

# EXHIBIT M

***Force MOS Technology Co., Ltd. v. ASUSTeK Computer, Inc., Case No. 2:22-cv-00460-JRG***  
**Plaintiff's First Amended Infringement Contention Claim Chart for U.S. Patent No. 7,812,409**

Plaintiff Force MOS Technology Co., Ltd. (“Force MOS” or “Plaintiff”) presently contends that Defendant ASUSTek Computer, Inc. (“ASUS” or “Defendant”) infringes Claim 1 (the “Asserted Claims”) of U.S. Patent No. 7,812,409 (“’409 Patent”) directly and indirectly. This chart sets forth Force MOS’s first amended infringement contentions relating to the Asserted Claims and the Accused Instrumentalities. Exemplary Accused Components of the Accused Instrumentalities are referenced here, and they are listed in Force MOS’s Disclosure of First Amended Infringement Contentions. Specifically, exemplary photographs and excerpts of the datasheet of UBIQ, also known as uPI Group, QM3016AM Component are referenced herein. SEMs of the QM3016AM Component, manufactured by UBIQ Semiconductor Corp. (uPI Group), include those produced at Bates Nos. FORCE-MOS0024542 through FORCE-MOS0024544, which were taken September 5, 2022. Additional SEMs of this component were produced at Bates Nos. FORCE-MOS0024586 through FORCE-MOS0024597 and FORCE-MOS0032920 through FORCE-MOS0032921, which were taken between November 20, 2022 and December 7, 2022. To the extent that other ASUS products include the QM3016AM Component as described below, Force MOS intends to include those products within the scope of Accused Instrumentalities. The Accused Instrumentalities encompass any predecessor or successor product or service or unnamed related product or service that includes the QM3016AM Component described below.


These contentions articulate the structures and acts that constitute direct infringement of the ’409 Patent and identify specifically where each element of each asserted claim is found within each Accused Components of the Accused Instrumentality. Exemplary references to publicly available descriptions of ASUS’s product and service information are provided where appropriate. Exemplary references to specific Accused Components of the Accused Instrumentalities are not intended and should not be read to exclude Accused Instrumentalities not specifically identified. Exemplary evidence of specific Accused Components of the Accused Instrumentalities are intended to be examples of all Accused Component with similar manner of infringement and should not be read to exclude Accused Components without exemplary evidence. As

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discovery proceeds, these contentions and the specific Accused Components identified here as meeting certain claim elements or performing certain claim steps may change in view of claim construction and additional information made available to Force MOS.

Additional information, in particular process, architecture and design documents, which have not yet been produced in this litigation, are expected to provide further details about the implementation of accused functionality and specific information upon which Force MOS will rely in proving infringement. Force MOS will supplement these first amended infringement contentions after receiving access to that information and may supplement or amend in light of the Court's claim constructions.

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<b>'409 Patent Asserted Claims</b>	<b>Where each element is found within the Accused Component (QM3016AM)</b>
<p><b>Claim [1.pre]</b> A trenched semiconductor power device comprising a plurality of trenched gates surrounding a plurality of transistor cells formed in a semiconductor substrate, wherein:</p>	<p>Plaintiff contends the preamble is not limiting because it describes a purpose or intended use of the claimed subject matter. To the extent the preamble is found to be limiting, the UBIQ QM3016AM (hereinafter, the “Accused Component”) includes a trenching semiconductor power device comprising a plurality of trenching gates surrounding a plurality of transistor cells formed in a semiconductor substrate.</p> <p>Below is non-exhaustive, exemplary evidence from public sources, ASUS’s production, and analysis of the Accused Component demonstrating how ASUS infringes this claim element:<sup>1</sup></p> <p>Below are exemplary photographs of the UBIQ, also known as uPI Group, QM3016AM.</p> <div align="center" data-bbox="970 776 1381 1234">  </div> <p><i>See FORCE-MOS0032914 (09.05.2022).</i></p>

<sup>1</sup> To date, ASUS has only produced 438 documents. In reference to the Accused Component, ASUS has not produced any product information pertaining to the QM3016AM Component. The images of the Accused Component in this claim chart come from Force MOS’s investigation and analysis of the Accused Component.

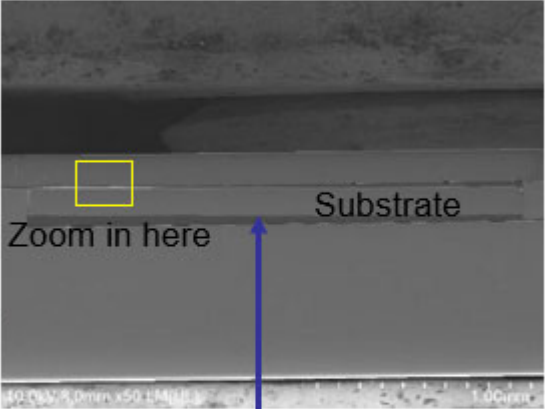
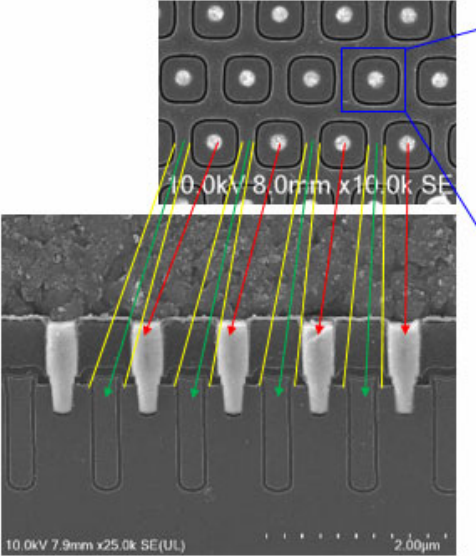
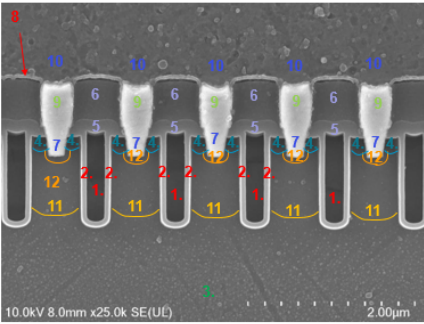
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'409 Patent Asserted Claims	Where each element is found within the Accused Component (QM3016AM)
	

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	<div data-bbox="909 329 1444 716" data-label="Image"> </div> <p data-bbox="407 721 1255 751"><i>See</i> FORCE-MOS0032915 - FORCE-MOS0032919 (03.24.2022).</p> <p data-bbox="407 792 1885 899">The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed <i>trenched semiconductor power device comprising a plurality of trenched gates surrounding a plurality of transistor cells formed in a semiconductor substrate.</i></p>

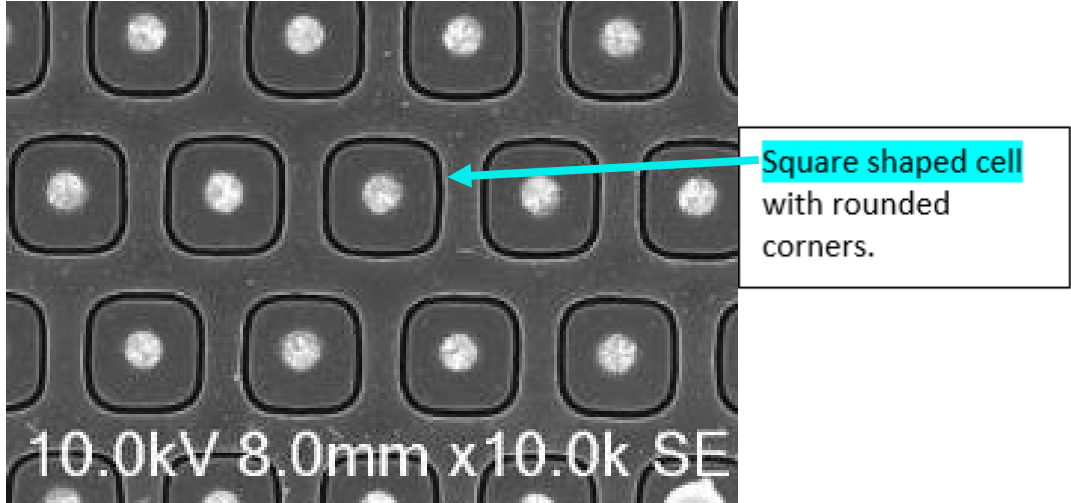
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'409 Patent Asserted Claims	Where each element is found within the Accused Component (QM3016AM)
	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Drain Metal (Back Metal)</p> </div> <div style="text-align: center;">  </div> </div> <div style="margin-top: 20px;"> <ol style="list-style-type: none"> <li>1. Trenched Gates (Doped Poly)</li> <li>2. Gate Oxide</li> <li>3. Epitaxial layer</li> <li>4. Source region</li> <li>5. Isolation Layer #1 (SiO2)</li> <li>6. Isolation Layer #2 (BPSG)</li> <li>7. Source Contact Trench</li> <li>8. Ti/TiN</li> <li>9. Co/TiN/W</li> <li>10. Source Metal (Al)</li> <li>11. Body region</li> <li>12. P-type base contact Layer</li> </ol> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p style="margin-top: 20px;">See FORCE-MOS0024542 (09.05.2022). See FORCE-MOS0024544 (09.05.2022). See FORCE-MOS0032921 (12.06.2022).</p>

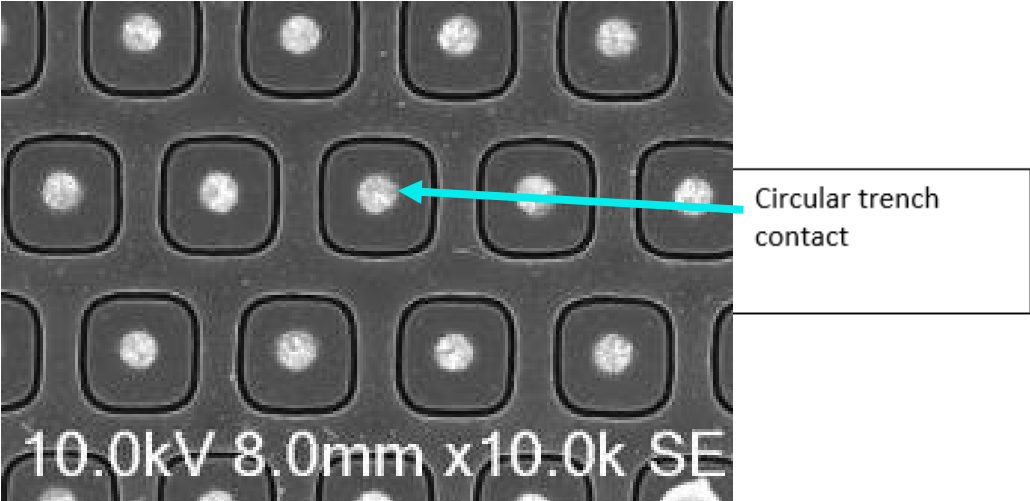
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	<i>See</i> FORCE-MOS0024590 (12.06.2022).
<p><b>[1.a]</b> said trenched gates surrounding said transistor cells as closed cells constituting substantially square-shaped cells with rounded corners;</p>	<p>The Accused Components have trenched gates surrounding said transistor cells as closed cells constituting substantially square-shaped cells with rounded corners. For example, the Accused Components have square shaped cells with rounded corners.</p> <p>Below is non-exhaustive, exemplary evidence from public sources, ASUS's production, and analysis of the Accused Components demonstrating how ASUS infringes this claim element:</p> <p>The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed closed cells constituting substantially square-shaped cells with rounded corners.</p>

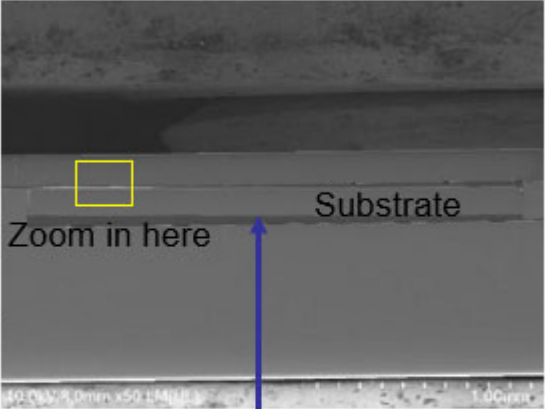
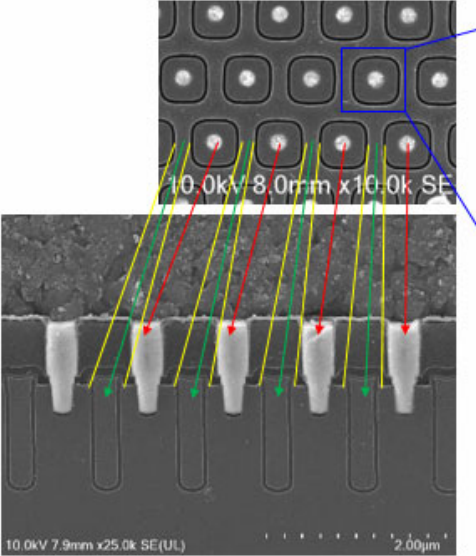
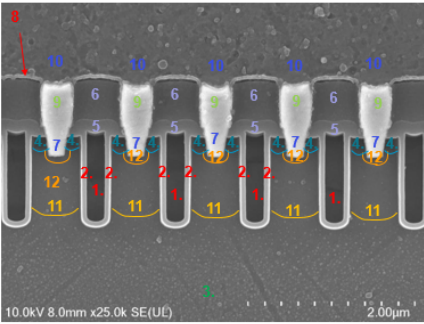
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	 <p data-bbox="405 930 934 963"><i>See</i> FORCE-MOS0032921 (12.06.2022).</p>
<p data-bbox="149 1005 384 1437"><b>[1.b]</b> each of said closed cells further includes a circular trench contact disposed substantially in a central portion of said closed cells, penetrating through a source region surrounding said</p>	<p data-bbox="405 1005 1946 1149">In the Accused Components, each of said closed cells further includes a circular trench contact disposed substantially in a central portion of said closed cells, penetrating through a source region surrounding said trenced gates and extending into a body region encompassing said source region. For example, in the Accused Components the closed cells include a circular trench penetrating through the source and body region.</p> <p data-bbox="405 1187 1892 1256">Below is non-exhaustive, exemplary evidence from public sources, ASUS's production, and analysis of the Accused Components demonstrating how ASUS infringes this claim element:</p> <p data-bbox="405 1297 1940 1437">The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed circular trench contact disposed substantially in a central portion of said closed cells. The circular trench contact penetrates through a source region surrounding said trenced gates and extends into a body region encompassing said source region (<i>see</i> limitation 1.c, below).</p>

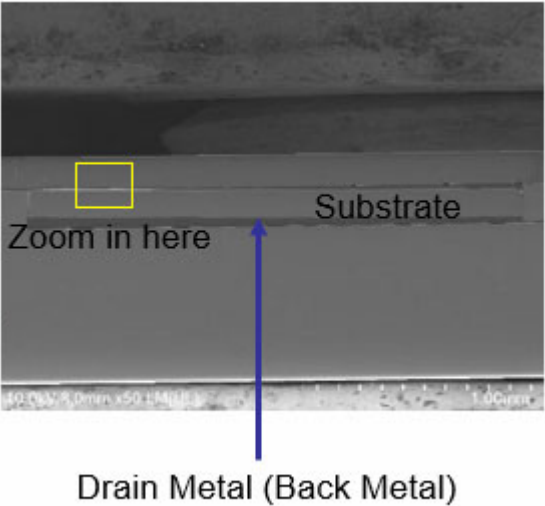
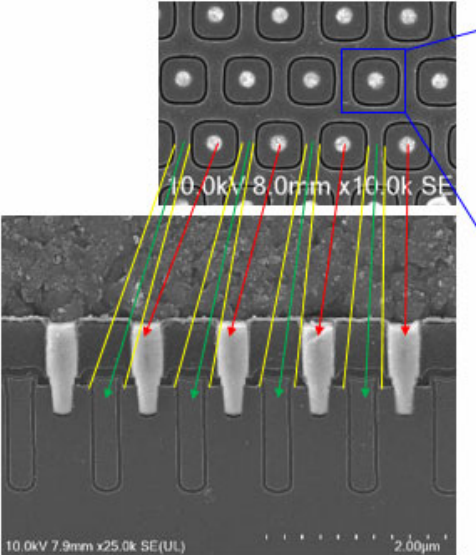
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<p>trenched gates and extending into a body region encompassing said source region;</p>	<div style="text-align: center;">  </div> <p>See FORCE-MOS0032921 (12.06.2022).</p>
<p><b>[1.c]</b> said circular trench contact comprises a hole opened from a top surface of said semiconductor substrate and is filled with a contact metal plug;</p>	<p>In the Accused Components, said circular trench contact comprises a hole opened from a top surface of said semiconductor substrate and is filled with a contact metal plug. For example, the Accused Components have the circular trench filled with a contact metal plug.</p> <p>Below is non-exhaustive, exemplary evidence from public sources, ASUS's production, and analysis of the Accused Components demonstrating how ASUS infringes this claim element:</p> <p>The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed said circular trench contact comprising a hole (item 7 below and the white circle in the figure of element 1.b) opened from a top surface of said semiconductor substrate and filled with a contact metal plug (item 9 below).</p>

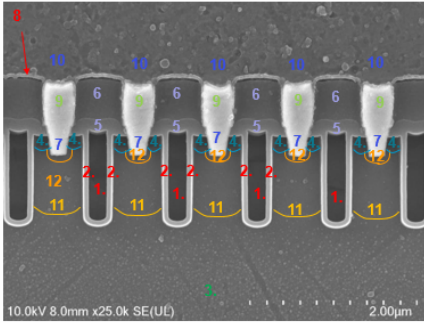
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	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Drain Metal (Back Metal)</p> </div> <div style="text-align: center;">  </div> </div> <div style="margin-top: 20px;"> <ol style="list-style-type: none"> <li>1. Trenched Gates (Doped Poly)</li> <li>2. Gate Oxide</li> <li>3. Epitaxial layer</li> <li>4. Source region</li> <li>5. Isolation Layer #1 (SiO2)</li> <li>6. Isolation Layer #2 (BPSG)</li> <li>7. Source Contact Trench</li> <li>8. Ti/TiN</li> <li>9. Co/TiN/W</li> <li>10. Source Metal (Al)</li> <li>11. Body region</li> <li>12. P-type base contact Layer</li> </ol> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p style="margin-top: 20px;">See FORCE-MOS0024542 (09.05.2022). See FORCE-MOS0024544 (09.05.2022).</p>

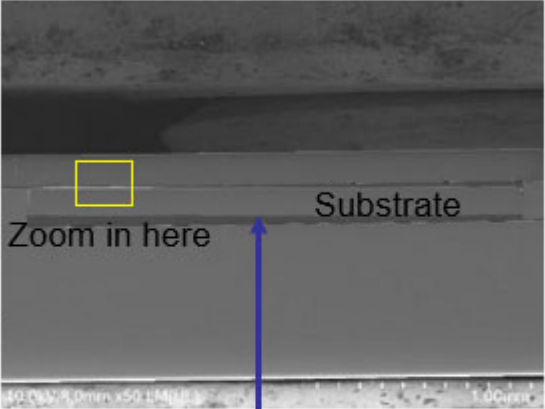
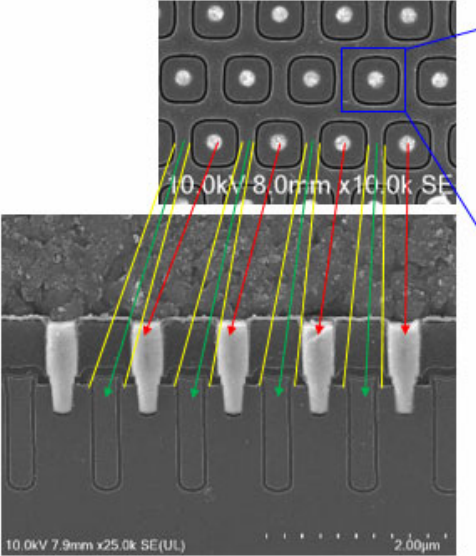
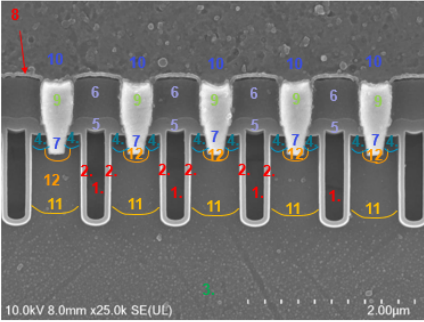
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	<p>See FORCE-MOS0032921 (12.06.2022). See FORCE-MOS0024590 (12.06.2022).</p>
<p><b>[1.d]</b> wherein sidewalls of said hole are surrounded by and in contact with the source and body regions and the circular trench contact is separate from the trenched gates, and the source and body region are disposed between a gate oxide lining of the trench gates and all circumferential points of the circular trench contact;</p>	<p>In the Accused Components, the sidewalls of said hole are surrounded by and in contact with the source and body regions, and the circular trench contact is separate from the trenched gates, and the source and body region are disposed between a gate oxide lining of the trench gates and all circumferential points of the circular trench contact.</p> <p>Below is non-exhaustive, exemplary evidence from public sources, ASUS's production, and analysis of the Accused Components demonstrating how ASUS infringes this claim element:</p> <p>The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed sidewalls, source, and body regions, and circular trench contact.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="638 846 1178 1349" style="text-align: center;">  </div> <div data-bbox="1247 821 1719 1373" style="text-align: center;">  </div> </div>

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	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> <li>1. Trenched Gates (Doped Poly)</li> <li>2. Gate Oxide</li> <li>3. Epitaxial layer</li> <li>4. Source region</li> <li>5. Isolation Layer #1 (SiO2)</li> <li>6. Isolation Layer #2 (BPSG)</li> <li>7. Source Contact Trench</li> <li>8. Ti/TiN</li> <li>9. Co/TiN/W</li> <li>10. Source Metal(Al)</li> <li>11. Body region</li> <li>12. P-type base contact Layer</li> </ul> </div> <div style="width: 45%; text-align: center;">  <p>10.0kV 8.0mm x25.0k SE(UE) 2.00µm</p> </div> </div> <p><i>See</i> FORCE-MOS0024542 (09.05.2022).  <i>See</i> FORCE-MOS0024544 (09.05.2022).  <i>See</i> FORCE-MOS0032921 (12.06.2022).  <i>See</i> FORCE-MOS0024590 (12.06.2022).</p>
<p><b>[1.e]</b> said contact metal plug connected to a source metal disposed on top of said circular trench contact.</p>	<p>In the Accused Components, the contact metal plug is connected to a source metal disposed on top of said circular trench contact.</p> <p>Below is non-exhaustive, exemplary evidence from public sources, ASUS's production, and analysis of the Accused Components demonstrating how ASUS infringes this claim element:</p> <p>The exemplary scanning electron microscope (SEM) images of the UBIQ, also known as uPI Group, QM3016AM Accused Component evidence the claimed contact metal plug and source metal.</p>

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	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p data-bbox="709 834 1094 870">Drain Metal (Back Metal)</p> </div> <div style="text-align: center;">  </div> </div> <div style="margin-top: 20px;"> <ol style="list-style-type: none"> <li>1. Trenched Gates (Doped Poly)</li> <li>2. Gate Oxide</li> <li>3. Epitaxial layer</li> <li>4. Source region</li> <li>5. Isolation Layer #1 (SiO2)</li> <li>6. Isolation Layer #2 (BPSG)</li> <li>7. Source Contact Trench</li> <li>8. Ti/TiN</li> <li>9. Co/TiN/W</li> <li>10. Source Metal (Al)</li> <li>11. Body region</li> <li>12. P-type base contact Layer</li> </ol> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p data-bbox="405 1354 936 1421" style="margin-top: 20px;">See FORCE-MOS0024542 (09.05.2022). See FORCE-MOS0024544 (09.05.2022).</p>

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	<i>See</i> FORCE-MOS0032921 (12.06.2022). <i>See</i> FORCE-MOS0024590 (12.06.2022).