

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APTIV SERVICES US, LLC,
Petitioner,

v.

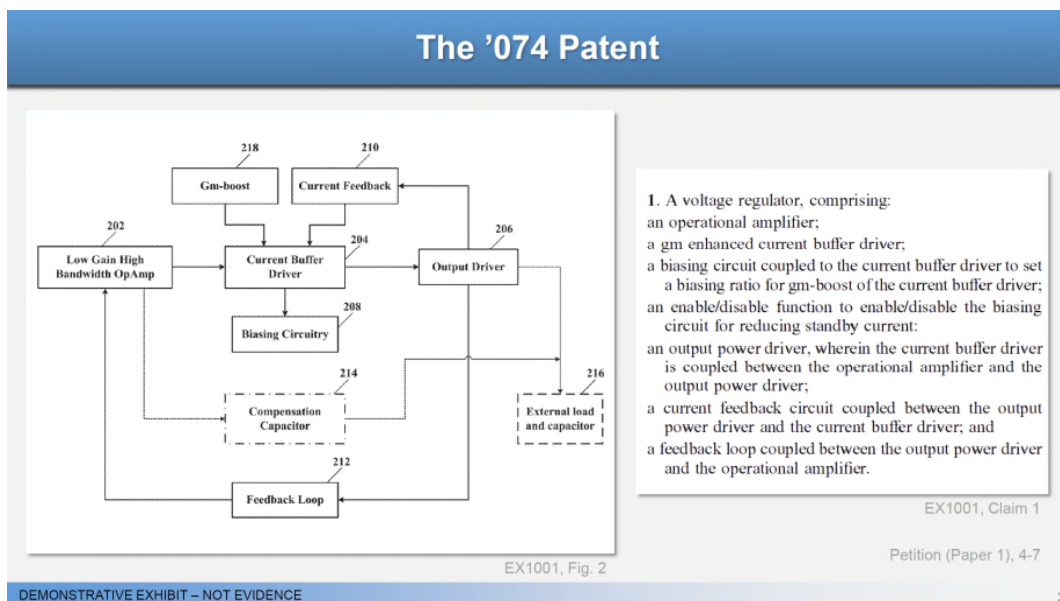
MICROCHIP TECHNOLOGY INC.,
Patent Owner.

Case No. IPR2024-00646
U.S. Patent No. 9,471,074

**PATENT OWNER'S OBJECTIONS TO PETITIONER'S
DEMONSTRATIVES**

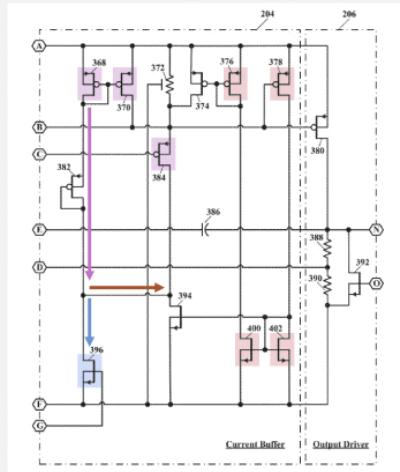
Pursuant to the Board's Order of June 3, 2025 (Paper 34), Patent Owner Microchip Technology Inc. submits its objections to Petitioner Aptiv Services US, LLC's demonstrative exhibits for the oral hearing in this matter on June 27, 2025. Patent Owner certifies that it and Petitioner have met and conferred in an attempt to resolve the objections but were unable to do so.

Slide 3 (reproduced below): Petitioner has not previously presented, discussed, annotated, or developed any argument that Figure 2 of the '074 patent is an embodiment of claim 1.



Slide 10 (reproduced below): Petitioner annotates '074 patent Fig. 3B and the accompanying cite (*e.g.*, adding/removing current-directionality arrows and color-coding) in a manner not previously presented in any of the four citations to the Petition and Reply to modify its argument.

'074 Patent: Current Feedback to 368/370



current buffer 204. The gm of the PMOS current buffer driver 204 may comprise transistor 384 and may be coupled to two sources of currents, one from the bias network and the other as current feedback 210 comprising transistors 378, 400, 402 and 376 from the power output stage 206 that may comprise transistor 380. The bias network may be fixed by transistor 396. Then these currents are ratio'ed in transistors 368 and 370 to provide a sufficient amount of current for the driver transistor 384 but not enough to increase more current based upon a limited current mirror by transistor 396.

EX1001, 5:15-24

EX1001, Fig. 3B

Petition (Paper 1), 6-7, 17-19, 59-60
Reply (Paper 25), 4-5

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

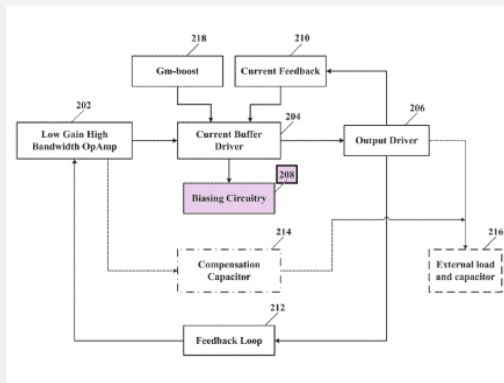
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Slide 12: Patent Owner's objection to slide 12 is substantially the same as for slide 10.

Slide 32: Slide 32 is identical to slide 10 and Patent Owner objects for the same reasons.

Slide 40 (reproduced below): Petitioner has not previously presented, discussed, annotated, or developed any argument that Figure 2 of the '074 patent is an embodiment of claim 1, and slide 40 makes no such connection rendering it irrelevant and confusing.

'074 Patent: Biasing Circuit = Circuit 208



EX1001, Fig. 2

output driver 206. The voltage regulator of FIG. 2 may further comprise biasing circuits 208, current feedback 210, a feedback loop 212, a compensation capacitor 214 and a gm-boost circuit 218. This voltage regulator may supply

EX1001, 3:62-65

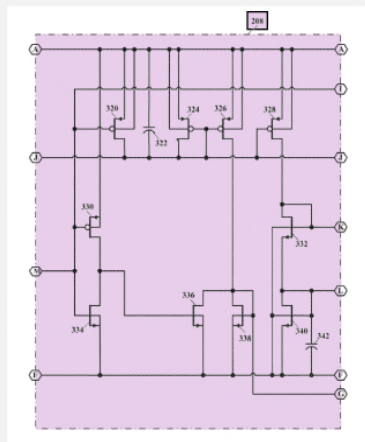
Reply (Paper 25), 13-14

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

40

Slide 41 (reproduced below): Petitioner has not previously presented, discussed, annotated, or developed any argument that the colored circuitry in Figure 3 of the '074 patent corresponds to claim 1, and slide 41 makes no such connection rendering it irrelevant and confusing.

'074 Patent: Biasing Circuit = Circuit 208



EX1001, Fig. 3

Shown in FIG. 3 is the bias circuit 208 for the USB regulator. Transistors 320, 330, 334 and 336 may be shut off during disabling/power down operation to make sure this circuit will consume substantially no DC current. Capacitors 322 and 342 are coupling capacitors to improve the VDD noise cancelation making sure the gates of transistors 324, 326 and 328 are moving the same way as VDD (node A) to cancel the power noise resulting with $V_{gs_noise}=0.342$ acts similarly to help transistor 340 have better ground noise immunity resulting in $V_{gs_noise}=0$. Node M is the enable signal coming to the regulator circuit so that the module can be turned off when disabled.

EX1001, 4:43-54

Reply (Paper 25), 13-14

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Respectfully submitted,

Dated: June 25, 2025

/Travis Jensen/

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Counsel for Patent Owner

CERTIFICATE OF SERVICE

The undersigned certifies that on June 25, 2025, a copy of the following was served in its entirety via electronic mail, upon the following attorneys of record for Petitioner:

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