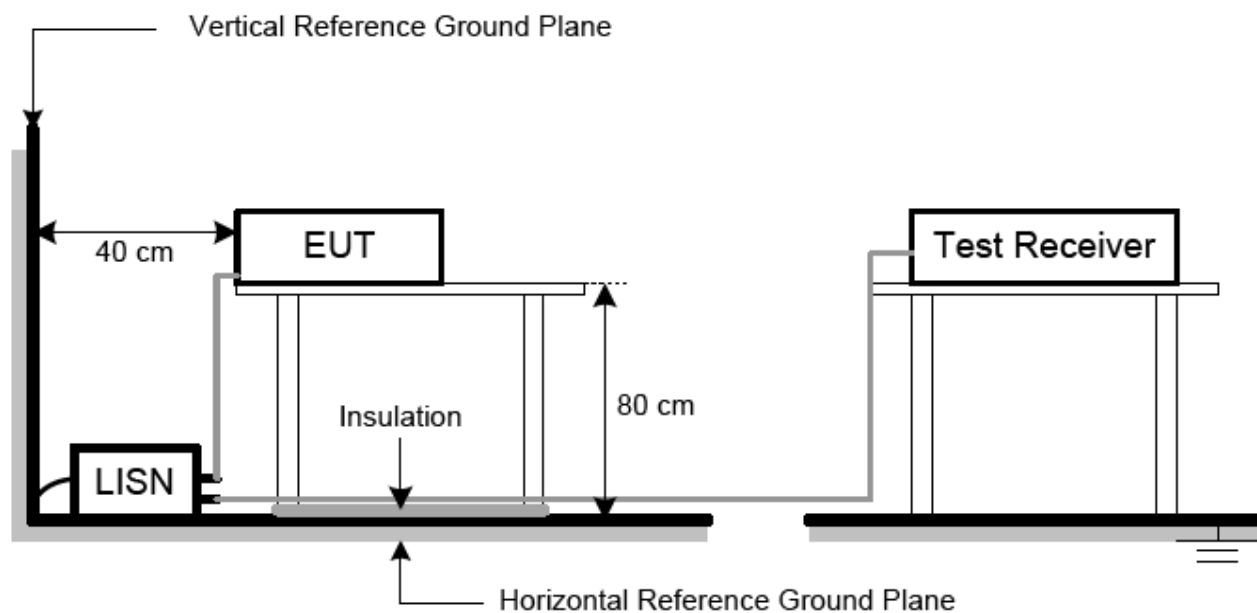
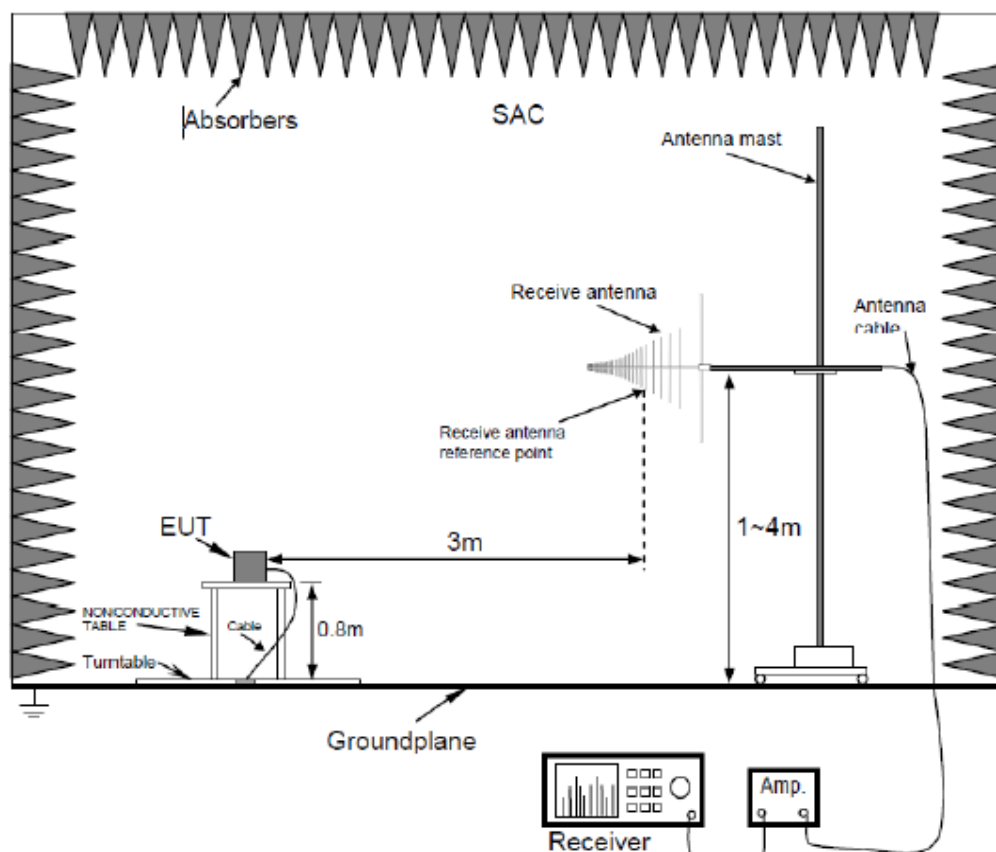


Configuration used for determination 用於特性的配置
EMI 特性 Electro-Magnetic interference characteristics
(1)Conducted Emission



(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	KH3931
2	AC Source(變頻器)	ALL POWER/APG-1005N
3	Character Standard	EN55032 CLASS B

※Character Data(特性數據) :

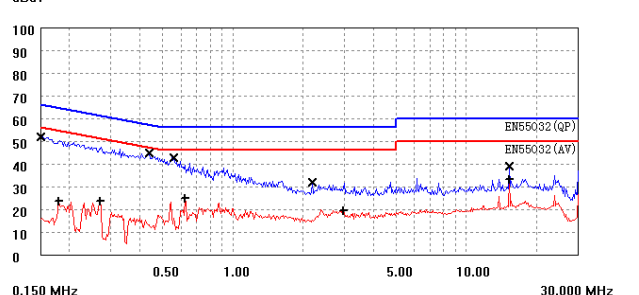
ITEM	QP	AV
L line	-12.3dB	-17.1dB
N line	-11.5dB	-23.1dB

※Character Waveform (特性波形) :

EMI TEST REPORT

Organization: UNIFIVE Operator: C L EUT: UNOWT3100-150067SA
 Place: EMI Time: 2025/4/11/17:03 Test equipment: KH3931
 Detector: PK+AV Transducer(PK+AV): PK / AV SN: 310771
 Limit: EN55032 JZ: 2,14,1413
 Remark: 100V L LOAD=6.7A(2.238R)

Start(MHz)	End(MHz)	Step(MHz)
0.150	2.000	0.002
2.000	10.000	0.010
10.000	30.000	0.025

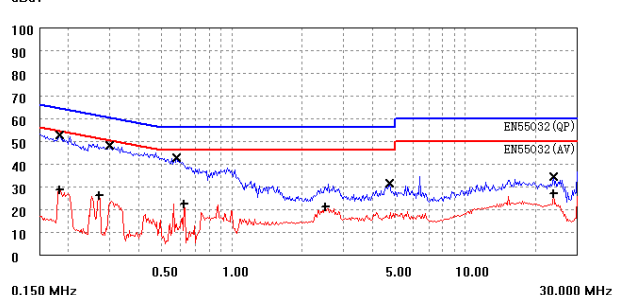


(QP)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.150	51.8	66.0	-14.2
	0.438	44.8	57.1	-12.3
	0.558	42.6	56.0	-13.4
	2.200	32.0	56.0	-24.0
	15.250	38.8	60.0	-21.2
(AV)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.180	23.5	54.5	-31.0
	0.270	23.4	51.1	-27.7
	0.626	24.7	46.0	-21.3
	2.970	19.5	46.0	-26.5
	15.250	32.9	50.0	-17.1

EMI TEST REPORT

Organization: UNIFIVE Operator: C L EUT: UNOWT3100-150067SA
 Place: EMI Time: 2025/4/11/16:58 Test equipment: KH3931
 Detector: PK+AV Transducer(PK+AV): PK / AV SN: 310771
 Limit: EN55032 JZ: 2,14,1413
 Remark: 100V N LOAD=6.7A(2.238R)

Start(MHz)	End(MHz)	Step(MHz)
0.150	2.000	0.002
2.000	10.000	0.010
10.000	30.000	0.025



(QP)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.184	52.8	64.3	-11.5
	0.300	48.0	60.2	-12.2
	0.582	42.6	56.0	-13.4
	4.740	31.4	56.0	-24.6
	24.000	34.2	60.0	-25.8
(AV)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.184	28.6	54.3	-25.7
	0.270	25.8	51.1	-25.3
	0.626	22.4	46.0	-23.6
	2.510	21.1	46.0	-24.9
	24.000	26.9	50.0	-23.1

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	KH3931
2	AC Source(變頻器)	ALL POWER/APG-1005N
3	Character Standard	EN55032 CLASS B

※Character Data(特性數據) :

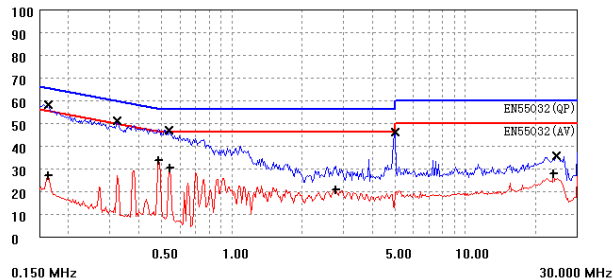
ITEM	QP	AV
L line	-7.2dB	-12.8dB
N line	-4.8dB	-17.4dB

※Character Waveform (特性波形) :

EMI TEST REPORT

Organization: UNIFIVE Operator: C L EUT: UNOWT3100-150067SA
Place: EMI Time: 2025/4/11/16:48 Test equipment: KH3931
Detector: PK+AV Test-time(ms): 30 SN: 310771
Limit: EN55032 Transductor(PK/AV): PK / AV JZ: 2,14,1411
Remark: 230V L LOAD=6.7A(2.238R)

Start(MHz) End(MHz) Step(MHz) freq, step
0.150 2.000 0.002
2.000 10.000 0.010
10.000 30.000 0.025
dBuV scan result

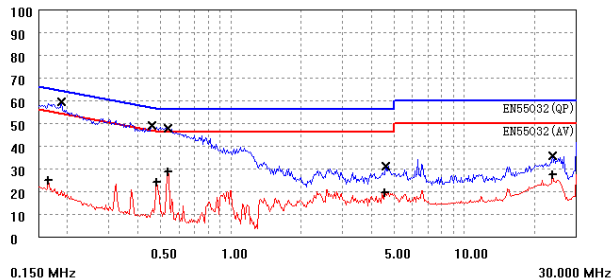


(QP)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.164	58.1	65.3	-7.2
	0.324	50.9	59.6	-8.7
	0.538	46.7	56.0	-9.3
	4.990	46.1	56.0	-9.9
	24.625	35.7	60.0	-24.3
(AV)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.164	27.1	55.3	-28.2
	0.488	33.4	46.2	-12.8
	0.542	30.4	46.0	-15.6
	2.780	20.8	46.0	-25.2
	24.000	27.8	50.0	-22.2

EMI TEST REPORT

Organization: UNIFIVE Operator: C L EUT: UNOWT3100-150067SA
Place: EMI Time: 2025/4/11/16:53 Test equipment: KH3931
Detector: PK+AV Test-time(ms): 30 SN: 310771
Limit: EN55032 Transductor(PK/AV): PK / AV JZ: 2,14,1412
Remark: 230V N LOAD=6.7A(2.238R)

Start(MHz) End(MHz) Step(MHz) freq, step
0.150 2.000 0.002
2.000 10.000 0.010
10.000 30.000 0.025
dBuV scan result



(QP)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.188	59.3	64.1	-4.8
	0.460	48.8	56.7	-7.9
	0.536	47.7	56.0	-8.3
	4.630	30.9	56.0	-25.1
	24.000	35.7	60.0	-24.3
(AV)	freq(MHz)	lev(dBuV)	Lim(dBuV)	Δ(lev-Lim)
	0.166	24.7	55.2	-30.4
	0.482	23.8	46.3	-22.5
	0.540	28.6	46.0	-17.4
	4.580	19.5	46.0	-26.5
	24.000	27.3	50.0	-22.7

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

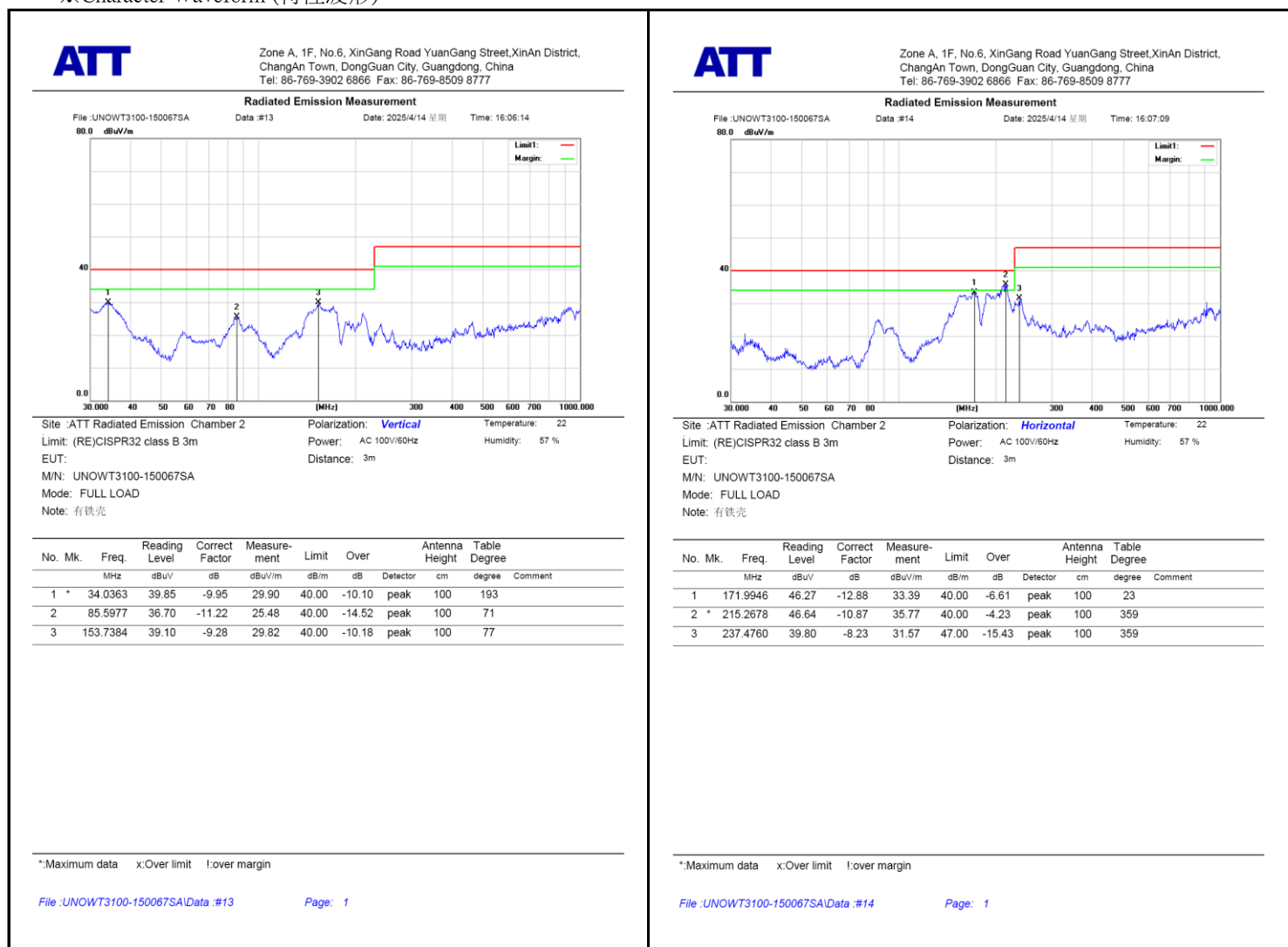
※Character Equipment(特性設備):

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	-10.1dB	/
H line	-4.23dB	/

※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	-7.83dB	/
	H line	-3.08dB	/

※Character Waveform (特性波形)：



Zone A, 1F, No.6, XinGang Road YuanGang Street,XinAn District, ChangAn Town, DongGuan City, Guangdong, China

Tel: 86-769-3902 6866 Fax: 86-769-8509 8777

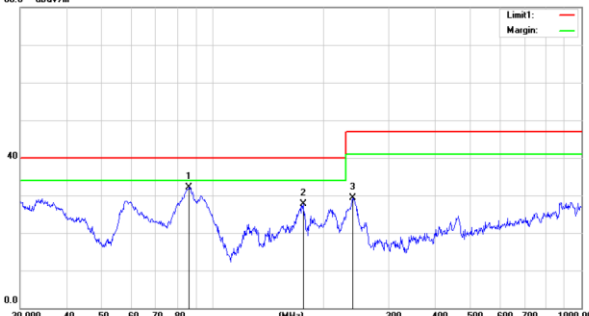
Radiated Emission Measurement

File :UNOWT3100-150067SA

Data :#11

Date: 2025/4/14 星期

Time: 16:03:09



Site :ATT Radiated Emission Chamber 2

Limit: (RE)CISPR32 class B 3m

EUT:

M/N: UNOWT3100-150067SA

Mode: FULL LOAD

Note: 有铁壳

Polarization: **Vertical**

Power: AC 230V/50Hz

Distance: 3m

Temperature: 22

Humidity: 57 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree
1	*	86.2001	44.10	-11.93	32.17	40.00	-7.83	peak	100 97
2		175.6516	38.93	-11.16	27.77	40.00	-12.23	peak	100 343
3		239.1473	36.57	-7.17	29.40	47.00	-17.60	peak	100 87


*Maximum data

x:Over limit

!:over margin

File :UNOWT3100-150067SA\Data :#11

Page: 1



Zone A, 1F, No.6, XinGang Road YuanGang Street,XinAn District, ChangAn Town, DongGuan City, Guangdong, China

Tel: 86-769-3902 6866 Fax: 86-769-8509 8777


Radiated Emission Measurement

File :UNOWT3100-150067SA

Data :#12

Date: 2025/4/14 星期

Time: 16:04:04



Site :ATT Radiated Emission Chamber 2

Limit: (RE)CISPR32 class B 3m

EUT:

M/N: UNOWT3100-150067SA

Mode: FULL LOAD

Note: 有铁壳

Polarization: **Horizontal**

Power: AC 230V/50Hz

Distance: 3m

Temperature: 22

Humidity: 57 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree
1		86.2001	50.47	-18.07	32.40	40.00	-7.60	peak	100 359
2	!	210.7860	45.39	-9.84	35.55	40.00	-4.45	peak	100 23
3	*	230.0000	46.95	-10.03	36.92	40.00	-3.08	peak	100 48
4	!	239.1473	49.24	-7.69	41.55	47.00	-5.45	peak	100 17

*Maximum data

x:Over limit

!:over margin

File :UNOWT3100-150067SA\Data :#12

Page: 1

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: ±8.0KV	Contact: ±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	±8.0KV	Criteria B	Criteria A	PASS
Contact Discharge	Mini 25/Point	±4.0KV	Criteria B	Criteria A	PASS
Indirect Discharge(HCP)	Mini 25/Point	±4.0KV	Criteria B	Criteria A	PASS
Indirect Discharge(VCP Front)	Mini 25/Point	±4.0KV	Criteria B	Criteria A	PASS
Indirect Discharge(VCP Left)	Mini 25/Point	±4.0KV	Criteria B	Criteria A	PASS
Indirect Discharge(VCP Back)	Mini 25/Point	±4.0KV	Criteria B	Criteria A	PASS
Indirect Discharge(VCP Right)	Mini 25/Point	±4.0KV	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 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 $\pm 1\text{KV}$; Line to FG $\pm 2\text{KV}$	
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 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

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 : $\geq 95\%$; 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 A	PASS
0		100	250/300	C	Criteria B	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

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) AM Modulated 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 AC. Power Port	0.15-80MHz	3V(rms) AM Modulated 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