

Intel Corporation
v.
Qualcomm Incorporated

IPR2019-00047

IPR2019-00048

IPR2019-00049

U.S. Patent No. 9,154,356

Patent Owner's Demonstrative Exhibits

U.S. Patent No. 9,154,356

(12) **United States Patent**
Tasic et al.

(10) Patent No.: **US 9,154,356 B2**
(45) Date of Patent: **Oct. 6, 2015**

(54) **LOW NOISE AMPLIFIERS FOR CARRIER AGGREGATION**

(75) Inventors: **Aleksandar Miodrag Tasic**, San Diego, CA (US); **Anosh Bomi Davierwalla**, San Diego, CA (US)

(73) Assignee: **QUALCOMM Incorporated**, San Diego, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **13/590,423**

(22) Filed: **Aug. 21, 2012**

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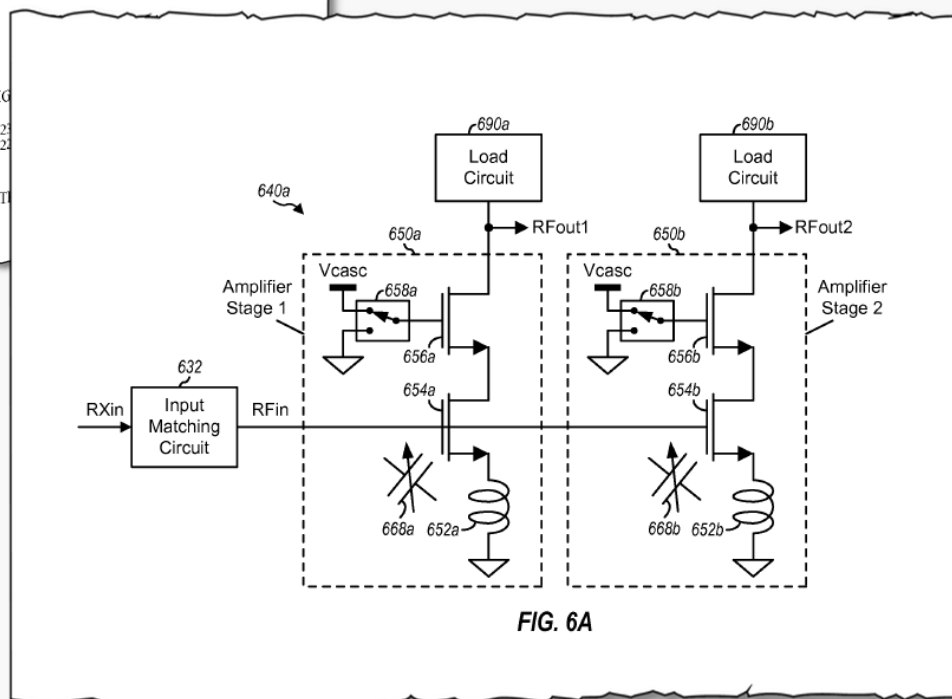


FIG. 6A

Intel 1001, Fig. 6A*

* All Citations are to IPR2019-00047, unless otherwise noted.

Instituted Grounds

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- Ground I: Claims 1, 11, 17 and 18 as Anticipated by Uehara
- Ground II: Claims 7 and 8 as Obvious over Uehara and Perumana
- Ground III: Claim 10 as Obvious over Uehara and Youssef
- Ground IV: Claims 1, 11, 17 and 18 as Obvious over Uehara and Feasibility Study
- Ground V: Claims 7 and 8 as Obvious over Uehara, Feasibility Study, and Permuna
- Ground VI: Claim 10 as Obvious over Uehara, Feasibility Study, and Youssef

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- Ground I: Claims 1, 17, and 18 as Obvious over Jeon and Xiong
- Ground II: Claims 9 and 10 as Obvious over Jeon, Xiong, and Youssef
- Ground III: Claims 1, 17, and 18 as Obvious over Jeon, Xiong, and Feasibility Study
- Ground IV: Claims 9 and 10 as Obvious over Jeon, Xiong, Youssef, and Feasibility Study

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- Ground I: Claims 2–8, and 11 as Obvious over Jeon and Xiong
- Ground II: Claims 2–8, and 11 as Obvious over Jeon, Xiong, and Feasibility Study

Patentability

- 1) “Independently Enabled or Disabled” Amplifier Stages
 - a) Uehara Fails to Anticipate
 - b) Jeon and Xiong Fail to Render Obvious
- 2) The Petition Relies on an Overly Broad Interpretation of “Carrier Aggregation”
- 3) Petitioner Fails to Establish that Uehara and Jeon/Xiong Disclose “Carrier Aggregation”
- 4) Petitioner Fails to Sufficiently Articulate a Motivation to Combine Uehara or Jeon and Xiong with the Feasibility Study

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