

# Exhibit 5

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SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG TELECOMMUNICATIONS  
15 AMERICA, LLC, SAMSUNG TECHWIN CO., LTD., and SAMSUNG OPTO-ELECTRONICS  
AMERICA, INC.

16 UNITED STATES DISTRICT COURT  
17 NORTHERN DISTRICT OF CALIFORNIA

18  
19 ADVANCED MICRO DEVICES, INC., et al.,

20 Plaintiffs and Counterdefendants,

21 v.

22 SAMSUNG ELECTRONICS CO., LTD., et al.,

23 Defendants and Counterclaimants.  
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26

Case No. 3:08-CV-0986-SI

**DEFENDANTS AND  
COUNTERCLAIMANTS'  
PRELIMINARY INVALIDITY  
CONTENTIONS PURSUANT TO  
PATENT L.R. 3-3**

27 Pursuant to Patent Local Rule 3-3, Defendants and Counterclaimants (collectively  
28 “Samsung”) hereby submit their Preliminary Invalidity Contentions to Plaintiffs and

SF: 107104-4

SAMSUNG'S PRELIMINARY INVALIDITY CONTENTIONS  
CV-08-0986-SI

1 In addition, as disclosed herein, Samsung contends that certain claims of the patents-in-suit  
2 are invalid for failing to comply with the written description, enablement, best mode, and/or  
3 definiteness requirements pursuant to 35 U.S.C. § 112. As a result, Samsung's Preliminary  
4 Invalidity Contentions are made in the alternative, and should in no way be seen as admissions (1)  
5 as to the proper construction or scope of the claims of the patents-in-suit or (2) that any of the  
6 patents-in-suit meet the written description, enablement, best mode, or definiteness requirements.

7 **I. Patent L.R. 3-3(a): Identity of Each Item of Prior Art**

8 Samsung identifies the following prior art patents and publications for each of the asserted  
9 patents. Samsung reserves the right to rely on any products offered for sale, publicly used, or  
10 publicly known that embodied any of the references identified below.

11 **A. U.S. Patent No. 5,545,592 ("the '592 patent"), Claims 1 & 4**

12 Samsung identifies the following items of prior art that anticipate the asserted claims and/or  
13 render the asserted claims obvious alone or in combination with other prior art identified below:

14

15 **Prior Art Patents and**

16 **Patent Publications**

<u>Number</u>	<u>Country of Origin</u>	<u>Date of Issue/Publication</u>
5,975,912	United States	Nov. 2, 1999
4,920,071	United States	Apr. 24, 1990
2-235372	Japan	Sep. 18, 1990
4-290425	Japan	Oct. 15, 1992
5-243179	Japan	Sep. 21, 1993
5,103,272	United States	Apr. 7, 1992
4,701,349	United States	Oct. 20, 1987
5,652,180	United States	Jul. 29, 1997
2-90610	Japan	Mar. 30, 1990
5-102073	Japan	Apr. 23, 1993
2-116124	Japan	Apr. 27, 1990

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2-250354	Japan	Oct. 8, 1990
6-204173	Japan	Apr. 8, 1994
6-97111	Japan	Apr. 8, 1994
5,170,242	United States	Dec. 8, 1992
5,187,120	United States	Feb. 16, 1993
5,221,853	United States	June 22, 1993
5,686,323	United States	Nov. 11, 1997
5,227,335	United States	Jul. 13, 1993
5,102,827	United States	Apr. 7, 1992
5,202,287	United States	Apr. 13, 1993
5,084,417	United States	Jan. 28, 1992
4,640,004	United States	Feb. 3, 1987
5,462,895	United States	Oct. 31, 1995
5,525,543	United States	June 11, 1996
4,851,369	United States	Jul. 25, 1989
4,994,410	United States	Feb. 19, 1991
5,049,975	United States	Sep. 17, 1991
5,242,860	United States	Sep. 7, 1993
5,420,072	United States	May 30, 1995
5,585,673	United States	Dec. 17, 1996
5,317,187	United States	May 31, 1994
4-61323	Japan	Feb. 27, 1992
4-71231	Japan	Mar. 5, 1992
3-153077	Japan	Jul. 1, 1991
4-14219	Japan	Mar. 5, 1992
2-119129	Japan	May 7, 1990
63-280417	Japan	Nov. 17, 1988

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63-12132	Japan	Jul. 22, 1986
1-25572	Japan	Jan. 27, 1989
2-231713	Japan	Sep. 13, 1990
4-137621	Japan	May 12, 1992
<b><u>Prior Art Articles</u></b>		
<u>Title</u>	<u>Date of Publication</u>	<u>Author and Publisher</u>
Contact Resistance Improvement for Tungsten Metallurgy	Jan. 1, 1990	T.J. Hartswick, P. Lee, E.M. Smith; IBM
New Structure for Contact Metallurgy	May 1, 1983	C.Y. Ting; IBM
Using Titanium Nitride and Silicon Nitride for VLSI Contacts	Sep. 1, 1981	C.Y. Ting; IBM
Etch Stop Materials and Process for Reactive Ion Etching of Aluminum Copper	Jan. 1, 1988	W.J. Cote, J.E. Cronin, C.W. Kaanta, T.M. Wright; IBM
Novel Submicron MOS Devices by Self-Aligned Nitridation of Silicide (Sanicide)	1985	H. Kaneko, M. Koyanagi, S. Shimizu, Y. Kubota, S. Kishino; IEEE
Self-aligned titanium silicide device technology by NH <sub>3</sub> plasma assisted thermal annealing	Nov./Dec. 1987	B.Z. Li, S.F. Zhou, J. Li, T.A. Tang; J. Vac. Sci. Technol. B
An Evaluation of the Device Performance and Manufacturability of Three Adhesion Layers for Blanket CVD Tungsten	1991	R. Barber, M. Shenasa; Materials Research Society
Titanium Nitride Local Interconnect Technology for VLSI	1987	T. Tang, C.C. Wei, R. Haken, T. Holloway, L. Hite, T. Blake; IEEE
Failure of Titanium Nitride Diffusion Barriers During Tungsten Chemical Vapor Deposition: Theory and Practice	1992	M. Rutten, D. Greenwell, S. Luce, R. Dreves; Materials Research Society
A Quarter-Micrometer Interconnection Technology Using a TiN/Al-Si-Cu/TiN/Al-Si-	1993	T. Kikkawa, H. Aoki, E. Ikawa, J. Drynan; IEEE

Cu/TiN/Ti Multilayer Structure		
On the Failure Mechanisms of Titanium Nitride/Titanium Silicide Barrier Contacts Under High current Stress	Dec. 1988	Kuan-Yu Fu, Ronald E. Pyle, IEEE
Al/W/TiNx/TiSi <sub>y</sub> /Si Barrier Technology for 1.0-um Contacts	Feb. 1988	S.W. Sun, J. J. Lee, B. Boeck, and R.L. Hance, IEEE

Samsung further identifies all prior art references cited or included in the prosecution history of the '592 patent, as well as any statements regarding the prior art present in the prosecution history. Samsung further identifies and reserves the right to rely on all related applications and foreign counterparts to any reference identified above.

**B. U.S. Patent No. 4,737,830 (“the ‘830 patent”), Claims 5 &6**

Samsung identifies the following items of prior art that anticipate the asserted claims and/or render the asserted claims obvious alone or in combination with other prior art identified below:

<b><u>Prior Art Patents and Patent Applications</u></b>		
<u>Number</u>	<u>Country of Origin</u>	<u>Date of Issue/Publication</u>
4,654,689	United States	March 31, 1987
59-46044	Japan	March 15, 1984
55-52237	Japan	April 16, 1980
58-64048	Japan	April 16, 1983
59-040547	Japan	March 6, 1984
4,675,717	United States	June 23, 1987
4,477,736	United States	October 16, 1984
4,493,056	United States	January 8, 1985
4,516,312	United States	May 14, 1985
4,536,941	United States	August 27, 1985
4,559,548	United States	December 17, 1985

1	Frox System Owner's Manual including Video Manual	1991	Frox, Inc.
2			
3	IBM Aptiva Handbook	May, 1996	IBM
4	Mass MicroSystems TitleMaker User's Guide and Reference Manual	1990	Mass MicroSystems
5	Magnavox CD11450/CD11550 Operating Instructions	1994	Philips Interactive Media Systems
6			
7	Macintosh Reference	1990	Apple Computer, Inc.
8	Trinitron Color TV Operating Instructions	1995	Sony Corporation
9	Sony Trinitron Color TV Service Manual	1995	Sony Corporation
10	Data Sheet: MOS Integrated Circuit 424270	1991	NEC Corporation
11	Data Sheet: MB834000A/AL ROM Memory	November, 1990	Fujitsu
12			
13	Data Sheet: SCC68070 Microprocessor	1991	Philips Semiconductors
14	The CD-I Production Handbook	1992	Philips Electronics UK Ltd.

15 Samsung further identifies all prior art references cited or included in the prosecution  
16 history of the '879 patent, as well as any statements regarding the prior art present in the  
17 prosecution history. Samsung further identifies and reserves the right to rely on all related  
18 applications and foreign counterparts to any reference identified above.

19  
20 **II. Patent L.R. 3-3(b): Anticipation and Obviousness**

21 Samsung contends that each item of prior art identified above and for which a chart was  
22 provided anticipates the asserted claims of the asserted patents. Alternatively, Samsung contends  
23 that each of the items of prior art listed above renders the asserted claims of the asserted patents  
24 obvious, either alone or in combination with each other or with what was known to those of  
25 ordinary skill in the art at the time of the alleged invention of the subject matter claimed in the  
26 asserted patents.

27 Samsung contends that one of skill in the art, at the time the alleged inventions were made,  
28 would have been motivated to combine the prior art identified above in such a way as to reach the

1 alleged inventions. The motivation to combine such items (although not necessarily required by the  
2 Supreme Court's ruling in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (April 30, 2007)), is  
3 found, explicitly or implicitly, in one or more of the following:

- 4 1. His or her own knowledge or common sense;
- 5 2. The prior art references themselves and/or the prior art as a whole;
- 6 3. The interrelated teachings of multiple prior art references;
- 7 4. The subject matter acknowledged as prior art in the asserted patents;
- 8 5. The nature of the problems to be solved and the existence of similar improvements in  
9 similar applications;
- 10 6. Design incentives and other market forces, including the advantages of creating a superior  
11 and more desirable product and the effects of demands known to the design community or  
12 present in the marketplace;
- 13 7. The ability to implement the alleged invention as a predictable variation of the prior art;
- 14 8. Improvements in similar devices;
- 15 9. Any needs or problems known in the field and addressed by the asserted patents; and,
- 16 10. The number of identified, predictable solutions to the problems addressed by the asserted  
17 patents.

18 Exemplary combinations of references that render the asserted claims of the asserted patents  
19 obvious are identified in the charts attached hereto as Appendices A-G, along with exemplary  
20 reasons to combine the items. Further, although not necessarily specified in each of the claim  
21 charts (Appendices A-G) in order to avoid repetition, Samsung contends that, for each AMD Patent,  
22 it would have been obvious for one of ordinary skill in the art at the relevant time to combine each  
23 reference identified in Section I above, for at least the same reasons identified in the respective  
24 claim charts (*see* Appendices).

### 25 **III. Patent L.R. 3-3(c): Invalidity Charts**

26 Charts identifying where specifically in each alleged item of prior art each element of each  
27 asserted claim is found are attached hereto as Appendices A-G. The citations to the prior art  
28 references contained in the charts are merely exemplary and are not meant to be limiting in any  
way. With respect to the anticipation and obviousness analyses provided by Samsung herein and



1 within the attached claim charts, Samsung cites representative portions of identified references,  
2 even where a reference may contain additional support for a particular claim element. Where  
3 Samsung cites to a particular figure in a prior art reference, the citation should be understood to  
4 encompass the caption and description of the figure and any text relating to the figure in addition to  
5 the figure itself. Similarly, where a cited portion of text refers to a figure, the citations should be  
6 understood to include the figure as well. As a general matter, all portions of each reference are  
7 relied upon to support the disclosure of each patent claim element, as all portions provide general  
8 support. Persons of ordinary skill in the art generally read a prior art reference as a whole and in  
9 the context of other publications and literature. Thus, to understand and interpret a specific  
10 statement or disclosure within a prior art reference, such persons would rely on other information  
11 within the reference, along with other publications and their general scientific knowledge.  
12 Accordingly, Samsung reserves the right to rely upon the prior art references in their entirety to  
13 establish the invalidity of the asserted patents.

14 Samsung has not provided individual claim charts for each of the references listed in  
15 Section II above because: (1) Samsung is still investigating and analyzing this prior art and expect  
16 to uncover additional information about this prior art as discovery progresses and Samsung's  
17 analysis continues; (2) Samsung is relying upon the references at this time as illustrating the state of  
18 the art and/or the level of ordinary level of skill in the art; (3) Samsung is relying upon the  
19 references at this time as secondary prior art in combination with one or more other references for  
20 which an individual claim chart has been provided; and/or (4) the references have substantially  
21 similar disclosures as other prior art for which a chart has been provided, and thus the references  
22 are cumulative. Consequently, Samsung reserves the right to revise these Preliminary Invalidity  
23 Contentions to more specifically rely on these and other references to prove the invalidity of the  
24 asserted claims of the patents-in-suit in a manner consistent with the Federal Rules of Civil  
25 Procedure, the Patent Local Rules and the Court's rules and orders.

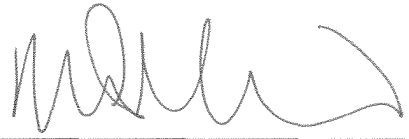
26 **IV. Patent L.R. 3-3(d): Invalidity Under 35 U.S.C. § 112**

27 Pursuant to Patent L.R. 3-3(d), Samsung contends that certain claims of the patents-in-suit  
28 are invalid because: (1) the claims are indefinite pursuant to 35 U.S.C. § 112 (2); (2) the claims are

1 DATED: November 14, 2008

COVINGTON & BURLING LLP

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