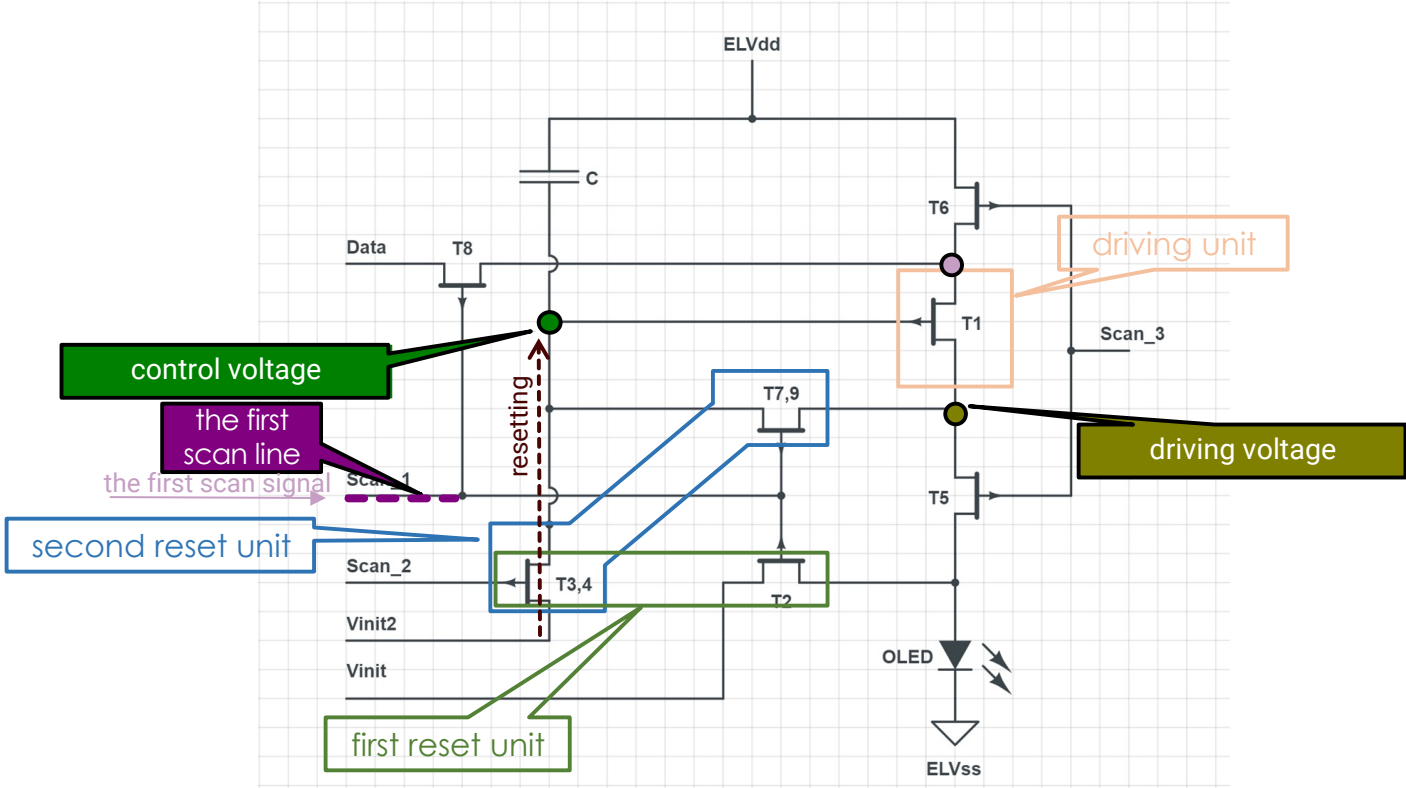
Claim 1	Accused Products
<p>[1e] an input unit, electrically connected to the data line and the first scan line, for outputting a preliminary control voltage according to the data signal and the first scan signal;</p>	<p>Each Accused Product comprises an input unit, electrically connected to the data line and the first scan line, for outputting a preliminary control voltage according to the data signal and the first scan signal.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing input unit, preliminary control voltage, data signal, and first scan signal.</p>

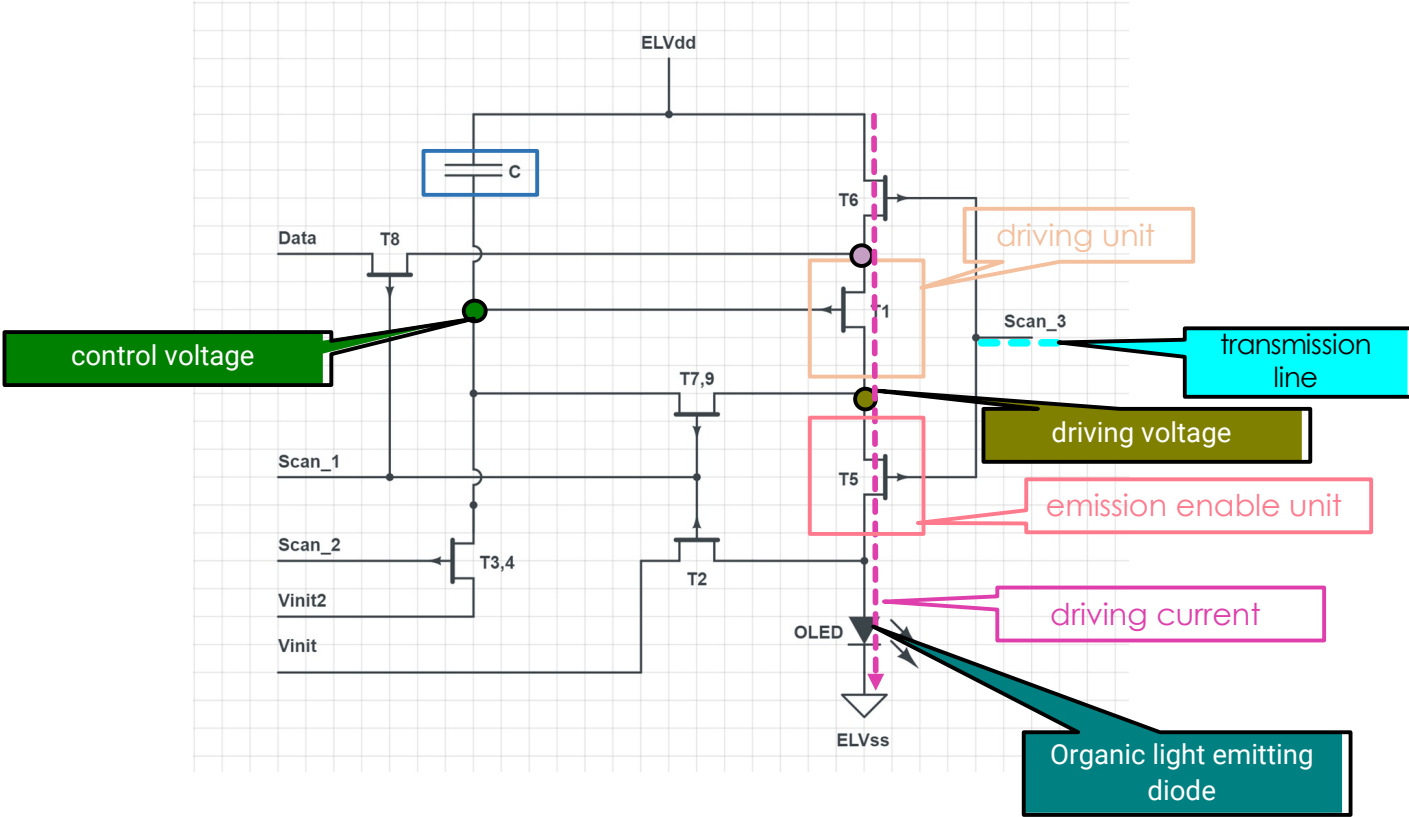
Claim 1	Accused Products
<p>[1f] a voltage adjustment unit, electrically connected to the transmission line and the input unit, for adjusting the preliminary control voltage according to the emission signal and a second reference voltage;</p>	<p>Each Accused Product comprises a voltage adjustment unit, electrically connected to the transmission line and the input unit, for adjusting the preliminary control voltage according to the emission signal and a second reference voltage.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing voltage adjustment unit, transmission line, emission signal, input unit, preliminary control voltage emission signal, and second reference voltage.</p>

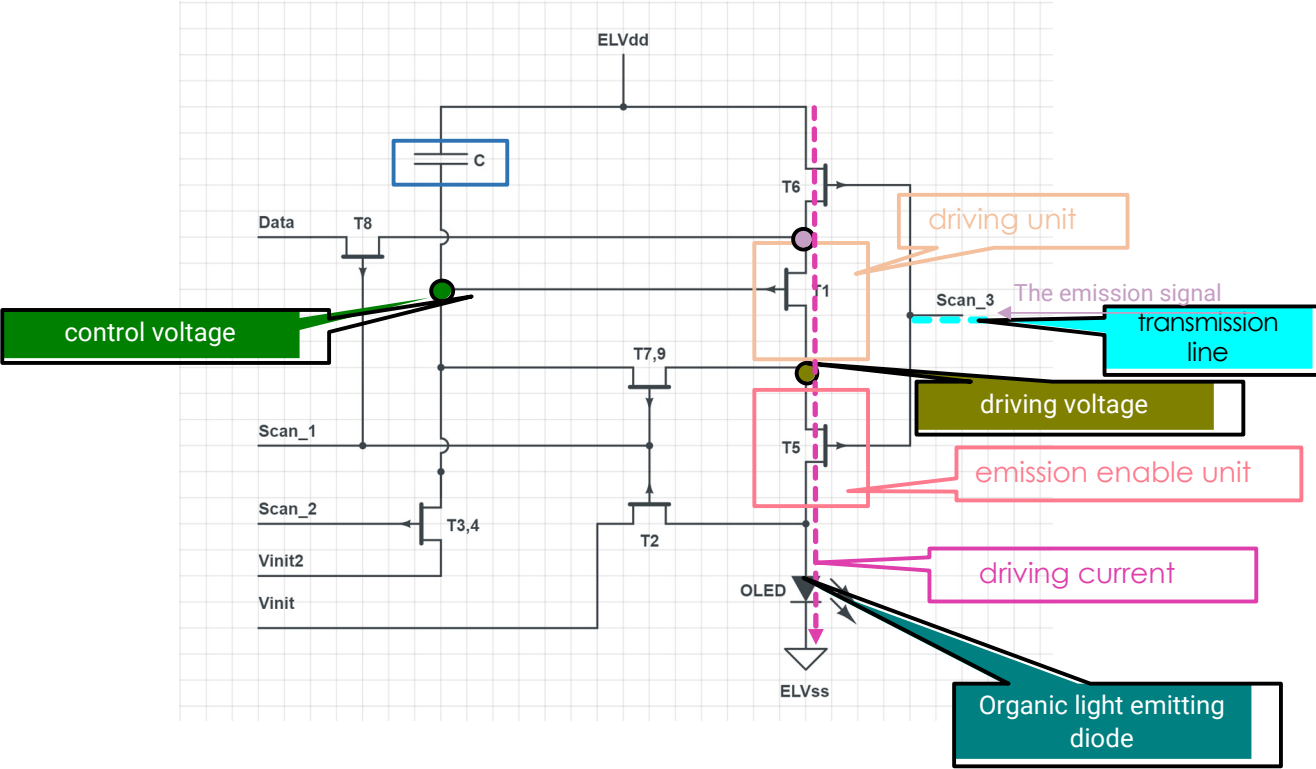
Claim 1	Accused Products
<p>[1g] a couple unit, electrically connected to the input unit and the voltage adjustment unit, for adjusting a control voltage through coupling a change of the preliminary control voltage;</p>	<p>Each Accused Product comprises a couple unit, electrically connected to the input unit and the voltage adjustment unit, for adjusting a control voltage through coupling a change of the preliminary control voltage.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing couple unit, input unit, voltage adjustment unit, control voltage, and preliminary control voltage.</p>

Claim 1	Accused Products
<p>[1h] a driving unit, electrically connected to the couple unit, for providing a driving current and a driving voltage according to the control voltage and a first power voltage;</p>	<p>Each Accused Product comprises a driving unit, electrically connected to the couple unit, for providing a driving current and a driving voltage according to the control voltage and a first power voltage.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p> <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing driving unit, driving current, driving voltage, and first power voltage.</p>

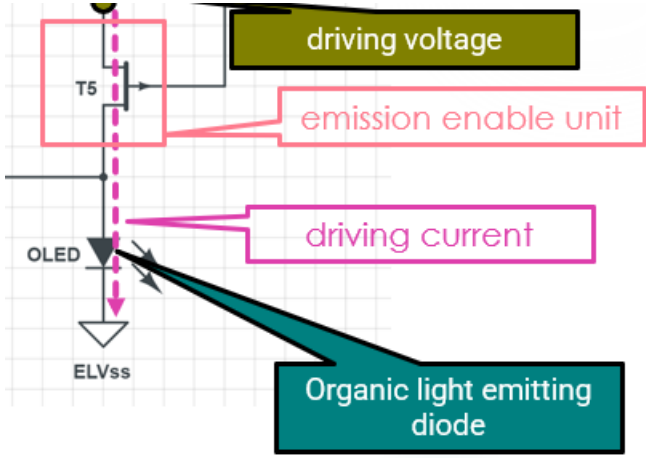
Claim 1	Accused Products
<p>[1i] a first reset unit, electrically connected to the driving unit and the second scan line, for resetting the driving voltage according to the second scan signal and a first reference voltage;</p>	<p>Each Accused Product comprises a first reset unit, electrically connected to the driving unit and the second scan line, for resetting the driving voltage according to the second scan signal and a first reference voltage.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing first reset unit and first reference voltage.</p>

Claim 1	Accused Products
<p>[1j] a second reset unit, electrically connected to the driving unit, the first reset unit and the first scan line, for resetting the control voltage according to the first scan signal and the driving voltage;</p>	<p>Each Accused Product comprises a second reset unit, electrically connected to the driving unit, the first reset unit and the first scan line, for resetting the control voltage according to the first scan signal and the driving voltage.</p> <p>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</p> <p>See also, e.g.:</p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing second reset unit.</p>

Claim 1	Accused Products
<p>[1k] an organic light emitting diode for generating output light according to the driving current; and</p>	<p>Each Accused Product comprises an organic light emitting diode for generating output light according to the driving current.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing organic light emitting diode and driving current.</p>

Claim 1	Accused Products
<p>[17] an emission enable unit, electrically connected to the transmission line, the driving unit and the organic light emitting diode, for providing a control of furnishing the driving current to the organic light emitting diode according to the emission signal.</p>	<p>Each Accused Product comprises an emission enable unit, electrically connected to the transmission line, the driving unit and the organic light emitting diode, for providing a control of furnishing the driving current to the organic light emitting diode according to the emission signal.</p> <p><i>See optical microscopy images and overview of circuit extraction shown in [1pre] above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing emission enable unit furnishing the driving current to the organic light emitting diode according to the emission signal.</p>

Claim 16

Claim 16	Accused Products
<p>16. The organic light emitting display of claim 1, wherein the organic light emitting diode comprises an anode electrically connected to the emission enable unit and a cathode for receiving a second power voltage.</p>	<p>Each Accused Product comprises the organic light emitting display of claim 1, wherein the organic light emitting diode comprises an anode electrically connected to the emission enable unit and a cathode for receiving a second power voltage.</p> <p><i>See analysis and evidence of Claim 1 above.</i></p> <p><i>See also, e.g.:</i></p>  <p>Annotated portion of reverse-engineered circuit diagram of a portion of the BOE iPhone 14 OLED panel, showing OLED with anode connected to emission enable unit and cathode for receiving a second power voltage.</p>