

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

~~INTEL CORPORATION, GLOBALFOUNDRIES U.S., INC.,~~
~~AND MICRON TECHNOLOGY, INC.,~~
~~Petitioners~~ SAMSUNG ELECTRONICS COMPANY, LTD.
Petitioner,

v.

DANIEL L. FLAMM,
Patent Owner.

~~PTAB Case No. IPR2017-00281~~
Patent No. RE40,264 E

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. RE40,264 E**

~~Claims 37-50 & 67~~

TABLE OF CONTENTS

Page

| | | |
|------|--|----|
| I. | Introduction..... | 1 |
| II. | Mandatory notices | 2 |
| | A. Real party in interest..... | 2 |
| | B. Related matters | 2 |
| | C. Notice of counsel and service information..... | 2 |
| III. | Requirements for <i>inter partes</i> review | 4 |
| | A. Ground for standing | 4 |
| | B. Identification of challenge..... | 5 |
| IV. | Overview of the '264 patent | 5 |
| | A. The claims recite two temperature etch processes and add only conventional features..... | 7 |
| | B. The earliest priority date for the '264 patent is September 1997..... | 9 |
| V. | Overview of the prior art | 10 |
| | A. Kadomura (Ex. 1005)..... | 11 |
| | B. Matsumura (Ex. 1003)..... | 12 |
| | C. Kikuchi (Ex. 1004)..... | 16 |
| | D. Muller (Ex. 1002)..... | 18 |
| | E. Moslehi '824 (Ex. 1010) | 20 |
| | F. Oka (Ex. 1011) | 23 |
| | G. Level of ordinary skill in the art..... | 24 |
| VI. | Claims 37-50 and 67 of the '264 patent are unpatentable..... | 24 |
| | A. Ground 1: Claims 37-46 are obvious over Kadomura and Matsumura..... | 25 |
| | 1. Claim 37..... | 25 |
| | 2. Claim 38..... | 40 |
| | 3. Claim 39..... | 40 |
| | 4. Claim 40..... | 41 |
| | 5. Claim 41..... | 45 |

TABLE OF CONTENTS
(Continued)

| | Page |
|---|-------------|
| 6. Claim 42 | 46 |
| 7. Claim 43 | 46 |
| 8. Claim 44 | 47 |
| 9. Claim 45 | 48 |
| 10. Claim 46 | 49 |
| B. Ground 2: Claims 40, 42, 45, 49, and 67 are obvious over Kadomura, Matsumura, and Muller | 49 |
| 1. Claim 37 | 49 |
| 2. Claim 40 | 49 |
| 3. Claim 42 | 51 |
| 4. Claim 45 | 52 |
| 5. Claim 49 | 53 |
| 6. Claim 67 | 55 |
| C. Ground 3: Claim 50 is obvious over Kadomura, Matsumura, and Kikuchi | 56 |
| 1. Claim 37 | 56 |
| 2. Claim 50 | 56 |
| D. Ground 4: Claims 37, 46, 50, and 67 are obvious over Kikuchi and Matsumura | 58 |
| 1. Claim 37 | 58 |
| 2. Claim 38 | 67 |
| 3. Claim 39 | 67 |
| 4. Claim 40 | 67 |
| 5. Claim 41 | 70 |
| 6. Claim 42 | 71 |
| 7. Claim 43 | 72 |
| 8. Claim 44 | 73 |

TABLE OF CONTENTS
(Continued)

| | Page |
|---|-------------|
| 9. Claim 45 | 73 |
| 10. Claim 46 | 74 |
| 11. Claim 50 | 74 |
| 12. Claim 67 | 76 |
| E. Ground 5: Claims 41 and 49 are obvious over Kikuchi, Matsumura, and Muller | 76 |
| 1. Claim 37 | 76 |
| 2. Claim 41 | 76 |
| 3. Claim 49 | 78 |
| F. Ground 6: Claims 37 and 47-48 are obvious over Moslehi '824, Matsumura, and Oka | 81 |
| 1. Claim 37 | 81 |
| 2. Claim 47 | 93 |
| 3. Claim 48 | 94 |
| VII. Conclusion | 94 |

TABLE OF CONTENTS

| | Page |
|--|-----------|
| <u>I. Introduction.....</u> | <u>1</u> |
| <u>II. Mandatory notices</u> | <u>2</u> |
| <u>A. Real party in interest.....</u> | <u>2</u> |
| <u>B. Related matters</u> | <u>3</u> |
| <u>C. Notice of counsel and service information.....</u> | <u>4</u> |
| <u>III. Requirements for <i>inter partes</i> review</u> | <u>7</u> |
| <u>A. Ground for standing</u> | <u>7</u> |
| <u>B. Identification of challenge.....</u> | <u>8</u> |
| <u>IV. Overview of the '264 patent</u> | <u>9</u> |
| <u>A. The claims recite two-temperature etch processes and add only conventional features.....</u> | <u>11</u> |
| <u>B. The earliest priority date for the '264 patent is September 1997.....</u> | <u>12</u> |
| <u>V. Overview of the prior art</u> | <u>13</u> |
| <u>A. Kadomura (Ex.1005).....</u> | <u>14</u> |
| <u>B. Matsumura (Ex.1003).....</u> | <u>16</u> |
| <u>C. Kikuchi (Ex.1004).....</u> | <u>20</u> |
| <u>D. Muller (Ex.1002)</u> | <u>23</u> |
| <u>E. Moslehi '824 (Ex.1010)</u> | <u>25</u> |
| <u>F. Oka (Ex.1011)</u> | <u>28</u> |
| <u>G. Level of ordinary skill in the art.....</u> | <u>29</u> |
| <u>VI. Claims 37-50 and 67 of the '264 patent are unpatentable</u> | <u>29</u> |
| <u>A. Ground 1: Claims 37-46 are obvious over Kadomura and Matsumura.....</u> | <u>30</u> |
| <u>1. Claim 37.....</u> | <u>30</u> |
| <u>2. Claim 38.....</u> | <u>45</u> |
| <u>3. Claim 39.....</u> | <u>45</u> |
| <u>4. Claim 40.....</u> | <u>46</u> |
| <u>5. Claim 41</u> | <u>50</u> |

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.