Supplemental test data
(参考資料)

OZP-120-12/15 EMI/EMS Test result (12V DC Output Settings)

Approved by : Makoto Urasue (QA manager)
Designed by : Naoki Yamamoto (R&D engineer)
Tested by : Kohei Sawada (Evaluation test engineer)

No.	Standard	Test item	Conditions	Result
1	EN55022 (Class-B) VCCI (Class-B)	Conducted emission	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)This product must be tested with the chassis.	OK
2	EN55022 (Class-B) VCCI (Class-B)	Radiated emission	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)This product must be tested with the chassis.	OK
3	IEC61000-3-2 (Class-D)	Harmonic current	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)This product must be tested with the chassis.	OK
4	IEC61000-4-2	Electrostatic discharge immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)Contact discharge: 6kV (5)Air discharge: 8kV (6)This product must be tested with the chassis.	OK
5	IEC61000-4-3	Radiated, radio-frequency, electromagnetic field immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)Frequency band: 80MHz to 1000MHz (5)Radiation field strength:10V/m (6)Amplitude modulated: 80%, 1kHz (7)This product must be tested with the chassis.	OK
6	IEC61000-4-4	Electrical fast transient / burst immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)Test voltage: 2.0kV (5)This product must be tested with the chassis.	OK
7	IEC61000-4-5	Surge immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)Test voltage: 1.0kV(Normal mode) (5)Test voltage: 2.0kV(Common mode) (6)This product must be tested with the chassis.	OK
8	IEC61000-4-6	Conducted disturbances induced by radio-frequency fields immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient Temperature: 25±5°C (4)Frequency band: 150kHz to 80MHz (5)Voltage level (e.m.f): 10V(rms) (6)Amplitude modulated: 80%, 1kHz (7)This product must be tested with the chassis.	OK
9	IEC61000-4-8	Power frequency magnetic field immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)Magnetic field strength: 30A/m(rms) (5)Magnetic frequency: 50, 60Hz (6)This product must be tested with the chassis.	OK
10	IEC61000-4-11	Voltage dips, short interruptions immunity test	(1)Input voltage: 100V, 230V AC (2)Rated load (120W) (3)Ambient temperature: 25±5°C (4)30% reduction at 500ms (5)95% reduction at 10ms (6)100% reduction at 5000ms (7)This product must be tested with the chassis.	OK

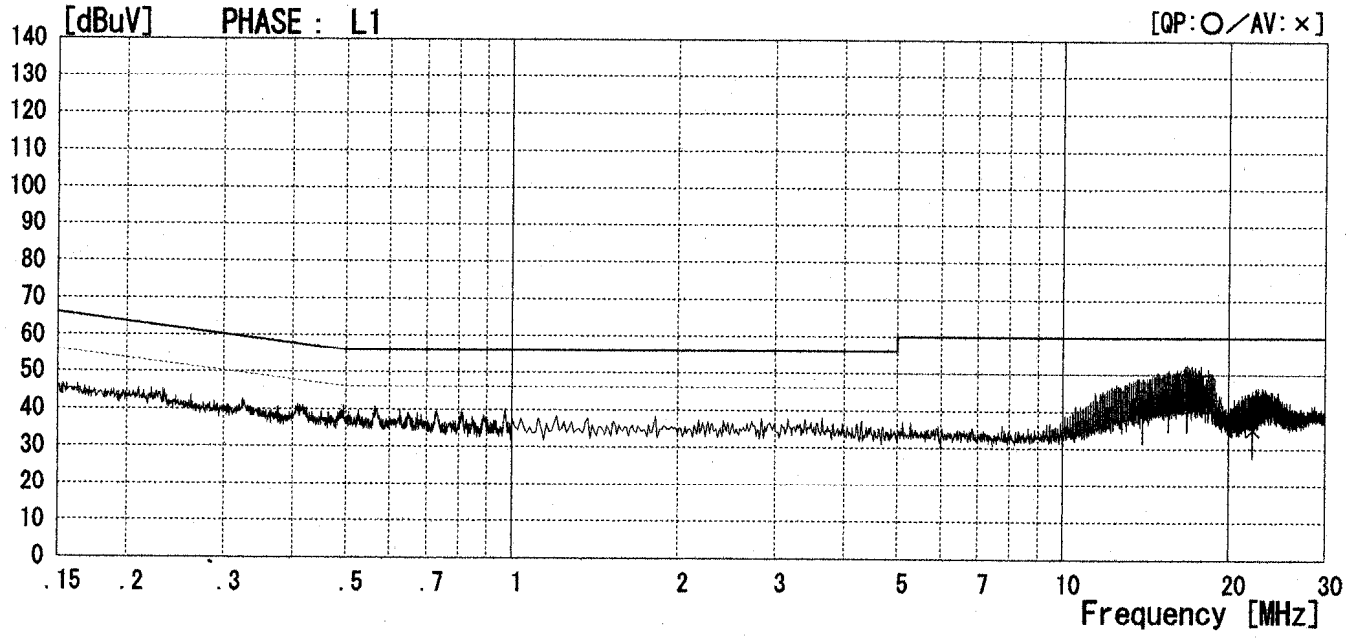
Nipron

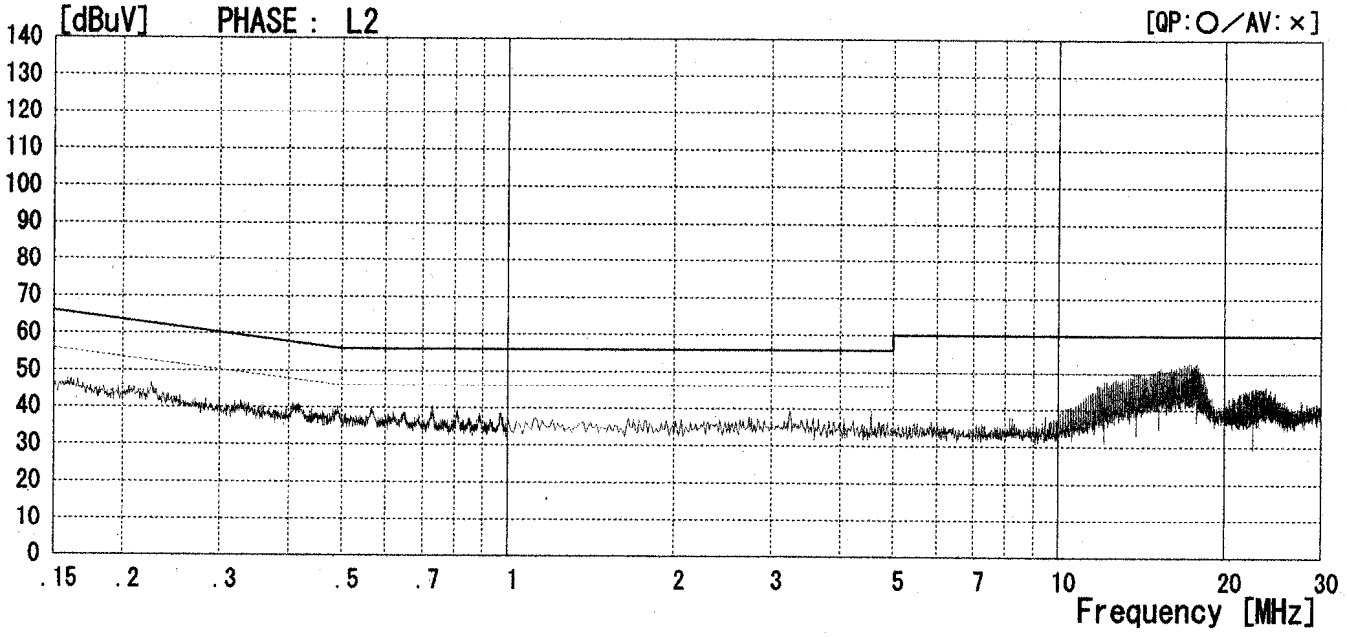
Conducted emission

Model Name	:OZP-120-12/15(12V DC Output Settings)	Report No.	:
Description	:	Temp/Humi	:
Serial No.	:	Power Supply	:
Test Mode	:	Operator	:

Memo: 100V AC, Rated load, This product must be tested with the chassis.

LIMIT : VCCI Class-B(QP)
VCCI Class-B(AV)





Supplemental test data
（参考資料）

Conducted emission

Model Name	:OZP-120-12/15(12V DC Output Settings)	Report No.	:
Description	:	Temp/Humi	:
Serial No.	:	Power Supply	:
Test Mode	:	Operator	:

Memo:100V AC, Rated load, This product must be tested with the chassis.

LIMIT : VCCI Class-B(QP)
VCCI Class-B(AV)

NO	FREQ	READING		C.FACTOR	RESULT		LIMIT		MARGIN		PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	13.9514	32.1	27.3	11.8	43.9	39.1	60.0	50.0	16.1	10.9	L1
2	15.5633	33.9	30.4	11.9	45.8	42.3	60.0	50.0	14.2	7.7	L1
3	16.8187	34.7	30.2	11.9	46.6	42.1	60.0	50.0	13.4	7.9	L1
4	18.3450	36.2	33.0	11.9	48.1	44.9	60.0	50.0	11.9	5.1	L1
5	22.1254	27.7	23.2	11.9	39.6	35.1	60.0	50.0	20.4	14.9	L1
6	12.1397	30.9	27.0	11.6	42.5	38.6	60.0	50.0	17.5	11.4	L2
7	13.8515	33.1	29.0	11.8	44.9	40.8	60.0	50.0	15.1	9.2	L2
8	15.2210	33.8	30.5	11.9	45.7	42.4	60.0	50.0	14.3	7.6	L2
9	17.8457	36.3	32.2	11.9	48.2	44.1	60.0	50.0	11.8	5.9	L2
10	22.5677	28.9	25.0	12.1	41.0	37.1	60.0	50.0	19.0	12.9	L2

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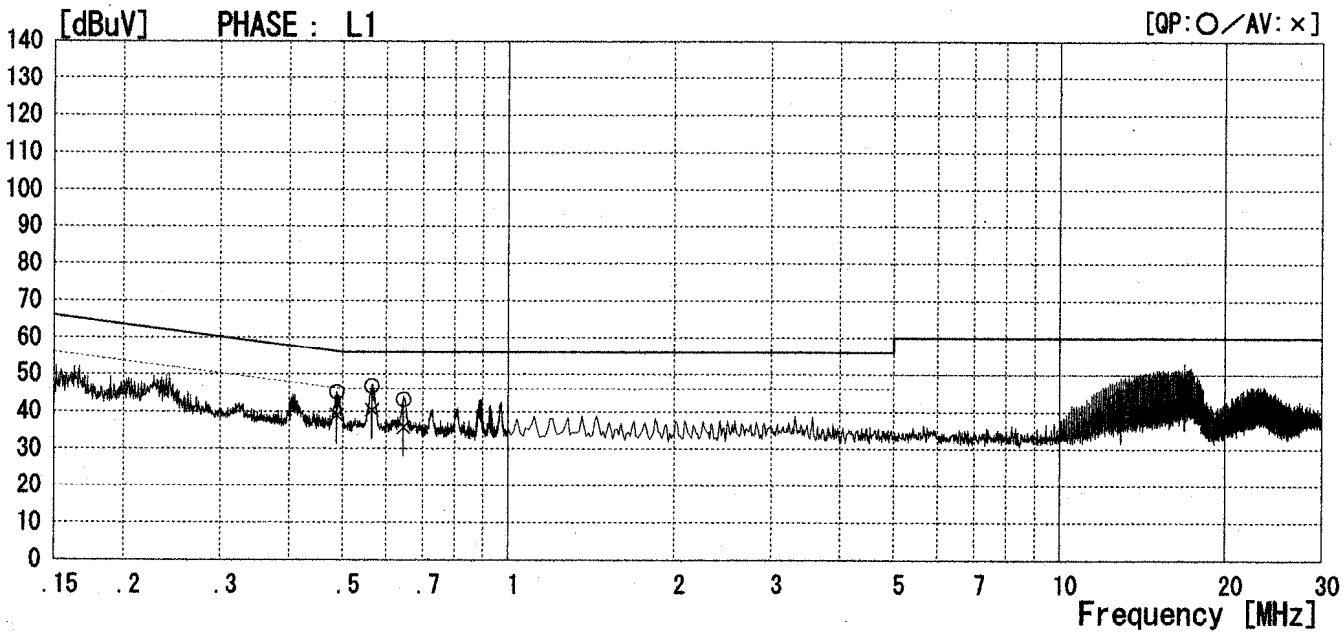
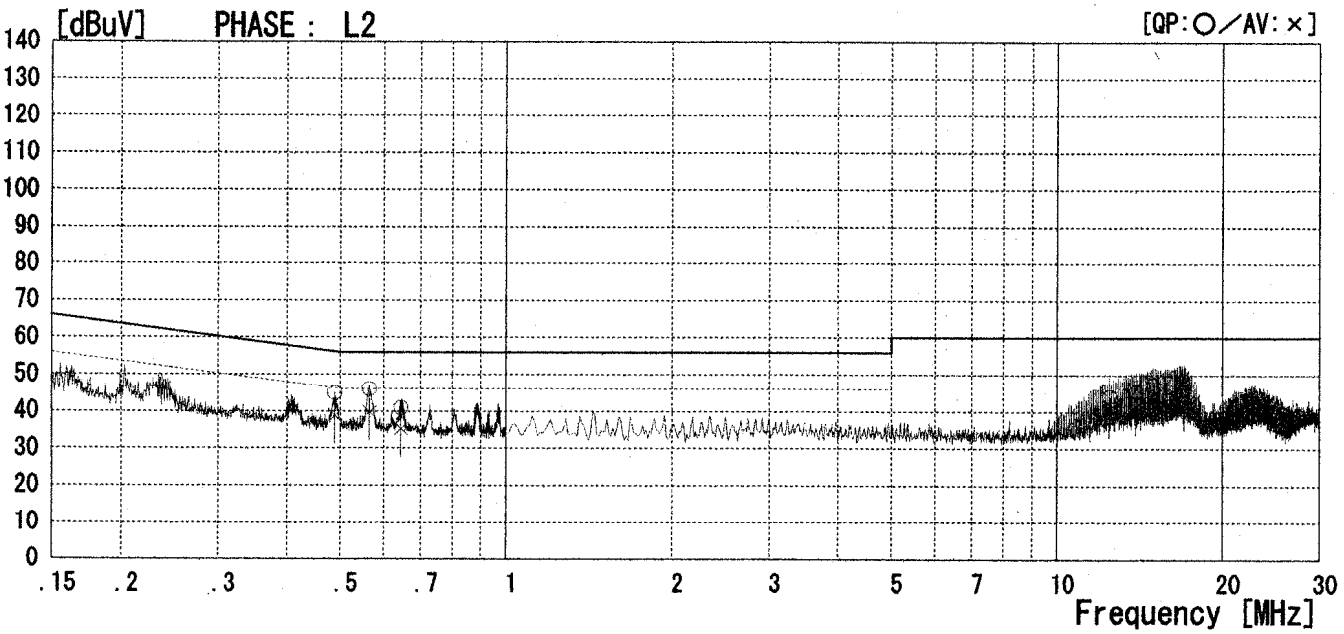
Conducted emission

Model Name	: OZP-120-12/15(12V DC Output Settings)	Report No.	:
Description	:	Temp/Humi	:
Serial No.	:	Power Supply	:
Test Mode	:	Operator	:

Memo: 230V AC, Rated load, This product must be tested with the chassis.

LIMIT : EN55022 Class-B(QP)
EN55022 Class-B(AV)





Nipron

Conducted emission

Model Name	:OZP-120-12/15(12V DC Output Settings)	Report No.	:
Description	:	Temp/Humi	:
Serial No.	:	Power Supply	:
Test Mode	:	Operator	:

Memo: 230V AC, Rated load, This product must be tested with the chassis.

LIMIT : EN55022 Class-B(QP)
EN55022 Class-B(AV)

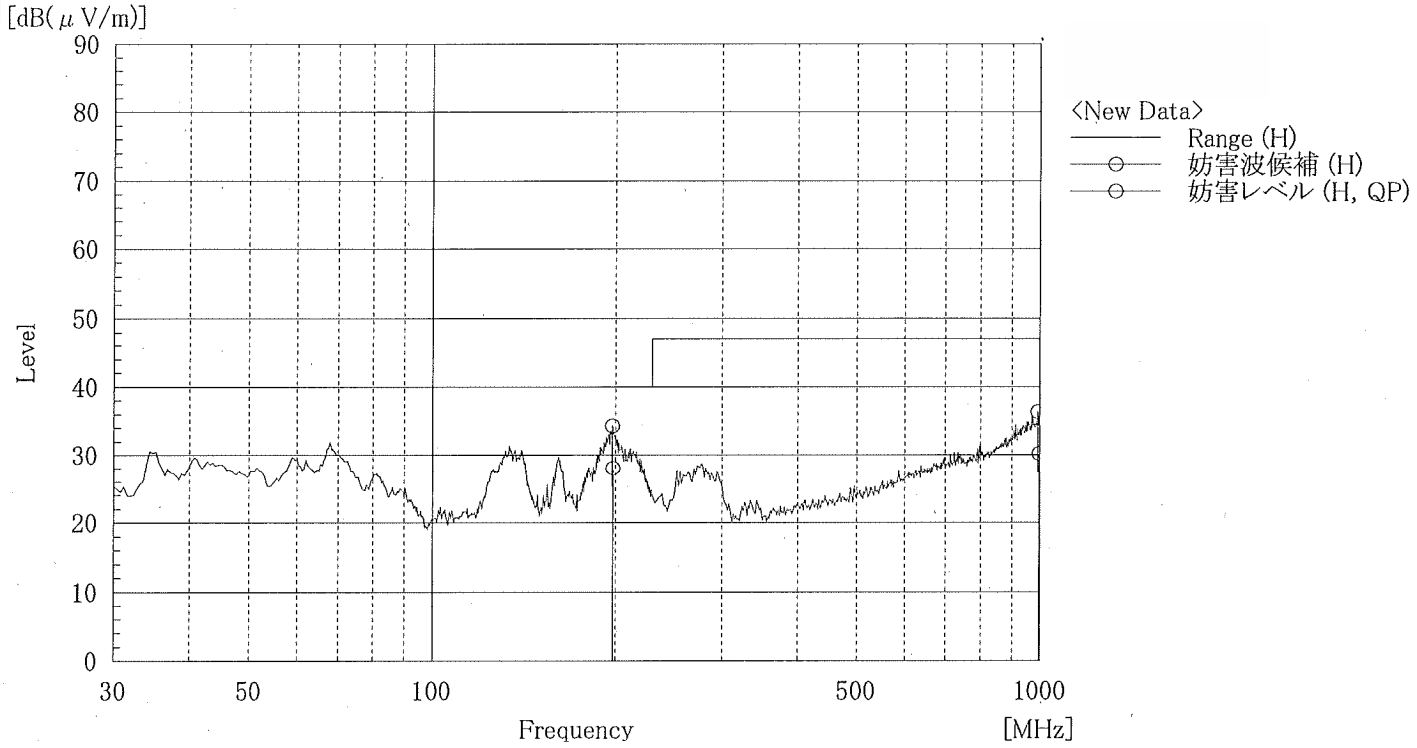
NO	FREQ	READING		C.FACTOR	RESULT		LIMIT		MARGIN		PHASE
		QP	AV		QP	AV	QP	AV	QP	AV	
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.4880	35.2	28.9	10.0	45.2	38.9	56.2	46.2	11.0	7.3	L1
2	0.5656	36.8	30.3	10.0	46.8	40.3	56.0	46.0	9.2	5.7	L1
3	0.6448	33.2	25.7	10.0	43.2	35.7	56.0	46.0	12.8	10.3	L1
4	12.9100	32.4	27.5	11.7	44.1	39.2	60.0	50.0	15.9	10.8	L1
5	15.0783	34.8	32.0	11.9	46.7	43.9	60.0	50.0	13.3	6.1	L1
6	16.9042	34.3	30.8	11.9	46.2	42.7	60.0	50.0	13.8	7.3	L1
7	0.4890	34.9	28.7	10.0	44.9	38.7	56.2	46.2	11.3	7.5	L2
8	0.5649	36.0	29.7	10.0	46.0	39.7	56.0	46.0	10.0	6.3	L2
9	0.6440	30.9	25.2	10.0	40.9	35.2	56.0	46.0	15.1	10.8	L2
10	12.4535	32.5	28.9	11.7	44.2	40.6	60.0	50.0	15.8	9.4	L2
11	13.9371	33.7	29.5	11.8	45.5	41.3	60.0	50.0	14.5	8.7	L2
12	14.9642	35.4	32.5	11.9	47.3	44.4	60.0	50.0	12.7	5.6	L2
13	17.0184	34.4	30.8	11.9	46.3	42.7	60.0	50.0	13.7	7.3	L2

Nipron

<<Radiated Emission>>

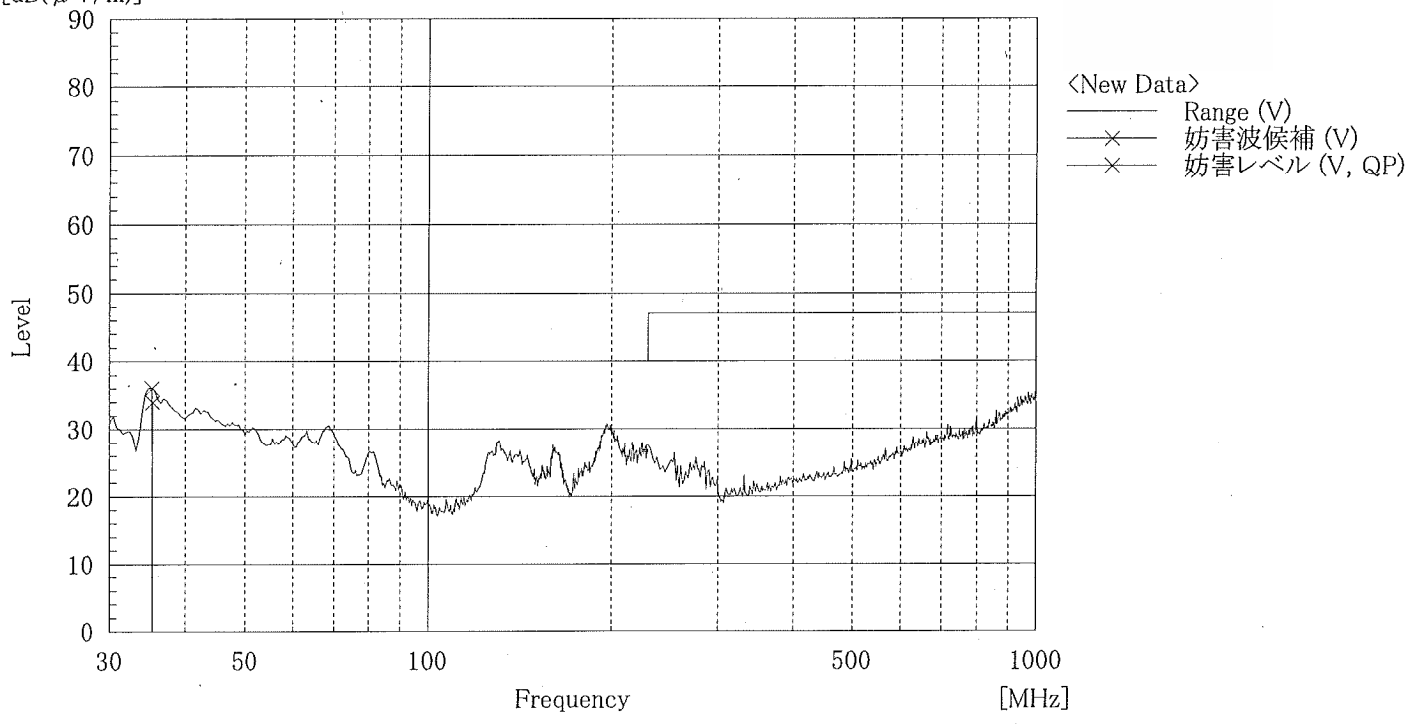
Supplemental test data
(参考資料)

Model	: OZP-120-12	Standard	: VCCI Class-B
Serial	:	Remark1	: Rated load
Operator	:	Remark2	: This product must be tested with the chassis.
AC Power	: 100V AC	Remark3	:
Temp,Humid	:	Remark4	:



<<Radiated Emission>>

Model	: OZP-120-12	Standard	: VCCI Class-B
Serial	:	Remark1	: Rated load
Operator	:	Remark2	: This product must be tested with the chassis.
AC Power	: 100V AC	Remark3	:
Temp,Humid	:	Remark4	:



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<<Radiated Emission>>

Supplemental test data
(参考資料)

Standard : VCCI Class-B
Model : OZP-120-12
Serial :
Operator : 100V AC
AC Power :
Temp, Humid : Rated load
Remark1 : This product must be tested with the chassis.
Remark2 :
Remark3 :
Remark4 :

Final Result

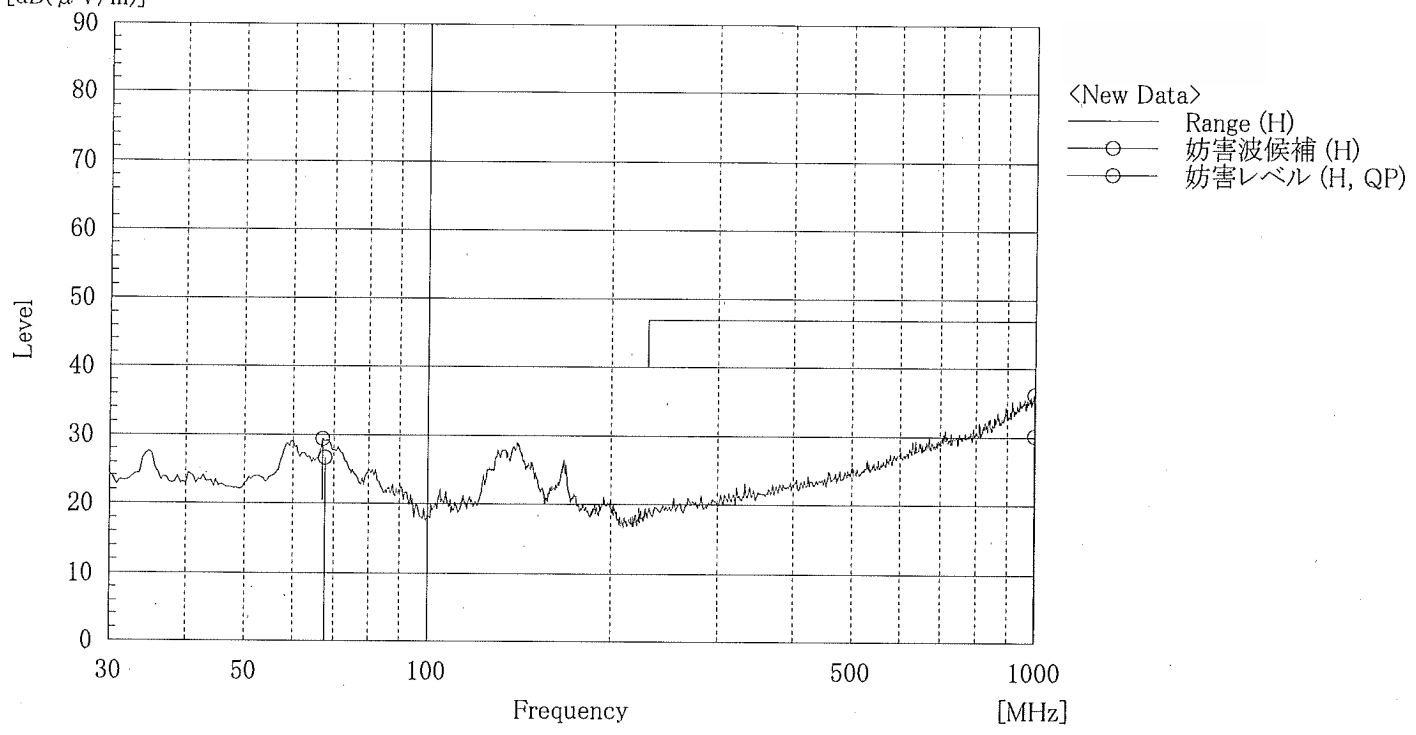
No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [°]	Remark
1	198.180	H	S	47.4	-19.3	28.1	40.0	11.9	192.0	90.0	
2	997.652	H	S	29.4	0.8	30.2	47.0	16.8	176.0	156.0	
3	35.352	V	S	48.3	-14.3	34.0	40.0	6.0	102.0	9.0	

Nipron

<<Radiated Emission>>

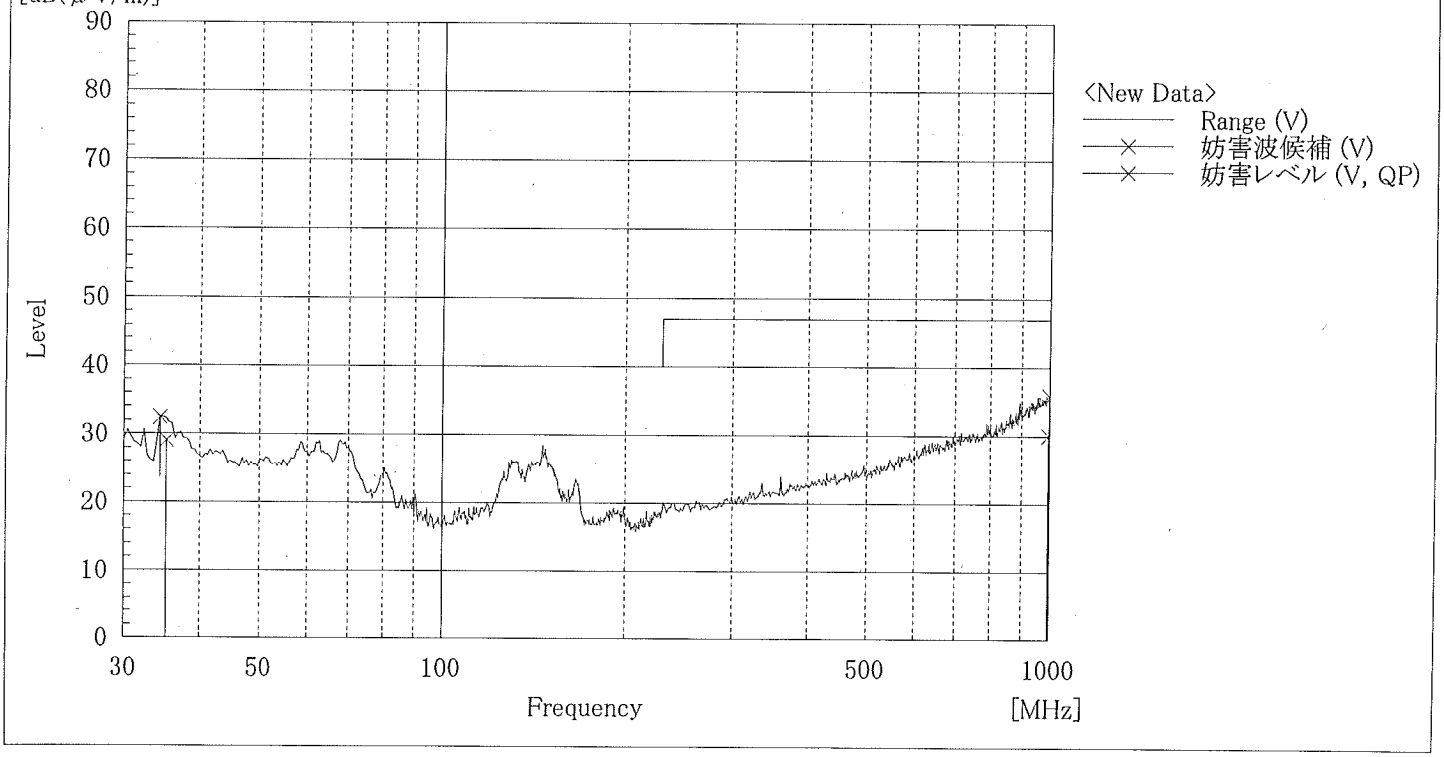
Supplemental test data
(参考資料)

Model	: OZP-120-12	Standard	: EN55022 Class-B
Serial	:	Remark1	: Rated load
Operator	:	Remark2	: This product must be tested with the chassis.
AC Power	: 230V AC	Remark3	:
Temp,Humid	:	Remark4	:



<<Radiated Emission>>

Model	: OZP-120-12	Standard	: EN55022 Class-B
Serial	:	Remark1	: Rated load
Operator	:	Remark2	: This product must be tested with the chassis.
AC Power	: 230V AC	Remark3	:
Temp,Humid	:	Remark4	:



Nipron

<<Radiated Emission>>

Supplemental test data
(参考資料)

Standard : EN55022 Class-B
Model : OZP-120-12
Serial :
Operator : 230V AC
AC Power :
Temp,Humid : Rated load
Remark1 : This product must be tested with the chassis.
Remark2 :
Remark3 :
Remark4 :

Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [°]	Remark
1	67.835	H	S	49.4	-22.6	26.8	40.0	13.2	154.0	290.0	
2	997.937	H	S	29.4	0.8	30.2	47.0	16.8	176.0	21.0	
3	35.254	V	S	43.3	-14.2	29.1	40.0	10.9	102.0	33.0	
4	995.755	V	S	29.4	0.8	30.2	47.0	16.8	189.0	51.0	

Supplemental test data
(参考資料)

EVALUATION DATA SHEET

Current Test Result Summary (Run time)

EUT: OZP-120-12/15(12V DC Output Settings) **Tested by: M.Nagatani**
Test category: IEC61000-3-2 Class-D **Test Margin: 100**
Test duration (min): 2.5 **Data file name: H-000201.cts_data**
Comment: Rated load (120W)

Test Result: Pass **Source qualification: Normal**
THC(A): 0.08 **I-THD(%): 5.73** **POHC(A): 0.021** **POHC Limit(A): 0.251**
Highest parameter values during test:

V_RMS (Volts):	100.07	Frequency(Hz):	50.00
I_Peak (Amps):	2.277	I_RMS (Amps):	1.494
I_Fund (Amps):	1.490	Crest Factor:	1.526
Power (Watts):	148.0	Power Factor:	0.991

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	--------	------	0.001	--------	------	N/A
3	0.051	0.503	10.1	0.054	0.754	7.1	Pass
4	0.000	--------	--------	0.001	--------	------	N/A
5	0.040	0.281	14.2	0.042	0.421	9.9	Pass
6	0.000	--------	--------	0.001	--------	------	N/A
7	0.028	0.148	18.9	0.029	0.222	13.0	Pass
8	0.000	--------	--------	0.001	--------	------	N/A
9	0.024	0.074	32.4	0.025	0.111	22.5	Pass
10	0.000	--------	--------	0.001	--------	------	N/A
11	0.022	0.051	43.1	0.022	0.077	28.5	Pass
12	0.000	--------	--------	0.001	--------	------	N/A
13	0.018	0.043	41.8	0.019	0.065	29.2	Pass
14	0.000	--------	--------	0.001	--------	------	N/A
15	0.014	0.037	37.8	0.014	0.056	25.0	Pass
16	0.000	--------	--------	0.000	--------	------	N/A
17	0.011	0.033	33.3	0.012	0.050	24.0	Pass
18	0.000	--------	--------	0.001	--------	------	N/A
19	0.009	0.029	31.0	0.010	0.044	22.7	Pass
20	0.000	--------	--------	0.001	--------	------	N/A
21	0.008	0.027	29.6	0.009	0.040	22.5	Pass
22	0.000	--------	--------	0.001	--------	------	N/A
23	0.007	0.024	29.1	0.008	0.037	21.6	Pass
24	0.000	--------	--------	0.001	--------	------	N/A
25	0.007	0.022	31.8	0.007	0.034	20.5	Pass
26	0.000	--------	--------	0.001	--------	------	N/A
27	0.006	0.021	28.5	0.007	0.031	22.5	Pass
28	0.000	--------	--------	0.001	--------	------	N/A
29	0.006	0.019	31.5	0.007	0.029	24.1	Pass
30	0.000	--------	--------	0.001	--------	------	N/A
31	0.006	0.018	33.3	0.007	0.027	25.9	Pass
32	0.000	--------	--------	0.001	--------	------	N/A
33	0.006	0.017	35.2	0.007	0.025	28.0	Pass
34	0.000	--------	--------	0.001	--------	------	N/A
35	0.006	0.016	37.5	0.007	0.024	29.1	Pass
36	0.000	--------	--------	0.001	--------	------	N/A
37	0.007	0.015	46.6	0.007	0.023	30.4	Pass
38	0.000	--------	--------	0.001	--------	------	N/A
39	0.007	0.014	50.0	0.008	0.021	38.0	Pass
40	0.000	--------	--------	0.001	--------	------	N/A

EVALUATION DATA SHEET

Current Test Result Summary (Run time)

EUT: OZP-120-12/15 (12V DC Output Settings) **Tested by: M.Nagatani**
Test category: IEC61000-3-2 Class-D **Test Margin: 100**
Test duration (min): 2.5 **Data file name: H-000203.cts_data**
Comment: Rated load (120W)

Test Result: Pass **Source qualification: Normal**
THC(A): 0.19 **I-THD(%): 27.81** **POHC(A): 0.033** **POHC Limit(A): 0.251**
Highest parameter values during test:

V_RMS (Volts):	230.15	Frequency(Hz):	50.00
I_Peak (Amps):	1.212	I_RMS (Amps):	0.701
I_Fund (Amps):	0.675	Crest Factor:	1.730
Power (Watts):	141.7	Power Factor:	0.878

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	--------	------	0.001	--------	------	N/A
3	0.134	0.481	27.8	0.135	0.722	18.6	Pass
4	0.001	--------	--------	0.001	--------	------	N/A
5	0.104	0.269	38.6	0.105	0.403	26.0	Pass
6	0.001	--------	--------	0.001	--------	------	N/A
7	0.042	0.141	29.7	0.043	0.212	20.2	Pass
8	0.000	--------	--------	0.000	--------	------	N/A
9	0.027	0.070	38.5	0.028	0.106	26.4	Pass
10	0.000	--------	--------	0.001	--------	------	N/A
11	0.028	0.049	57.1	0.028	0.074	37.8	Pass
12	0.000	--------	--------	0.001	--------	------	N/A
13	0.026	0.041	63.4	0.027	0.062	43.5	Pass
14	0.001	--------	--------	0.001	--------	------	N/A
15	0.018	0.036	50.0	0.018	0.054	33.3	Pass
16	0.000	--------	--------	0.000	--------	------	N/A
17	0.015	0.032	46.8	0.015	0.048	31.2	Pass
18	0.001	--------	--------	0.001	--------	------	N/A
19	0.016	0.028	57.1	0.016	0.043	37.2	Pass
20	0.000	--------	--------	0.001	--------	------	N/A
21	0.014	0.025	56.0	0.014	0.038	36.8	Pass
22	0.000	--------	--------	0.001	--------	------	N/A
23	0.012	0.023	52.1	0.013	0.035	37.1	Pass
24	0.000	--------	--------	0.001	--------	------	N/A
25	0.012	0.021	57.1	0.012	0.032	37.5	Pass
26	0.000	--------	--------	0.000	--------	------	N/A
27	0.010	0.020	50.0	0.010	0.030	33.3	Pass
28	0.000	--------	--------	0.001	--------	------	N/A
29	0.011	0.018	61.1	0.011	0.028	39.2	Pass
30	0.000	--------	--------	0.001	--------	------	N/A
31	0.010	0.017	58.8	0.010	0.026	38.4	Pass
32	0.000	--------	--------	0.001	--------	------	N/A
33	0.010	0.016	62.5	0.010	0.024	41.6	Pass
34	0.001	--------	--------	0.001	--------	------	N/A
35	0.007	0.015	46.6	0.007	0.023	30.4	Pass
36	0.000	--------	--------	0.000	--------	------	N/A
37	0.009	0.014	64.2	0.009	0.022	40.9	Pass
38	0.001	--------	--------	0.001	--------	------	N/A
39	0.007	0.013	53.8	0.007	0.020	35.0	Pass
40	0.001	--------	--------	0.001	--------	------	N/A

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Electrostatic discharge immunity test** **静電気放電試験イミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-2
(引用規格:IEC61000-4-2)

2.Test method (試験方法)

Pints to be applied voltage: Input and Output terminal, FG, Case
(電圧印加箇所:入出力端子、FG、ケース)

Polarity: +/-
(極性:+/-)

Discharge interval: 1 second
(放電間隔:1秒)

Number of tests: 10 times
(試験回数:10回)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Output voltage variations during the test, it is within specifications.
(試験中の出力電圧の変動は、仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

	Contact discharge (接触放電)		Air discharge (気中放電)	
Test level (試験レベル)	Test voltage (試験電圧)	Result (結果)	Test voltage (試験電圧)	Result (結果)
Level 1	2kV	**OK**	2kV	**OK**
Level 2	4kV	**OK**	4kV	**OK**
Level 3	6kV	**OK**	8kV	**OK**

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Radiated, radio-frequency, electromagnetic field immunity test** **放射無線周波電磁界イミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-3
(引用規格:IEC61000-4-3)

2.Test method (試験方法)

Frequency band: 80MHz to 1000MHz
(周波数範囲:80MHzから1000MHz)

Amplitude modulated: 80%, 1kHz
(振幅変調:80%, 1kHz)

Wave angle: Horizontal, Vertical
(偏波:水平、垂直)

Distance: 3m
(距離:3m)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Output voltage variations during the test, it is within specifications.
(試験中の出力電圧の変動は、仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

Test level (試験レベル)	Radiation field strength (放射電磁界強度)	Result (結果)
Level 1	1V/m	**OK**
Level 2	3V/m	**OK**
Level 3	10V/m	**OK**

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Electrical fast transient / burst immunity test** **電気的ファーストトランジェント／バーストイミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-4
(引用規格:IEC61000-4-4)

2.Test method (試験方法)

Points to be applied voltage: L-N, L-FG, N-FG
(電圧印加箇所:L-N, L-FG, N-FG)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Output voltage variations during the test, it is within specifications.
(試験中の出力電圧の変動は、仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

Test level (試験レベル)	Test voltage (試験電圧)	Repetition rate (繰り返し率)	Result (結果)
Level 1	0.5kV	5kHz	**OK**
Level 2	1.0kV	5kHz	**OK**
Level 3	2.0kV	5kHz	**OK**

Model	OZP-120-12/15 （12V DC Output Settings）
Test Item	**Surge immunity test** **サージイミュニティ試験**

1.Test conditions（試験条件）

Ambient Temperature: 25±5℃
（周囲温度：25±5℃）

Input: 100V, 230V AC
（入力：AC100V、AC230V）

Load: Rated load
（負荷：定格負荷）

Standard: IEC61000-4-5
（引用規格：IEC61000-4-5）

2.Test method（試験方法）

Test mode: Normal mode (L-N), Common mode (L-FG, N-FG)
（試験モード：ノーマルモード、コモンモード）

Polarity: +/-
（極性：＋／－）

Number of tests: 5 times
（試験回数：5回）

Test interval: 1 minute
（試験間隔：1分）

This product must be tested with the chassis.
（この製品はシャーシ付きで試験を実施すること）

3.Acceptable condition（許容可能な条件）

Output voltage variations during the test, it is within specifications.
（試験中の出力電圧の変動は、仕様内であること。）

No damage to the parts that no smoke or fire.
（部品へのダメージがなく、発煙や発火もないこと。）

4.Test result（試験結果）

	Normal mode （ノーマルモード）		Common mode （コモンモード）	
Test level （試験レベル）	Test voltage （試験電圧）	Result （結果）	Test voltage （試験電圧）	Result （結果）
Level 1	-	-	0.5kV	**OK**
Level 2	0.5kV	**OK**	1kV	**OK**
Level 3	1kV	**OK**	2kV	**OK**

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Conducted disturbances induced by radio-frequency fields immunity test** **伝導性無線周波数電磁界イミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-6
(引用規格:IEC61000-4-6)

2.Test method (試験方法)

Frequency band: 150kHz to 80MHz
(周波数範囲:150kHzから80MHz)

Amplitude modulated: 80%, 1kHz
(振幅変調:80%, 1kHz)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Output voltage variations during the test, it is within specifications.
(試験中の出力電圧の変動は、仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

Test level (試験レベル)	Voltage level (e.m.f) (電圧レベル(e.m.f))		Result (結果)
Level 1	120dB(μV)	1V	**OK**
Level 2	130dB(μV)	3V	**OK**
Level 3	140dB(μV)	10V	**OK**

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Power frequency magnetic field immunity test** **電力周波数磁界イミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-8
(引用規格:IEC61000-4-8)

2.Test method (試験方法)

Magnetic frequency: 50, 60Hz
(磁界周波数:50、60Hz)

Test time: 1 minutes (each direction)
(試験時間:各方向1分)

Magnetic field direction: Front, Left side, Right side, Rear, Horizontal, Vertical
(印加方向:正面、左側、右側、背面、水平、垂直)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Output voltage variations during the test, it is within specifications.
(試験中の出力電圧の変動は、仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

Test level (試験レベル)	Magnetic field strength (放射電磁界強度)	Result (結果)
Level 1	1A/m	**OK**
Level 2	3A/m	**OK**
Level 3	10A/m	**OK**
Level 4	30A/m	**OK**

Model	OZP-120-12/15 (12V DC Output Settings)
Test Item	**Voltage dips, short interruptions immunity test** **電圧ディップ、瞬時停電イミュニティ試験**

1.Test conditions (試験条件)

Ambient Temperature: 25±5℃
(周囲温度:25±5℃)

Input: 100V, 230V AC
(入力:AC100V、AC230V)

Load: Rated load
(負荷:定格負荷)

Standard: IEC61000-4-11
(引用規格:IEC61000-4-11)

2.Test method (試験方法)

Number of tests: 3 times
(試験回数:3回)

Interval: 10s min.
(試験間隔:10秒以上)

This product must be tested with the chassis.
(この製品はシャーシ付きで試験を実施すること)

3.Acceptable condition (許容可能な条件)

Voltage dip test time is about 10ms, the output voltage is within specification during the test.
(試験時間が10msの電圧ディップについては、試験中の出力電圧は仕様内であること。)

Voltage dip test time is about 500ms and 5000ms, the output voltage to be within specification after testing.
(電圧ディップ試験時間が500msと5000msについては、試験後の出力電圧が仕様内であること。)

No damage to the parts that no smoke or fire.
(部品へのダメージがなく、発煙や発火もないこと。)

4.Test result (試験結果)

Dip level (ディップレベル)	Residual voltage level (残留電圧レベル)	Voltage dip time (電圧ディップ時間)	Result (結果)
30%	70%	500ms	**OK**
95%	5%	10ms	**OK**
100%	0%	5000ms	**OK**