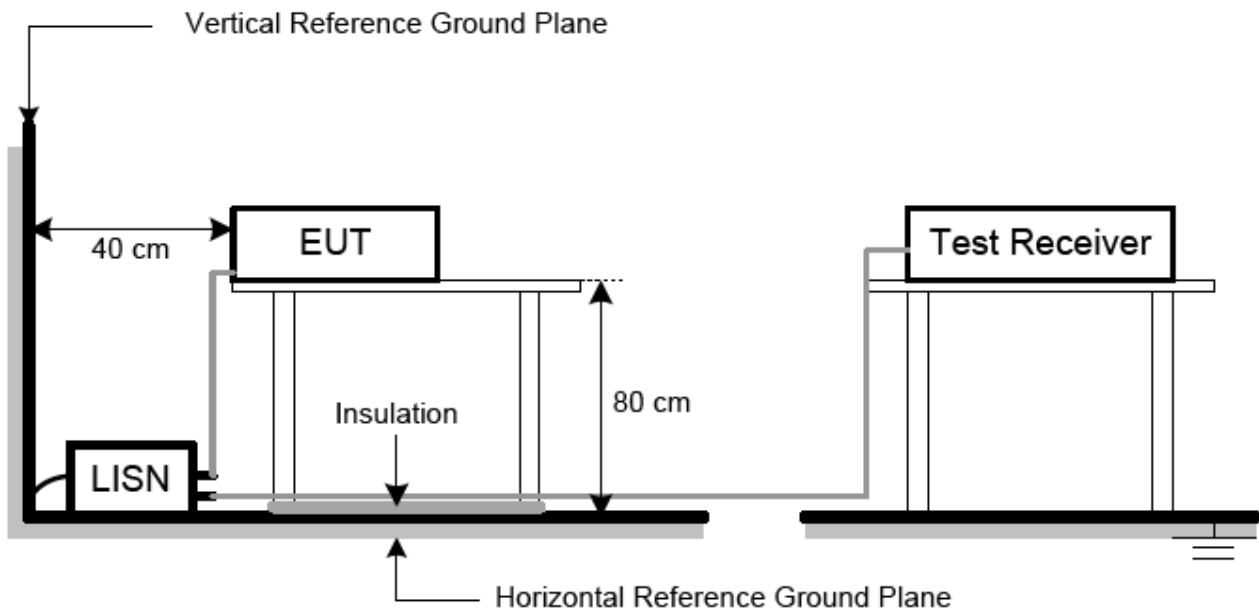
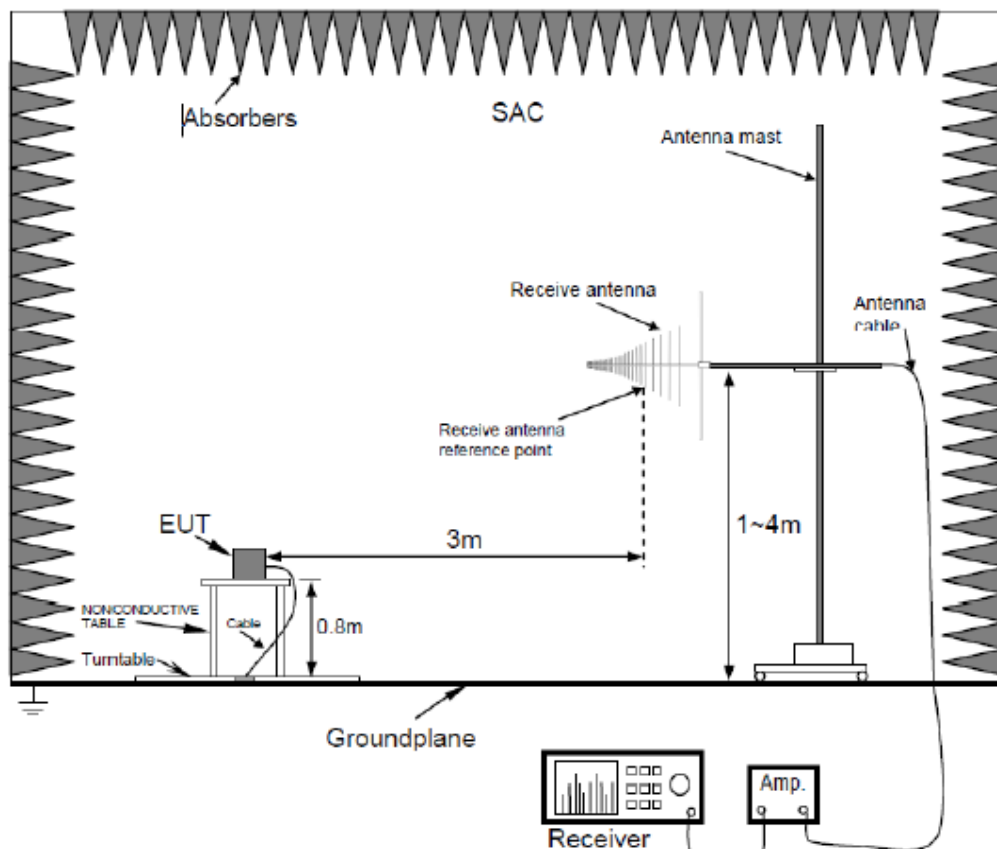


Configuration used for determination 用於特性的配置  
EMI 特性 Electro-Magnetic interference characteristics  
(1)Conducted Emission



(2)Radiated Emission



## Conduction Character (傳導特性)

### ※Character Condition(特性條件) :

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 60Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

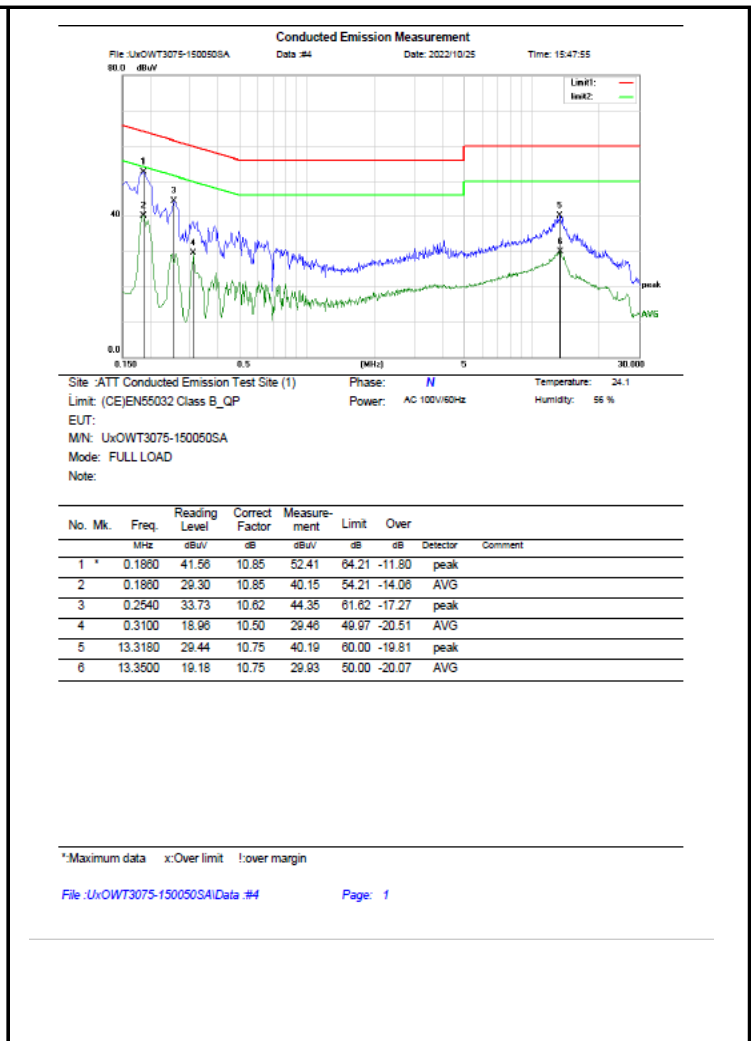
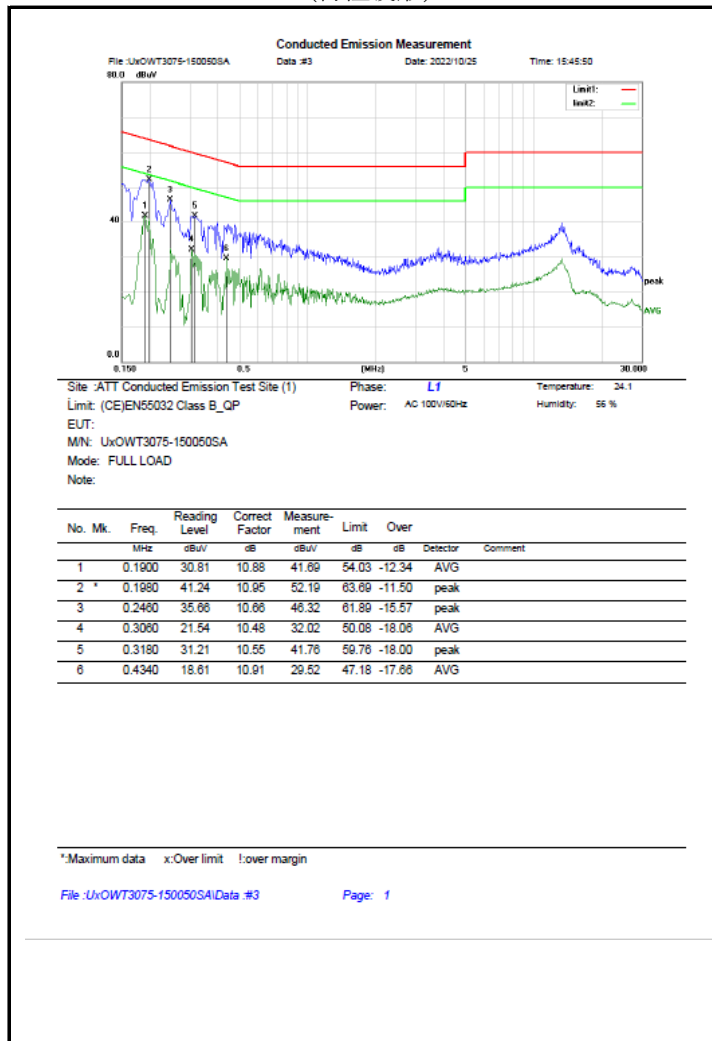
### ※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 外面實驗室                            |
| 2    | AC Source(變頻器)     | 外面實驗室                            |
| 3    | Character Standard | EN55032 CLASS B                  |

### ※Character Data(特性數據) :

| ITEM   | QP      | AV       |
|--------|---------|----------|
| L line | -11.5dB | -12.34dB |
| N line | -11.8dB | -14.06dB |

### ※Character Waveform (特性波形) :



## Conduction Character (傳導特性)

### ※Character Condition(特性條件) :

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 230Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

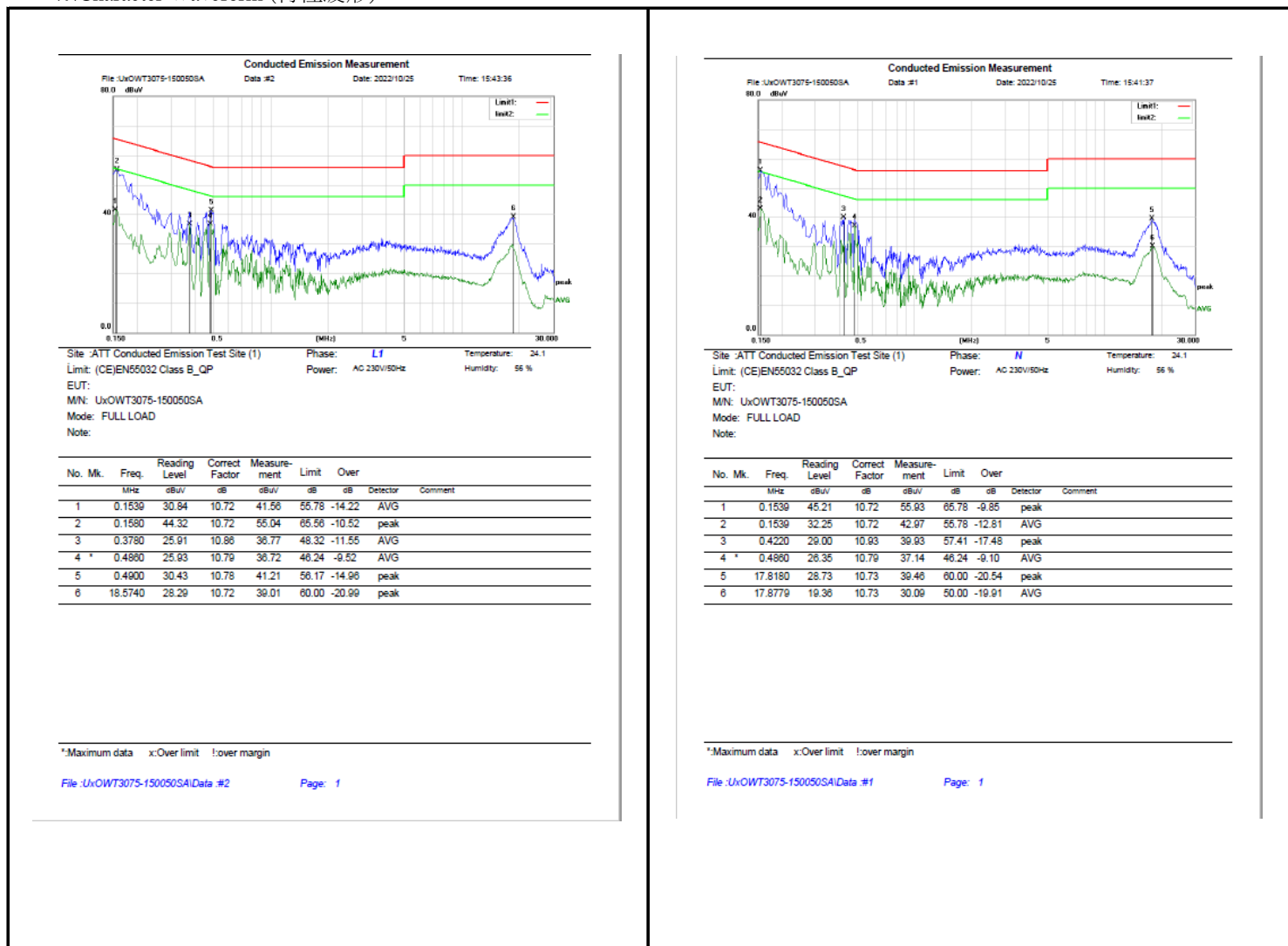
### ※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 外面實驗室                            |
| 2    | AC Source(變頻器)     | 外面實驗室                            |
| 3    | Character Standard | EN55032 CLASS B                  |

### ※Character Data(特性數據) :

| ITEM   | QP       | AV      |
|--------|----------|---------|
| L line | -10.52dB | -9.52dB |
| N line | -9.85dB  | -9.1dB  |

### ※Character Waveform (特性波形) :



## Radiation Character (輻射特性)

### ※Character Condition(特性條件) :

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 60Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

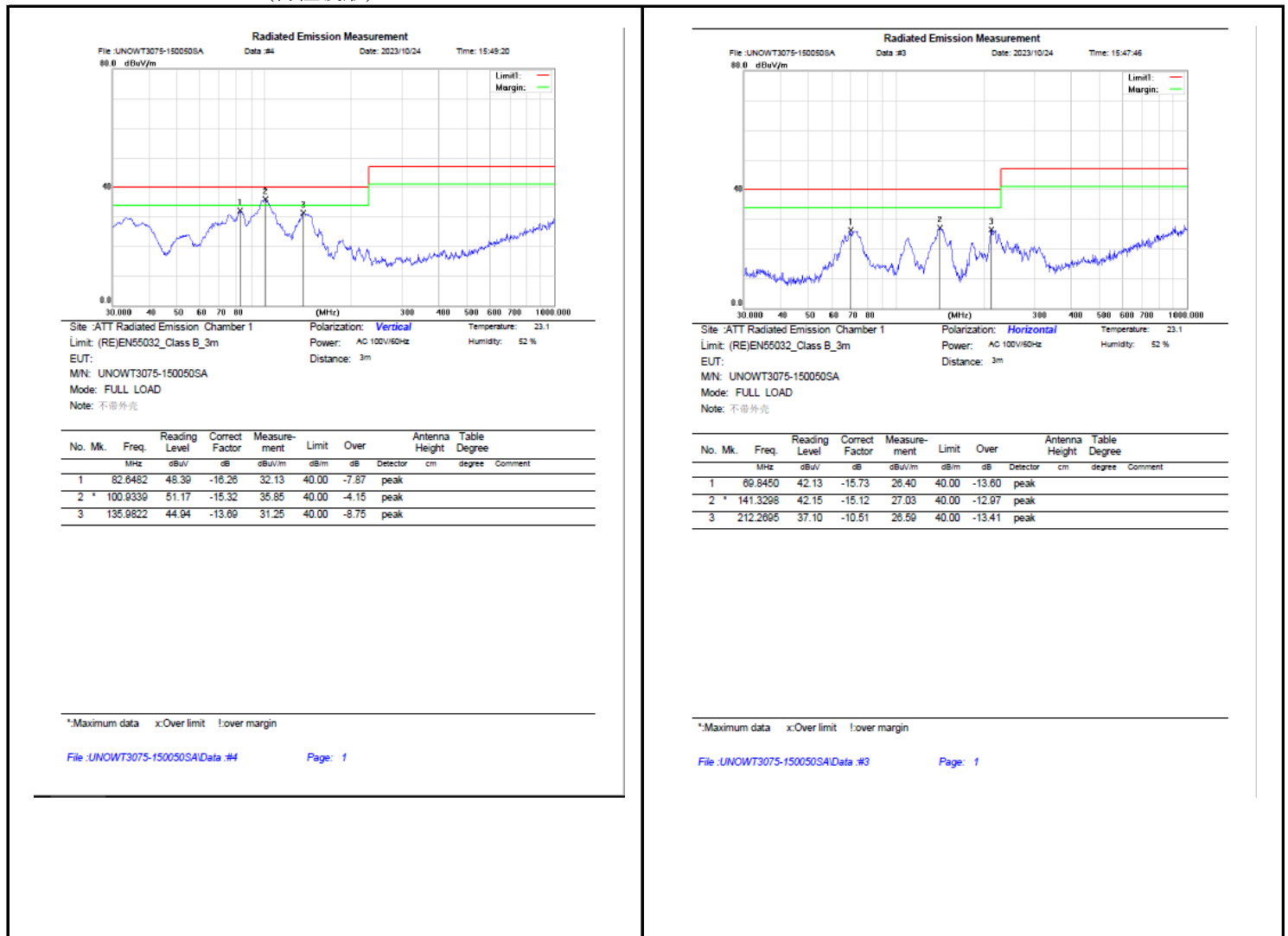
### ※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 外面實驗室                            |
| 2    | AC Source(變頻器)     | 外面實驗室                            |
| 3    | Character Standard | CISPR32 CLASS B                  |

### ※Character Data(特性數據) :

| ITEM             | peak                                    | QP     |
|------------------|---|--------|
| Character Result | V line<br>-4.15dB<br>H line<br>-12.97dB | /<br>/ |

### ※Character Waveform (特性波形) :



## Radiation Character (輻射特性)

### ※Character Condition(特性條件) :

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 230Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

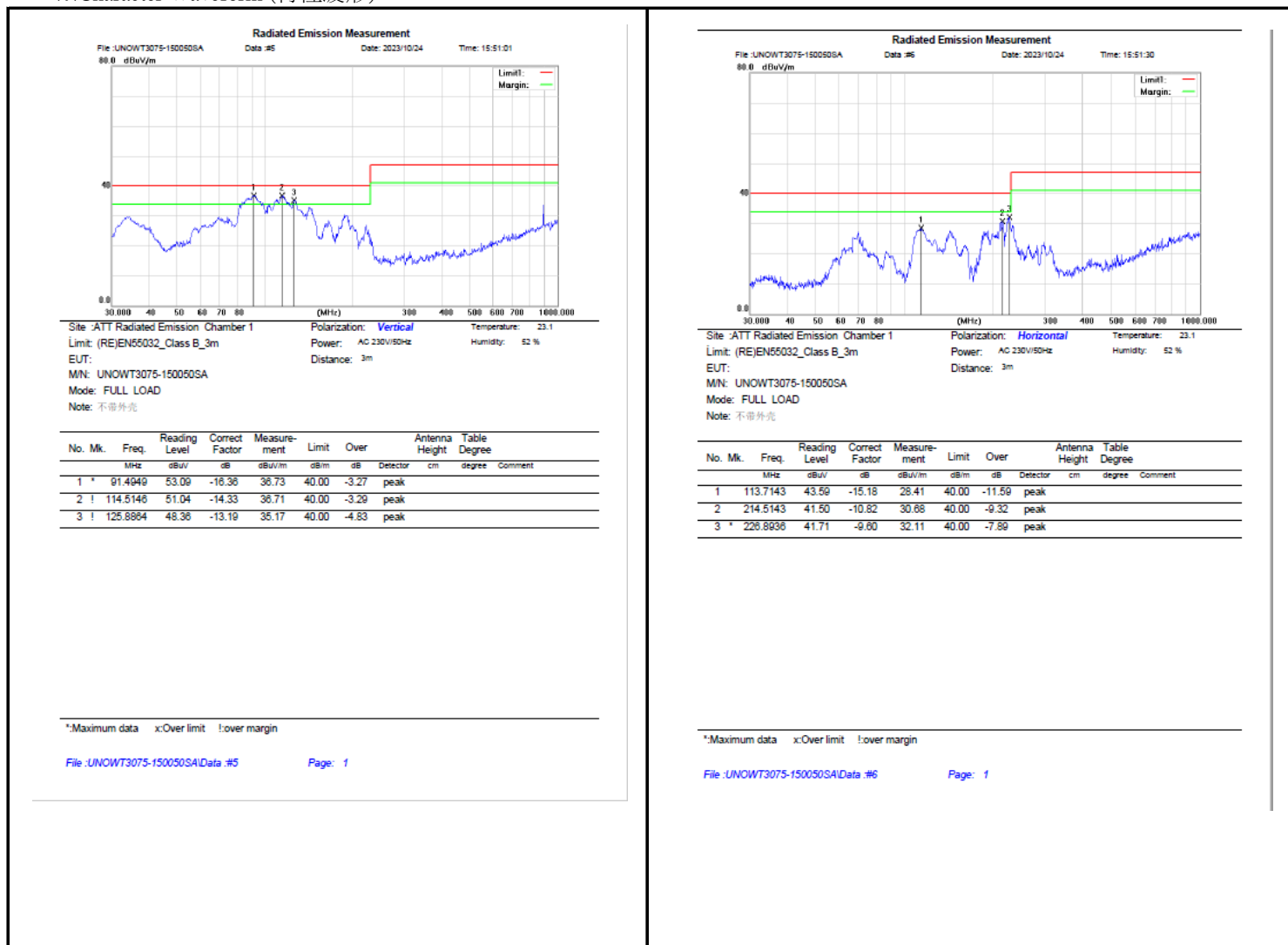
### ※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 外面實驗室                            |
| 2    | AC Source(變頻器)     | 外面實驗室                            |
| 3    | Character Standard | CISPR32 CLASS B                  |

### ※Character Data(特性數據) :

| ITEM             | peak                                   | QP     |
|------------------|--|--------|
| Character Result | V line<br>-3.27dB<br>H line<br>-7.89dB | /<br>/ |

### ※Character Waveform (特性波形) :



## EFT Character (電子脈衝群干擾特性)

### ※Character Condition(特性條件)：

|   |                         |               |
|---|-------------------------|---------------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac/230Vac |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz / 60Hz   |
| 3 | Output Load(輸出負載)       | Full Load     |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C          |
| 5 | Sample Size(取樣數)        | 1PCS          |

### ※Character Equipment(特性設備)：

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | BEST EMC SOLUTION  | EMCSOSIN / EFT-S4                |
| 2    | AC Source(變頻器)     | ALL POWER/APG-1005N              |

### ※Character Standard(特性標準)：

|               |                    |                           |
|---------------|--------------------|---------------------------|
| 1             | Character Standard | IEC 61000-4-4             |
| EFT Character |                    |                           |
|               | Spec.              | 1KV                       |
|               | O/P                | Full Load                 |
|               | I/P                | 100Vac/60Hz & 230Vac/50Hz |
|               | Burst              | 15ms/300ms                |
|               | Character Duration | 1 min                     |
|               | Pulse Rate:        | 5KHz/100KHz               |

### ※Character Data(特性數據)：產品類別: Class I

| Power Line | Pulse Polarity | Character Voltage | Required Criteria | Complied To Criteria(A,B,C) | Judgement |
|------------|----------------|-------------------|-------------------|-----------------------------|-----------|
| L          | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| N          | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| L-N        | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| PE         | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| L-PE       | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| N-PE       | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |
| L-N-PE     | "+" / "-"      | 1KV               | Criteria B        | Criteria A                  | PASS      |

### ※Character Performance & Result：

- ☒ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- ☐ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- ☐ Criteria C: Temporary loss of function is allowed, provided the function self recoverable or can be restored by the operation of controls

## ESD Character (靜電干擾特性)

## ※Character Condition(特性條件) :

|   |                         |               |
|---|-------------------------|---------------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac/230Vac |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz / 60Hz   |
| 3 | Output Load(輸出負載)       | Full Load     |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C          |
| 5 | Sample Size(取樣數)        | 1PCS          |

## ※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | EMC-PARTNER        | PRIMA /ESD61002TB                |
| 2    | AC Source(變頻器)     | ALL POWER/APG-1005N              |

## ※Character Standard(特性標準) :

|                             |   |                      |
|-----------------------------|---|----------------------|
| 1                           | Character Standard                                | IEC 61000-4-2:2001   |
| ESD Character               |   |                      |
| Spec.                       | Air: $\pm 8.0KV$                                  | Contact: $\pm 4.0KV$ |
| O/P                         | Full Load   |                      |
| I/P                         | 100Vac/60Hz & 230Vac/50Hz                         |                      |
| Description of Observation: | NO Abnormal Issue                                 |                      |
| Performance Criterion:      | Manufacturer (According to Standard/Manufacturer) |                      |

## ※Character Data(特性數據) :

| Item                          | Amount of Discharge | Voltage     | Required Criteria | Complied To Criteria(A,B,C) | Judgement |
|-------------------------------|---------------------|-------------|-------------------|-----------------------------|-----------|
| Air Discharge                 | Mini 10/Point       | $\pm 8.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Contact Discharge             | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Indirect Discharge(HCP)       | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Indirect Discharge(VCP Front) | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Indirect Discharge(VCP Left)  | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Indirect Discharge(VCP Back)  | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |
| Indirect Discharge(VCP Right) | Mini 25/Point       | $\pm 4.0KV$ | Criteria B        | Criteria A                  | PASS      |

## ※Character Performance &amp; Result :

- ☒ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- ☐ Criteria B: The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- ☐ Criteria C: Temporary loss of function is allowed, provided the function self recoverable or can be restored by the operation of controls

Light Surge Character (雷擊特性)

※Character Condition(特性條件) :

|   |                         |               |
|---|-------------------------|---------------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac/230Vac |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz / 60Hz   |
| 3 | Output Load(輸出負載)       | Full Load     |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C          |
| 5 | Sample Size(取樣數)        | 1PCS          |

※Character Equipment(特性設備) :

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | EMC-PARTNER        | Prima/ SUG61005TAX               |
| 2    | AC Source(變頻器)     | ALL POWER/APG-1005N              |

※Character Standard(特性標準) :

|                             |   |                             |
|-----------------------------|---|-----------------------------|
| 1                           | Character Standard                                | IEC 61000-4-5:1995+ A1:2001 |
| SURGE Character             |   |                             |
| Spec.                       | Line to Line $\pm 1KV$ ; Line to FG $\pm 2KV$     |                             |
| O/P                         | Full load   |                             |
| I/P                         | 100Vac/60Hz & 230Vac/50Hz                         |                             |
| REP.RATE                    | 60 sec  |                             |
| Description of Observation: | NO Abnormal Issue                                 |                             |
| Performance Criterion:      | Manufacturer (According to Standard/Manufacturer) |                             |

※Character Data(特性數據) : 產品類別: Class I

| Character Point | Character Voltage | Polarity | Phase Angle |     |      |      | Required Criteria | Complied To Criteria(A,B,C) | Judgement |
|-----------------|-------------------|----------|-------------|-----|------|------|-------------------|-----------------------------|-----------|
|                 |                   |          | 0°          | 90° | 180° | 270° |                   |                             |           |
| L-N             | 1KV               | +        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
|                 |                   | -        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
| L-GND           | 2KV               | +        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
|                 |                   | -        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
| N-GND           | 2KV               | +        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
|                 |                   | -        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
| L,N-GND         | 2KV               | +        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |
|                 |                   | -        | OK          | OK  | OK   | OK   | Criteria B        | Criteria A                  | PASS      |

Class II Type : Character L-N Only.

※Character Performance & Result :

- ☒ Criteria A: The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- ☐ Criteria B: The apparatus continues to operate as intended after test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- ☐ Criteria C: Temporary loss of function is allowed, provided the function self recoverable or can be restored by the operation of controls

## DIPS Character(周波跌落特性)

## ※Character Condition(特性條件):

|   |                         |            |
|---|-------------------------|------------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100~230Vac |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz/60Hz  |
| 3 | Output load(輸出負載)       | Full load  |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C       |
| 5 | Sample Size(取樣數)        | 1PCS       |
| 6 |                         |            |

## ※Character Parameters(特性參數):

| DIPS Character |   |
|----------------|---|
| Condition :    | According EN61000-4-11 ( full load and high line )  |
|                | Voltage Dips 100% Redaction 10ms/20ms ; 60% Redaction 200ms/240ms ; 30 % Redaction 500 ms/600ms Voltage Interruption : ≥95% ; Redaction 5000ms/6000ms |

## ※Character Data(特性數據):

| Character Level | % UT | Reduction (%) | Duration (Periods) | Perform Criteria | Results    | Judgement |
|-----------------|------|---------------|--------------------|------------------|------------|-----------|
| 0               |      | 100           | 0.5/1              | B                | Criteria A | PASS      |
| 40              |      | 60            | 10/12              | C                | Criteria B | PASS      |
| 70              |      | 30            | 25/30              | C                | Criteria B | PASS      |
| 0               |      | 100           | 250/300            | C                | Criteria B | PASS      |

## ※Character Performance &amp; Result :

- Criteria A:** The apparatus continues to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance.
- Criteria B:** The apparatus continues to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. In some cases the performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed.
- Criteria C:** Temporary loss of function is allowed, provided the function self recoverable or can be restored by the operation of controls

Radiated Radio-Frequency Electromagnetic Field Immunity Character (IEC61000-4-3) (RS特性)

※Character Condition(特性條件)：

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

※Character Equipment(特性設備)：

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 廠外部實驗室                           |
| 2    | AC Source(變頻器)     | 廠外部實驗室                           |

※Character Standard(特性標準)：

| RS TEST DATA    |                     |  |         |                  |         |          |
|-----------------|---------------------|--|---------|------------------|---------|----------|
| Freq.Range(MHz) | RF Field Position   | R.F. Field Strength                    | Azimuth | Perform Criteria | Results | Judgment |
| 80MHz-1000MHz   | Vertical/Horizontal | 1V(rms)<br>AM Modulated<br>1000Hz, 80% | Front   | A                | A       | PASS     |
|                 |                     |  | Back    |                  |         |          |
|                 |                     |  | Left    |                  |         |          |
|                 |                     |  | Right   |                  |         |          |

Conducted Disturbances Induced by Radio-Frequency Field Immunity Character (IEC61000-4-6) (CS特性)

※Character Condition(特性條件)：

|   |                         |           |
|---|-------------------------|-----------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac    |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz      |
| 3 | Output Load(輸出負載)       | Full Load |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C      |
| 5 | Sample Size(取樣數)        | 1PCS      |

※Character Equipment(特性設備)：

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 廠外部實驗室                           |
| 2    | AC Source(變頻器)     | 廠外部實驗室                           |

※Character Standard(特性標準)：

| CS TEST DATA                   |                 |  |                  |         |          |
|--------------------------------|-----------------|--|------------------|---------|----------|
| Test Ports (Mode)              | Freq.Range(MHz) | Field Strength                         | Perform Criteria | Results | Judgment |
| Input/Output<br>AC. Power Port | 0.15-80MHz      | 3V(rms)<br>AM Modulated<br>1000Hz, 80% | A                | A       | PASS     |

Power Frequency Magnetic Field Immunity Character (IEC61000-4-8) (PFMF特性)

※Character Condition(特性條件)：

|   |                         |            |
|---|-------------------------|------------|
| 1 | I/P Voltage(Vac)(輸入電壓)  | 100Vac     |
| 2 | I/P Frequency(Hz)(輸入頻率) | 50Hz/ 60Hz |
| 3 | Output Load(輸出負載)       | Full Load  |
| 4 | Ambient Temp.(°C)(環境溫度) | 25°C       |
| 5 | Sample Size(取樣數)        | 1PCS       |

※Character Equipment(特性設備)：

| ITEM | Equipment Item(設備) | Model No. / Manufacturer(製造商和型號) |
|------|--------------------|----------------------------------|
| 1    | 頻普接收儀              | 廠外部實驗室                           |
| 2    | AC Source(變頻器)     | 廠外部實驗室                           |

※Character Standard(特性標準)：

| Magnetic Field Immunity |               |                |                  |         |          |
|-------------------------|---------------|----------------|------------------|---------|----------|
| Test Ports (Mode)       | Frequency(Hz) | Field Strength | Perform Criteria | Results | Judgment |
| X Orientation           | 50/60         | 1A/m           | A                | A       | PASS     |
| Y Orientation           |               |                | A                | A       | PASS     |
| Z Orientation           |               |                | A                | A       | PASS     |