

## Details regarding VLAC-031 site

|                    |   |
|--------------------|---|
| Accreditation No.  | VLAC - 031  |
| Name of Laboratory | Mitsubishi Electric Engineering Co., Ltd.                             |
| Test site name     | Shizuoka Engineering Office   |
| Address            | 3-4-12 Toyoda Suruga-ku, Shizuoka-city, Shizuoka Pref. 422-8528 Japan |
| Responsible person | Motohide Sugiyama   |
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### - SCOPE OF ACCREDITATION -

#### ***【Measurement Method】***

##### **Emission Test**

###### **Radiated disturbance: Enclosure Port**

Radiated field strength measurement ( CISPR 16-2-3, ANSI C63.4:2003/2009 )

(Test Condition) On the ground reference plane, Measurement distance: 3m

Frequency Range (30 MHz - 6 GHz)

Quasi Free Space, Frequency Range (1GHz - 6GHz)

Disturbance power measurement (CISPR16-2-2) Clamp (CISPR 16-1-3)

(Test Facility) 3 m Anechoic chamber

###### **Conducted disturbance: AC/DC mains port**

Disturbance voltage measurement ( CISPR 16-2-1, ANSI C63.4:2003 )

(Test Condition) AMN, High-impedance probe (CISPR 16-1-2)

(Test Facility) 3 m Anechoic chamber

###### **Conducted disturbance: Telecommunications port**

Disturbance voltage measurement ( CISPR 22 Clause 9.6 and Annex C )

(Test Condition) AAN ( CISPR 16-1-2 )

Disturbance current measurement ( CISPR 22 Clause 9.6 and Annex C )

(Test Condition) Current probe ( CISPR 16-1-2 )

(Test Facility) 3 m Anechoic chamber

##### **Immunity Test**

ESD (IEC61000-4-2),

Radiated electromagnetic field strength (IEC61000-4-3),

EFT/B (IEC61000-4-4): AC mains port/Telecommunications port,

Surge (IEC61000-4-5): AC mains port

RF conducted (IEC61000-4-6): AC mains port/Telecommunications port,

Power frequency magnetic field (IEC61000-4-8),

Interruptions and voltage variations/dip (IEC61000-4-11)

(Test Facilities) 3 m Anechoic chamber

##### **Harmonic Test in Public Low Voltage Systems**

Harmonic current (IEC61000-3-2), Voltage fluctuations and flicker (IEC61000-3-3)

(Test Facility) 3 m Anechoic chamber

##### **Telecommunications Equipment Performance Test 1**

Tests based on European Standards

(Test Facility) 3 m Anechoic chamber

##### **Telecommunications Equipment Performance Test 2**

Magnetic Field Measurement

(Test Condition)Magnetic Field Probe

(Test Facility) 3 m Anechoic chamber

## ***【Measurement Standard】***

### **Emission Test**

V-3 : VCCI Technical Requirement

FCC 47CFR/Part15 Subpart B& Subpart C/ANSI C63.4 (2003/2009), FCC 47CFR/Part18/MP-5

CISPR 11, CISPR 14-1, CISPR 22, EN 55011, EN 55014-1, EN 55022

CISPR 13/J 55013/EN 55013/AS/NZS CISPR 13( Measurement only for Ancillary part)

CISPR 15, EN 55015, AS/NZS CISPR 15 (Measurement only for lighting equipment)

J 55001, J 55011, J 55014-1, J 55022,

Technical requirement of Electrical Appliances and Material Safety Act

for the disturbance noise level:Clause 1 of Ministerial Ordinance (Chapter 4, 5 and 7)

AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22

ICES-001, ICES-003, ICES-005, CNS 13803, CNS 13438, CNS 13439, CNS 13783-1

IEC 61000-6-3, IEC 61000-6-4, EN 61000-6-3, EN 61000-6-4,

AS/NZS 61000.6.3, AS/NZS 61000.6.4

IEC 61326-1(Particular requirement IEC61326-2 series),

EN 61326-1((Particular requirement EN 61326-2 series)), JIS C1806-1,

IEC 60601-1-2(Particular requirement IEC60601-2 series),

EN 60601-1-2(Particular requirement EN60601-2 series)

IEC 61851-21, IEC 60945, EN 61851-21, EN 60945, EN 50370-1, IACS E10

### **Immunity Test**

CISPR 14-2, CISPR 24, EN 55014-2, EN 55024

IEC 61000-6-1, IEC 61000-6-2, EN 61000-6-1, EN 61000-6-2,

IEC 61547, EN 61547, EN 50130-4

IEC60601-1-2(Particular requirement IEC60601-2 series),

EN60601-1-2((Particular requirement EN60601-2 series)

IEC61326-1(Particular requirement IEC61326-2 series),

EN61326-1(Particular requirement EN61326-2 series)

JIS C1806-1, JIS C61000-6-1, JIS C61000-6-2, J 1000, JEITA IT-3001A

AS/NZS CISPR 14.2, AS/NZS CISPR 24, AS/NZS 61000.6.1, AS/NZS 61000.6.2

IEC 61547, EN 61547, IEC 61851-21, EN 61851-21, IEC 60945, EN 60945,

EN 50370-2, IACS E10

### **Harmonic Test in Public Low Voltage Systems**

IEC 61000-3-2, JIS C61000-3-2, IEC 61000-3-3, IEC 61000-3-11, IEC 61000-3-12

EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12

AS/NZS 61000.3.2, AS/NZS 61000.3.3, AS/NZS 61000.3.11,

AS/NZS 61000.6.3, AS/NZS 61000.6.4

IEC 61000-6-3, IEC 61000-6-4, EN 61000-6-3, EN 61000-6-4

IEC60601-1-2(Particular requirement IEC60601-2 series),

EN60601-1-2((Particular requirement EN60601-2 series)

IEC61326-1(Particular requirement IEC61326-2 series),

EN61326-1(Particular requirement EN61326-2 series), JIS C1806-1

### **Telecommunications Equipment Performance Test 1**

EN 301 489-1, EN 300 386

### **Telecommunications Equipment Performance Test 2**

IEC 62233, EN 50366