

Testing Laboratory
Accreditation
Certificate

Accreditation No. RTL02610



UL Japan, Inc.

4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan

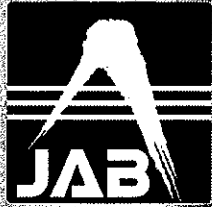
meets the following criteria. On the basis of this, Japan Accreditation Board (JAB) grants accreditation to the said testing laboratory.

| | |
|-----------------------------------|---|
| Applicable accreditation criteria | : JIS Q 17025:2018 (ISO/IEC 17025:2017) |
| Scope of accreditation | : Electrical testing (As described in the appendix) |
| Premises covered by accreditation | : As described in the appendix. |
| Expiry date of accreditation | : March 31, 2024 |

| | |
|-----------------------|----------------|
| Revised | July 28, 2022 |
| Renewed | April 1, 2022 |
| Initial accreditation | March 14, 2008 |

Y. Iizuka, President

Japan Accreditation Board



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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

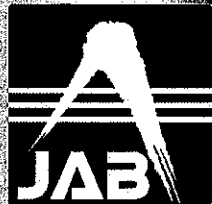
1) Premises on which testing activities are performed

| | | |
|--|---|---|
| Name of Premises | Ise EMC Lab. | |
| Address of Premises | Postal code | 516-0021 |
| | Address | 4383-326, Asamacho, Ise-shi, Mie, Japan |
| Testing service at permanent facilities or on site testing service | <input checked="" type="checkbox"/> Testing service at permanent facilities <input type="checkbox"/> On site testing service | |

Scope of Accreditation

| | |
|-------|------------------------|
| FIELD | M21 Electrical Testing |
|-------|------------------------|

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|---|
| M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.1 Continuous disturbance tests | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.4 Conducted emission tests at telecommunication ports | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.6 Electric field test (30 MHz to 1 GHz) | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.7 Electric field test (1 GHz and over) | VCCI technical requirements (VCCI-CISPR 32) |



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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

1) Premises on which testing activities are performed

| | | |
|--|---|-------------------------------------|
| Name of Premises | Yokowa EMC Lab. | |
| Address of Premises | Postal code | 516-1106 |
| | Address | 108, Yokowacho, Ise-shi, Mie, Japan |
| Testing service at permanent facilities or on site testing service | <input checked="" type="checkbox"/> Testing service at permanent facilities <input type="checkbox"/> On site testing service | |

Scope of Accreditation

| | |
|-------|------------------------|
| FIELD | M21 Electrical Testing |
|-------|------------------------|

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|--|
| M21 Electrical testing | ANSI C63.4 |
| M21.4 Electromagnetic compatibility testing | CISPR 11 (except 10) |
| M21.4.1 Continuous disturbance tests | EN 55011 (except 10) |
| | AS/NZS CISPR 11 (except 10, 12) |
| | CISPR 13 : 2009 + A1 : 2015 (except 6) |
| | EN 55013 : 2013 + A1 : 2016 (except 6) |
| | CISPR 14-1 (except 7) |
| | EN 55014-1 (except 7) |
| | AS/NZS CISPR 14.1 (except 8) |
| | CISPR 15 (except 10) |
| | EN 55015 (except 10) |
| | CISPR 22 : 2008 (except 7) |
| | EN 55022 : 2010 (except 7) |
| | CISPR 32 |
| | EN 55032 |
| | AS/NZS CISPR 32 |
| | IEC 61000-6-3 (except 9) |
| | EN 61000-6-3 (except 9) |
| | AS/NZS 61000.6.3(except 9) |
| | IEC 61000-6-4 (except 9) |
| | EN 61000-6-4 (except 9) |
| | AS/NZS 61000.6.4(except 9) |
| | ICES-001 |
| | ICES-003 |
| | IEC 61131-2 |
| | EN 61131-2 |
| | IEC 61204-3 |
| | EN 61204-3 |
| | IEC 61326-1 |
| | EN 61326-1 |



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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|--|
| | IEC 61326-2-6 EN 61326-2-6 IEC 60601-1-2 EN 60601-1-2 EN 50270 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.4 Conducted emission tests at telecommunication ports | CISPR 22 : 2008 (except 7) EN 55022 : 2010 (except 7) CISPR 32 EN 55032 AS/NZS CISPR 32 IEC 61000-6-3 (except 9) EN 61000-6-3 (except 9) AS/NZS 61000.6.3(except 9) IEC 61000-6-4 (except 9) EN 61000-6-4 (except 9) AS/NZS 61000.6.4(except 9) ICES-003 IEC 61204-3 EN 61204-3 IEC 60601-1-2 EN 60601-1-2 EN 50270 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.5 Magnetic/Electric field test(up to 30MHz) | ANSI C63.4 IEC / PAS 62825 CISPR 11 (except10) EN 55011 (except10) AS/NZS CISPR 11 (except10, 12, table 13 Van Veen loop method) ICES-001 IEC 61204-3 EN 61204-3 IEC 61326-1 EN 61326-1 IEC 61326-2-6 EN 61326-2-6 IEC 60601-1-2 EN 60601-1-2 |



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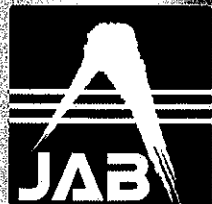
| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|--|---|
| M21.4.6 Electric field test(30MHz to 1GHz) | ANSI C63.4 ANSI C63.5-2017 CISPR 11 (except 10) EN 55011 (except 10) AS/NZS CISPR 11 (except 10, 12) CISPR 13 : 2009 + A1 : 2015 (except 6) EN 55013 : 2013 + A1 : 2016 (except 6) CISPR 14-1 (except 7) EN 55014-1 (except 7) AS/NZS CISPR 14.1 (except 8) CISPR 15 (except 10) EN 55015 (except 10) CISPR 22 : 2008 (except 7) EN 55022 : 2010 (except 7) CISPR 32 EN 55032 AS/NZS CISPR 32 IEC 61000-6-3 (except 9) EN 61000-6-3 (except 9) AS/NZS 61000.6.3(except 9) IEC 61000-6-4 (except 9) EN 61000-6-4 (except 9) AS/NZS 61000.6.4(except 9) ICES-001 ICES-003 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 IEC 61326-1 EN 61326-1 IEC 61326-2-6 EN 61326-2-6 IEC 60601-1-2 EN 60601-1-2 EN 50270 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 VCCI technical requirements (VCCI-CISPR 32) |

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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|--|---|
| M21.4.7 Electric field test(1GHz and over) | ANST C63.4 ANSI C63.5-2017 CISPR 13 : 2009 +A1 : 2015 (except over 3GHz and 6) EN 55013 : 2013 + A1 : 2016 (except over 3GHz and 6) CISPR 22 : 2008 (except 7) EN 55022 : 2010 (except 7) CISPR 32 EN 55032 AS/NZS CISPR 32 IEC 61000-6-3 (except 9) EN 61000-6-3 (except 9) AS/NZS 61000.6.3(except 9) IEC 61000-6-4 (except 9) EN 61000-6-4 (except 9) AS/NZS 61000.6.4(except 9) ICES-003 IEC 60601-1-2 EN 60601-1-2 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.9 Disturbance power tests | CISPR 13 : 2009 +A1 : 2015 (except 6) EN 55013 : 2013 + A1 : 2016 (except 6) CISPR 14-1 (except 7) EN 55014-1 (except 7) AS/NZS CISPR 14.1 (except 8) IEC 60601-1-2 EN 60601-1-2 |
| M21.4.10 Harmonic current emission tests | IEC 61000-3-2 EN 61000-3-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61000-6-3 (except 9) EN 61000-6-3 (except 9) AS/NZS 61000.6.3(except 9) IEC 61326-2-6 EN 61326-2-6 IEC 61000-3-12 EN 61000-3-12 IEC 61204-3 EN 61204-3 EN 301 489-1 |



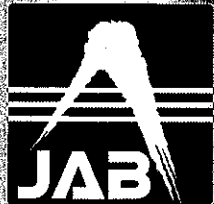
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| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|--|
| | EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.12 Voltage fluctuation and flicker tests | IEC 61000-3-3 EN 61000-3-3 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61000-6-3 (except 9) EN 61000-6-3 (except 9) AS/NZS 61000.6.3(except 9) IEC 61326-2-6 EN 61326-2-6 IEC 61000-3-11 EN 61000-3-11 IEC 61204-3 EN 61204-3 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.14 Electrostatic discharge immunity tests | IEC 61000-4-2 EN 61000-4-2 IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 |



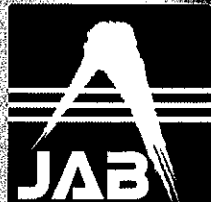
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| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|---|
| | EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.15 RF radiated electromagnetic field immunity tests | IEC 61000-4-3 EN 61000-4-3 IEC 61000-4-39(Up to 26 MHz) EN 61000-4-39(Up to 26 MHz) IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.16 Electrical fast transient / burst tests | IEC 61000-4-4 EN 61000-4-4 IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 |



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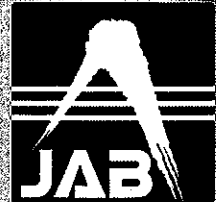
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| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|-------------------------------|--|
| | EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.17 Surge immunity tests | IEC 61000-4-5 EN 61000-4-5 IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |



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| Type of Laboratory | Testing Laboratory |
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| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|--|--|
| M21.4.18 RF conducted immunity tests | IEC 61000-4-6 EN 61000-4-6 IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.19 Power frequency magnetic field immunity tests | IEC 61000-4-8 EN 61000-4-8 IEC 61000-6-1 EN 61000-6-1 IEC 61000-6-2 EN 61000-6-2 IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 IEC 61131-2 EN 61131-2 EN 50270 IEC 61547 EN 61547 |



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| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|--|--|
| M21.4.20 A.C. power supply fluctuation immunity tests | IEC 61000-4-11 EN 61000-4-11 IEC 61000-6-1 (Input current not exceeding 16 A) EN 61000-6-1 (Input current not exceeding 16 A) IEC 61000-6-2 (Input current not exceeding 16 A) EN 61000-6-2 (Input current not exceeding 16 A) IEC 61326-1 EN 61326-1 IEC 60601-1-2 EN 60601-1-2 IEC 61326-2-6 EN 61326-2-6 EN 50130-4 IEC 61131-2 EN 61131-2 IEC 61204-3 EN 61204-3 EN 50270 CISPR 14-2 EN 55014-2 IEC 60335-1 EN 60335-1 IEC 61547 EN 61547 EN 301 489-1 EN 301 489-3 EN 301 489-17 EN 301 489-19 |
| M21.4.21 Immunity tests for Information technology equipment, broadcast receivers and associated equipment | CISPR 20 EN 55020 CISPR 24 EN 55024 CISPR 35 (except 4.2.7) EN 55035 (except 4.2.7) |
| M21.28 Radio Receiver M21.28.1 Limit of radio waves which are secondarily emitted | EN 303 340 FINAL DRAFT EN 303 345 EN 303 345-1 EN 303 345-2 EN 303 345-3 EN 303 345-4 |
| M21.28.2 Sensitivity | EN 303 340 FINAL DRAFT EN 303 345 EN 303 345-1 EN 303 345-2 EN 303 345-3 EN 303 345-4 |



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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|--|
| M21.28.6 Adjacent channel selectivity | EN 303 372-2 EN 303 340 FINAL DRAFT EN 303 345 EN 303 345-1 EN 303 345-2 EN 303 345-3 EN 303 345-4 |
| M21.28.12 Other Radio Receiver Tests | EN 303 372-2 EN 303 340 FINAL DRAFT EN 303 345 EN 303 345-1 EN 303 345-2 EN 303 345-3 EN 303 345-4 |
| M21.41 Accreditation Scope of EMC laboratory for FCC M21.41.1 Unintentional Radiators (FCC Part 15, Subpart B) | ANSI C63.4 ANSI C63.5-2017 FCC Part 15 Subpart B (Up to 40 GHz) |
| M21.41.2 Industrial, Scientific, and Medical Equipment (FCC Part 18) • Consumer ISM equipment | FCC/OET MP-5 (February 1986) ANSI C63.5-2017 FCC Part 18 (Up to 40 GHz) |



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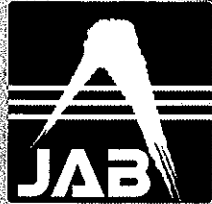
1) Premises on which testing activities are performed

| | | |
|--|---|---|
| Name of Premises | Shonan EMC Lab. | |
| Address of Premises | Postal code | 259-1220 |
| | Address | 1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa, Japan |
| Testing service at permanent facilities or on site testing service | <input checked="" type="checkbox"/> Testing service at permanent facilities <input type="checkbox"/> On site testing service | |

Scope of Accreditation

| | |
|-------|------------------------|
| FIELD | M21 Electrical Testing |
|-------|------------------------|

| CODE OF CLASSIFICATION NAME | TEST METHOD STANDARD |
|---|---|
| M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.1 Continuous disturbance tests | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.4 Conducted emission tests at telecommunication ports | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.6 Electric field test(30MHz to 1GHz) | VCCI technical requirements (VCCI-CISPR 32) |
| M21.4.7 Electric field test (1GHz and over) | VCCI technical requirements (VCCI-CISPR 32) |



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| Type of Laboratory | Testing Laboratory |
| Name of Laboratory | UL Japan, Inc. |
| Address | 4383-326, Asamacho, Ise-shi, Mie, 516-0021 Japan |

1) Premises on which testing activities are performed

| | | |
|--|---|--|
| Name of Premises | Kashima EMC Lab. | |
| Address of Premises | Postal code | 289-0341 |
| | Address | 1614 Mushihata, Katori-shi. Chiba, JAPAN |
| Testing service at permanent facilities or on site testing service | <input checked="" type="checkbox"/> Testing service at permanent facilities <input type="checkbox"/> On site testing service | |

Scope of Accreditation

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| FIELD | M21 Electrical Testing |
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| M21 Electrical testing M21.4 Electromagnetic compatibility testing M21.4.1 Continuous disturbance tests | VCCI technical requirements (VCCI-CISPR 32) |
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