ZWS50C

EVALUATION DATA

型式データ

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2. 特性データ Characteristics

使用記号 Terminology used

定義 Definition

Vin ‥‥‥入力電圧 Input voltage
Vout ‥‥‥出力電圧 Output voltage
Iin ‥‥‥入力電流 Input current
Iout ‥‥‥出力電流 Output current
Ta ‥‥‥周囲温度 Ambient temperature
f ‥‥‥周波数 Frequency

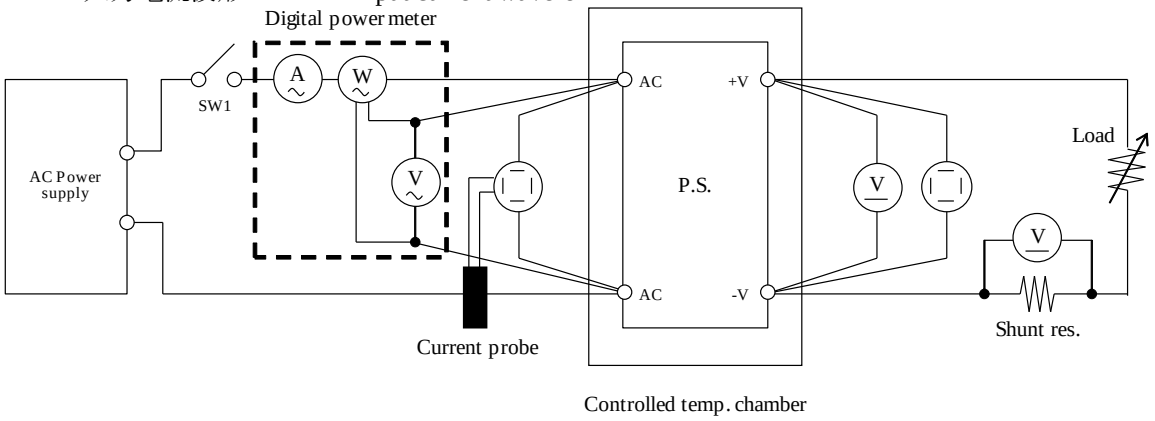
※ 当社測定条件における結果であり、参考値としてお考え願います。
Test results are reference data based on our measurement condition.

1. 測定方法 Evaluation Method

1-1. 測定回路 Circuit used for determination

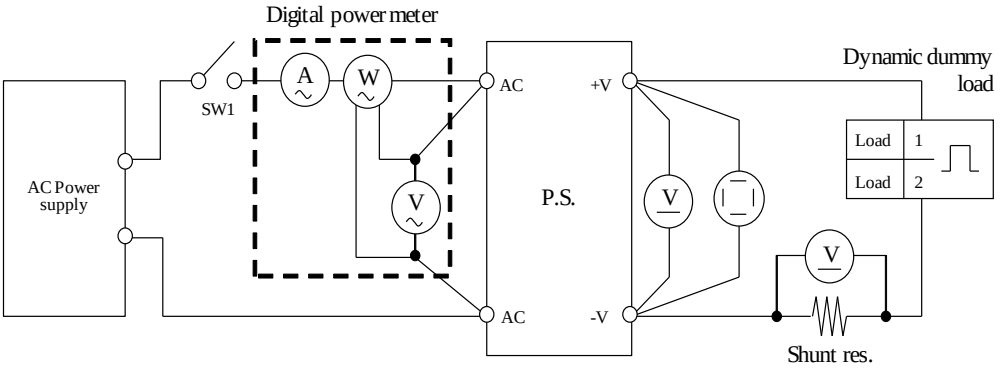
測定回路1 Circuit 1 used for determination

- 静特性 Steady state data
- 通電ドリフト特性 Warm up voltage drift characteristics
- 出力保持時間特性 Hold up time characteristics
- 出力立ち上がり特性 Output rise characteristics
- 出力立ち下がり特性 Output fall characteristics
- 過電流保護特性 Over current protection (OCP) characteristics
- 過電圧保護特性 Over voltage protection (OVP) characteristics
- 入力電圧瞬停特性 Response to brown out characteristics
- 入力電流波形 Input current waveform

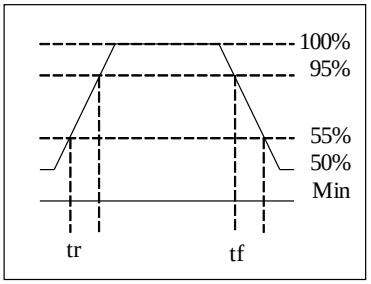


測定回路2 Circuit 2 used for determination

- 過渡応答(負荷急変)特性 Dynamic load response characteristics

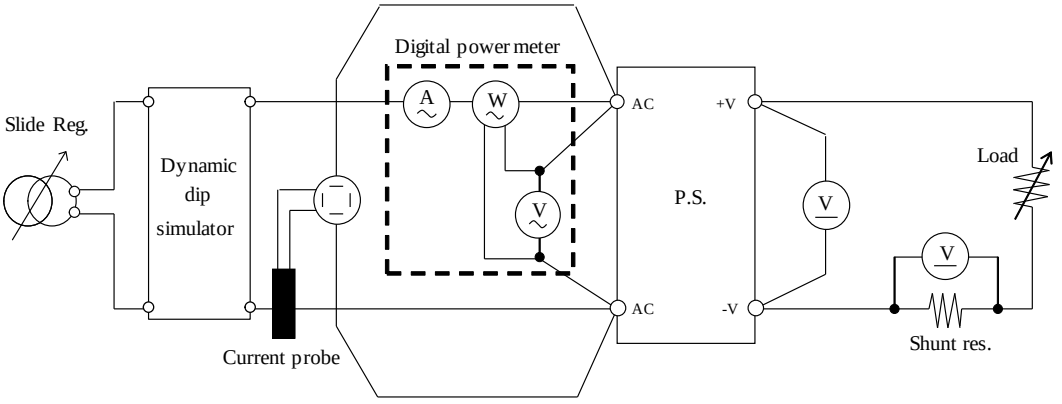


Output current waveform
Iout 50% <==> 100%



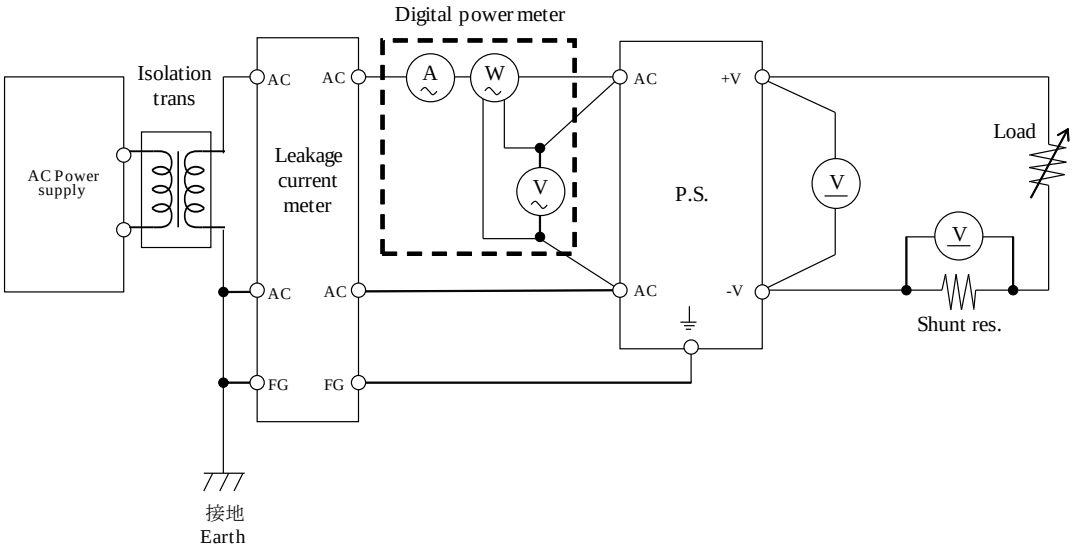
測定回路3　Circuit 3 used for determination

- 入力サージ電流（突入電流）波形　Inrush current waveform



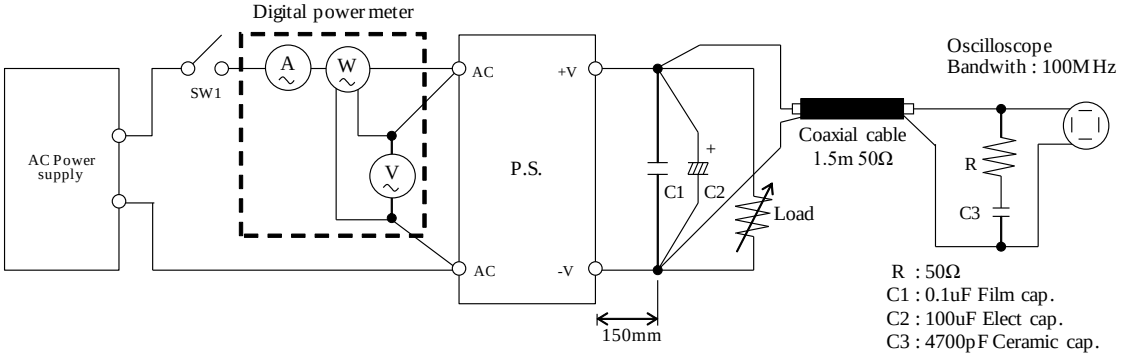
測定回路4　Circuit 4 used for determination

- リーク電流特性　Leakage current characteristics



測定回路5　Circuit 5 used for determination

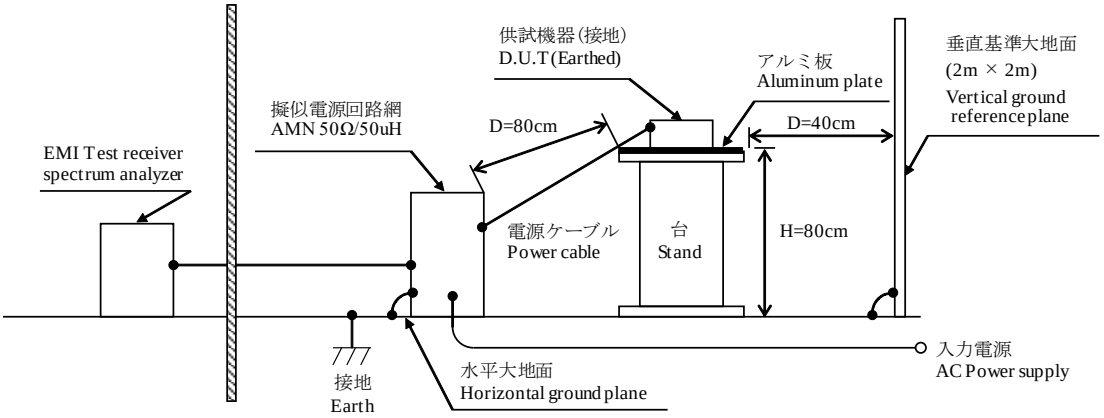
- 出力リップル、ノイズ波形　Output ripple and noise waveform



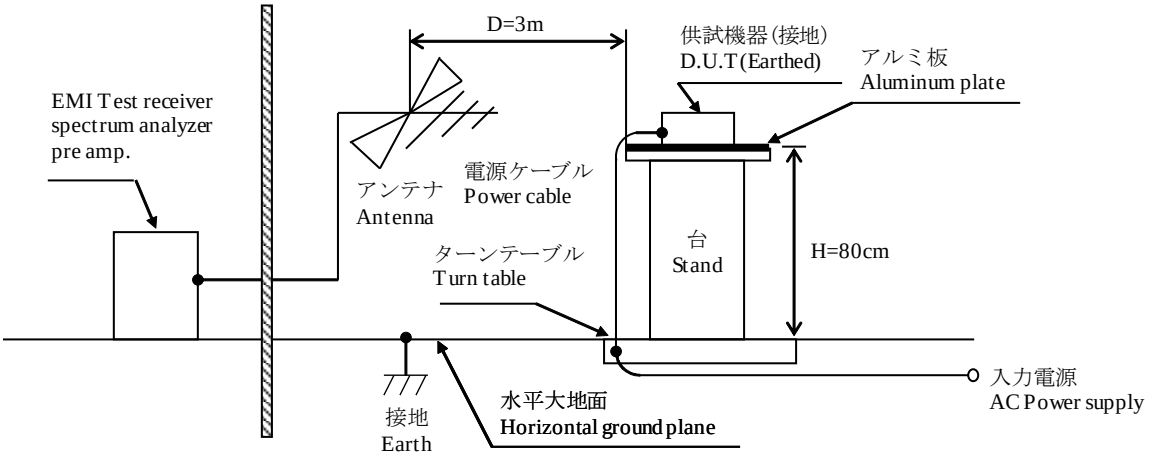
測定構成　Configuration used for determination

- EMI特性　Electro-Magnetic Interference characteristics

(a) 雑音端子電圧（帰還ノイズ）　Conducted Emission



(b) 雑音電界強度（放射ノイズ）　Radiated Emission



1-2. 使用測定機器 List of equipment used

	EQUIPMENT USED	MANUFACTURER	MODEL NO.
1	DIGITAL STORAGE OSCILLOSCOPE	YOKOGAWA ELECT.	DLM3054
2	DIGITAL MULTIMETER	AGILENT	34970A
3	DIGITAL POWER METER	YOKOGAWA ELECT.	WT210
4	CURRENT PROBE	TEKTRONIX	TPC312 / TP305A
5	CURRENT AMP	TEKTRONIX	TCPA300
6	DYNAMIC DUMMY LOAD	CHROMA	63103A
7	CVCF	CHROMA	6530
8	CVCF	CHROMA	61603
9	CVCF	KIKUSUI	PCR2000W / PCR1000LE
10	CONTROLLED TEMP. CHAMBER	ESPEC	SU-261 / SU-262
11	EMI TEST RECEIVER / SPECTRUM ANALYZER	ROHM & SCHWARZ	ESCI / ESR3
12	LISN	ROHM & SCHWARZ	ENV216
13	ANTENNA	SCHWARZBECK	VULB 9168
14	PRE-AMPLIFIER	EMCI	EMC9135 (EMCI)
15	DUMMY LOAD	FUTABA	RAGR SERIES
16	LEAKAGE CURRENT METER	EXTECH	7611

2. 特性データ Characteristics

2-1. 静特性 Steady state data

(1) 入力・負荷・温度変動／出力起動・遮断電圧

Regulation - line and load, Temperature drift / Start up voltage and Drop out voltage

5V

1. Regulation - line and load — Condition Ta : 25 °C

Iout \ Vin	85VAC	100VAC	200VAC	265VAC	Line regulation	
0%	5.070V	5.070V	5.070V	5.070V	0mV	0.000%
50%	5.067V	5.067V	5.066V	5.066V	1mV	0.020%
Full load	5.059V	5.061V	5.060V	5.061V	2mV	0.040%
Load regulation	11mV	9mV	10mV	9mV		
	0.220%	0.180%	0.200%	0.180%		

2. Temperature drift — Conditions Vin : 100 VAC, Iout : 100 %

Ta	-10°C	+25°C	+50°C	Temperature stability	
Vout	5.047V	5.061V	5.061V	14mV	0.280%

3. Start up voltage and Drop out voltage — Conditions Ta : 25 °C, Iout : 100 %

Start up voltage (Vin)	57VAC
Drop out voltage (Vin)	53VAC

12V

1. Regulation - line and load — Condition Ta : 25 °C

Iout \ Vin	85VAC	100VAC	200VAC	265VAC	Line regulation	
0%	12.134V	12.134V	12.134V	12.134V	0mV	0.000%
50%	12.130V	12.132V	12.131V	12.132V	2mV	0.017%
Full load	12.130V	12.128V	12.128V	12.128V	2mV	0.017%
Load regulation	4mV	6mV	6mV	6mV		
	0.033%	0.050%	0.050%	0.050%		

2. Temperature drift — Conditions Vin : 100 VAC, Iout : 100 %

Ta	-10°C	+25°C	+50°C	Temperature stability	
Vout	12.114V	12.128V	12.125V	14mV	0.117%

3. Start up voltage and Drop out voltage — Conditions Ta : 25 °C, Iout : 100 %

Start up voltage (Vin)	62VAC
Drop out voltage (Vin)	59VAC

48V

1. Regulation - line and load — Condition Ta : 25 °C

Iout \ Vin	85VAC	100VAC	200VAC	265VAC	Line regulation	
0%	48.206V	48.206V	48.206V	48.206V	0mV	0.000%
50%	48.201V	48.203V	48.203V	48.204V	3mV	0.006%
Full load	48.204V	48.199V	48.201V	48.200V	5mV	0.010%
Load regulation	5mV	7mV	5mV	6mV		
	0.010%	0.015%	0.010%	0.013%		

2. Temperature drift — Conditions Vin : 100 VAC, Iout : 100 %

Ta	-10°C	+25°C	+50°C	Temperature stability	
Vout	48.122V	48.199V	48.188V	77mV	0.160%

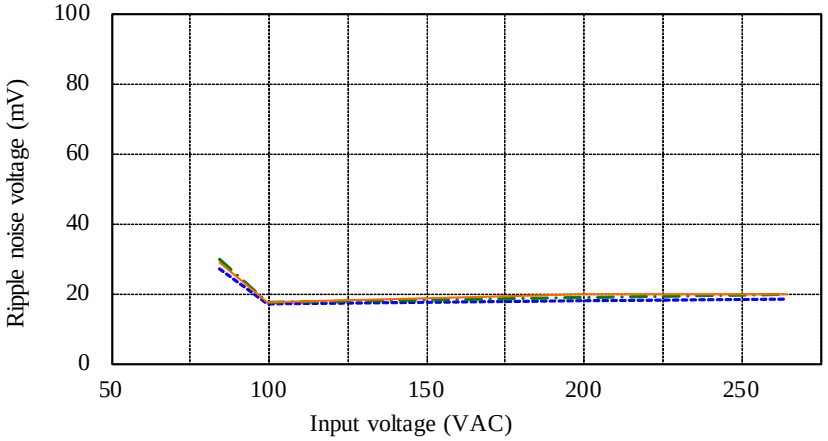
3. Start up voltage and Drop out voltage — Conditions Ta : 25 °C, Iout : 100 %

Start up voltage (Vin)	64VAC
Drop out voltage (Vin)	60VAC

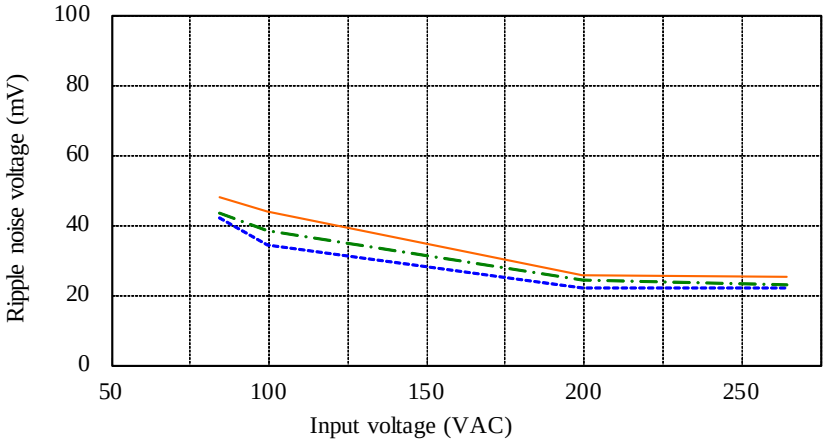
(2) リップルノイズ電圧対入力電圧　Ripple noise voltage vs. Input voltage

Conditions　Iout： 100 %
Ta： -10 °C
25 °C
50 °C

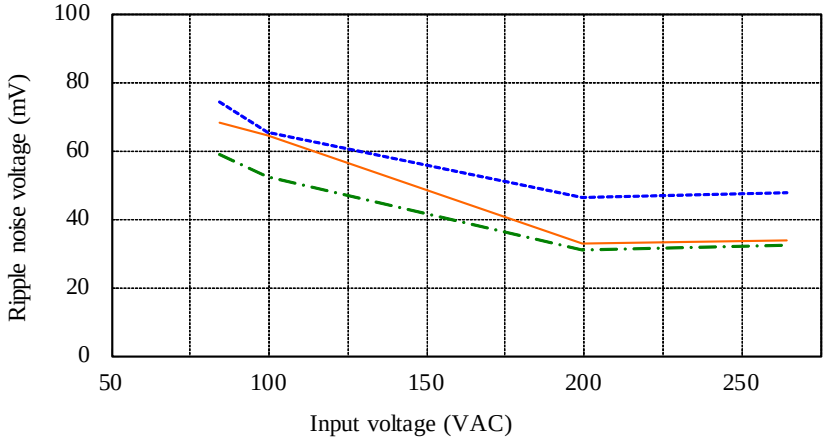
5V



12V



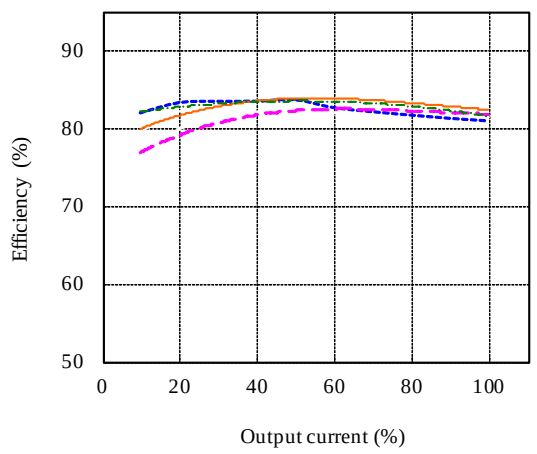
48V

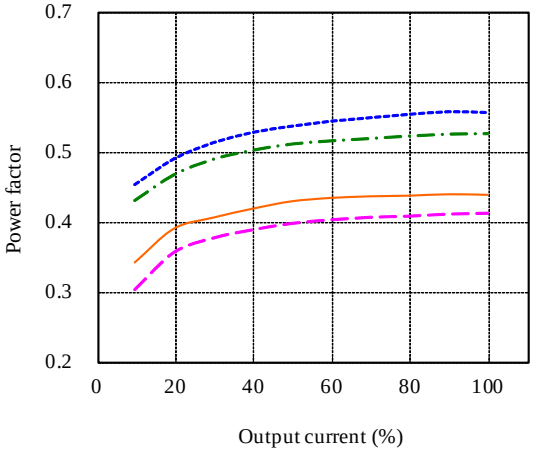


(3) 効率・力率対出力電流　Efficiency and Power factor vs. Output current

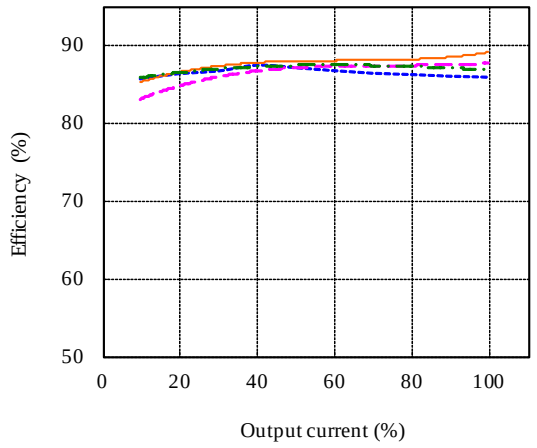
Conditions　Vin：　85 VAC
100 VAC
200 VAC
265 VAC
Ta：　25 °C

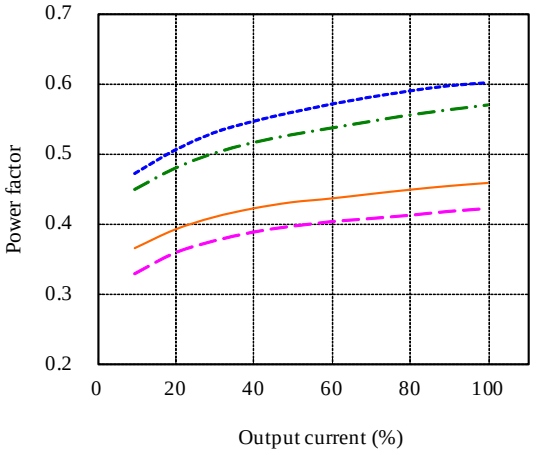
5V



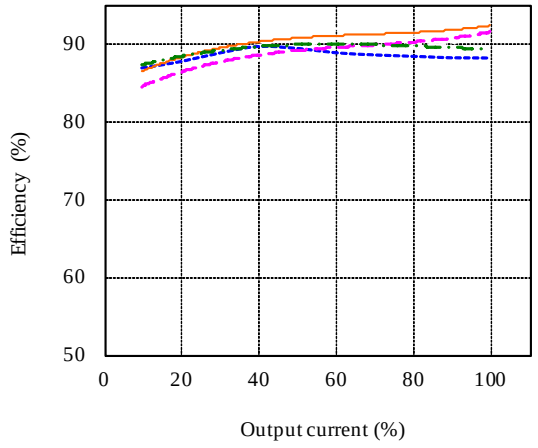


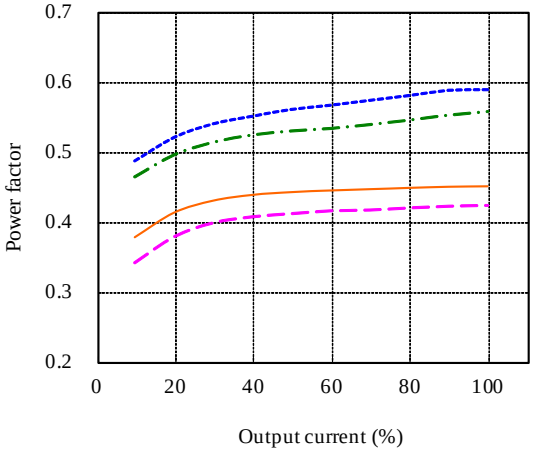
12V





48V



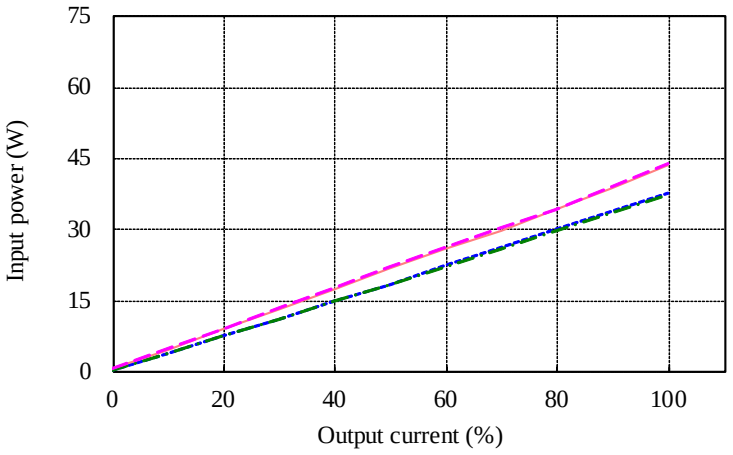


(4) 入力電力対出力電流 Input power vs. Output current

Conditions Vin : 85 VAC
100 VAC
200 VAC
265 VAC
Ta : 25 °C

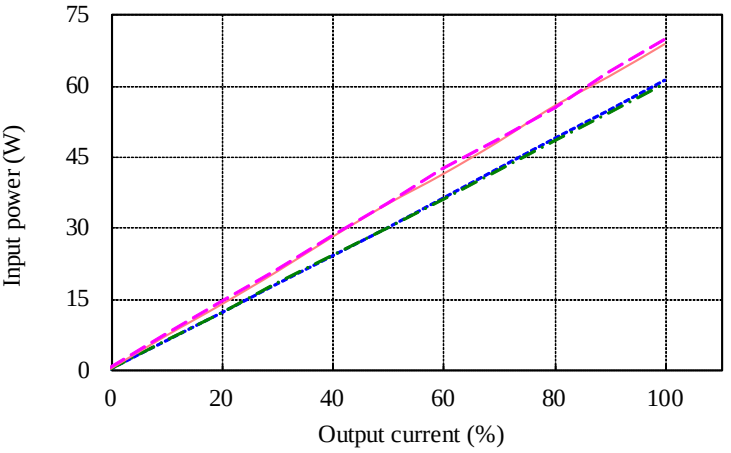
5V

Vin	Input power
	Iout : 0%
85VAC	0.2W
100VAC	0.2W
200VAC	0.3W
265VAC	0.5W



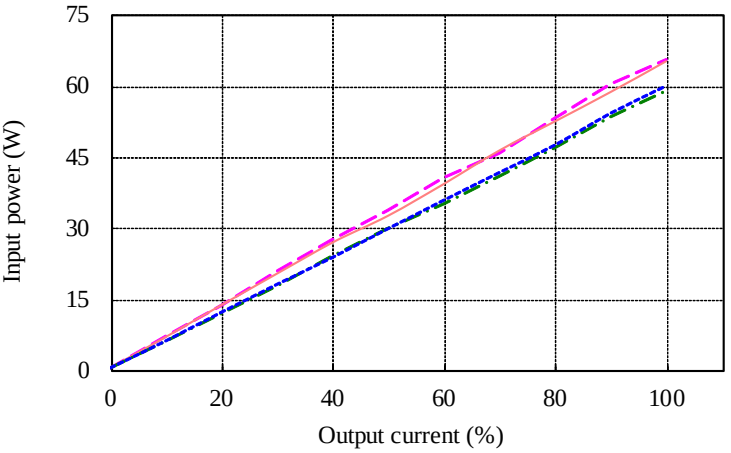
12V

Vin	Input power
	Iout : 0%
85VAC	0.2W
100VAC	0.2W
200VAC	0.2W
265VAC	0.3W



48V

Vin	Input power
	Iout : 0%
85VAC	0.3W
100VAC	0.3W
200VAC	0.4W
265VAC	0.4W

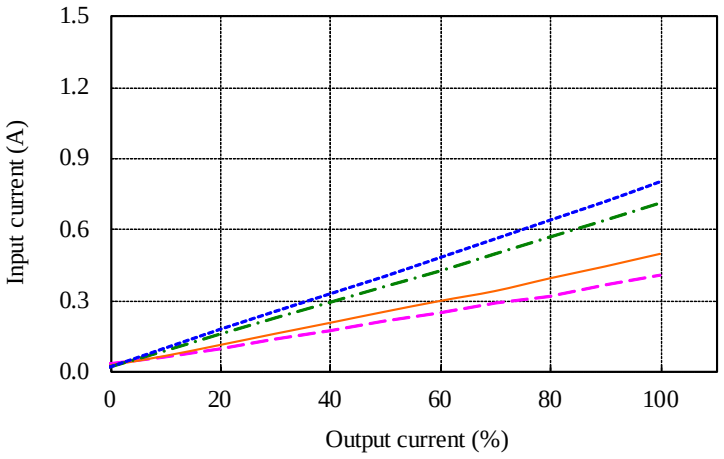


(5) 入力電流対出力電流　Input current vs. Output current

Conditions　Vin :　85 VAC
100 VAC
200 VAC
265 VAC
Ta :　25 °C

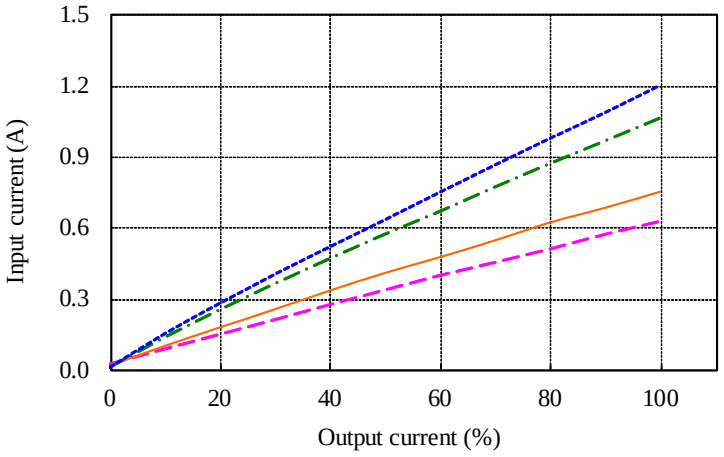
5V

Vin	Input current Iout : 0%
85VAC	0.02A
100VAC	0.02A
200VAC	0.03A
265VAC	0.03A



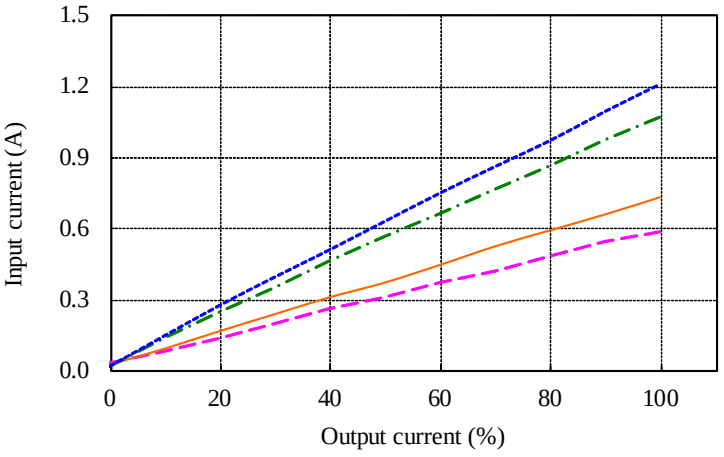
12V

Vin	Input current Iout : 0%
85VAC	0.01A
100VAC	0.01A
200VAC	0.02A
265VAC	0.02A



48V

Vin	Input current Iout : 0%
85VAC	0.02A
100VAC	0.02A
200VAC	0.03A
265VAC	0.03A

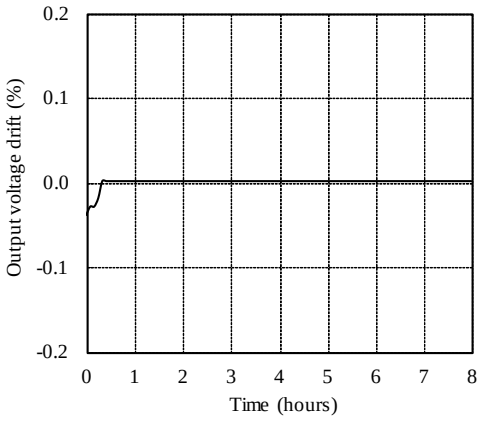


2-2. 通電ドリフト特性

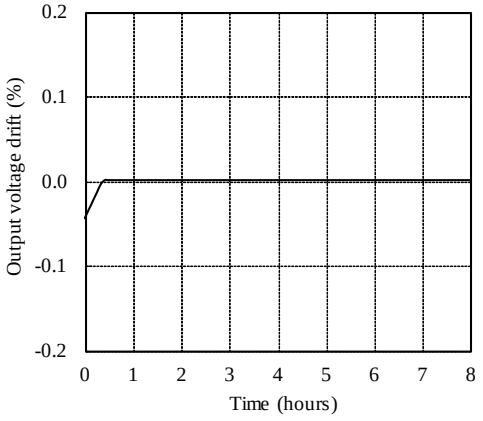
Warm up voltage drift characteristics

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25 °C

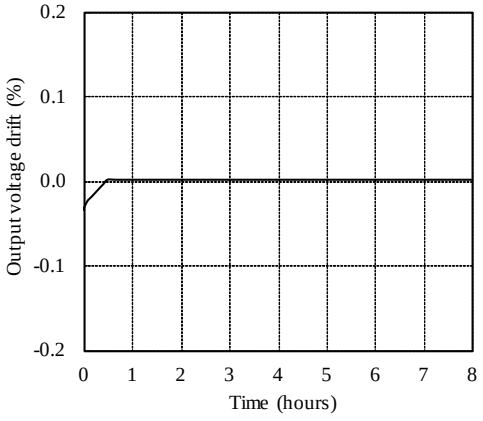
5V



12V



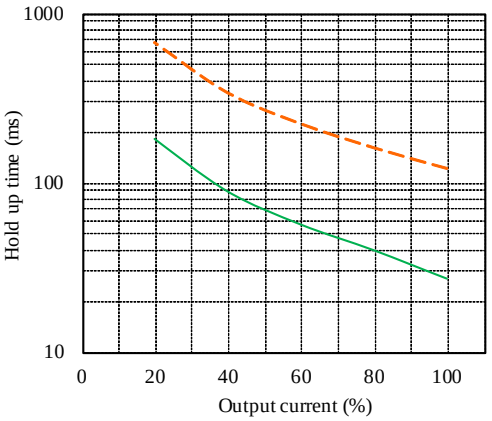
48V

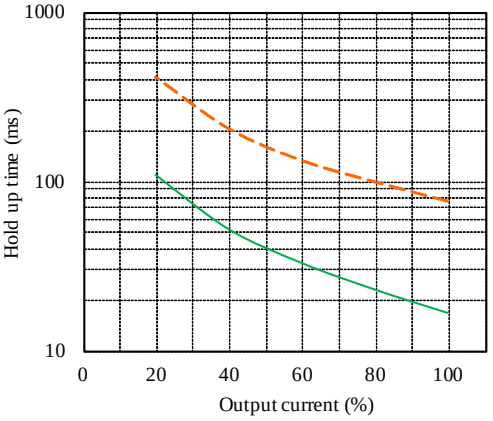


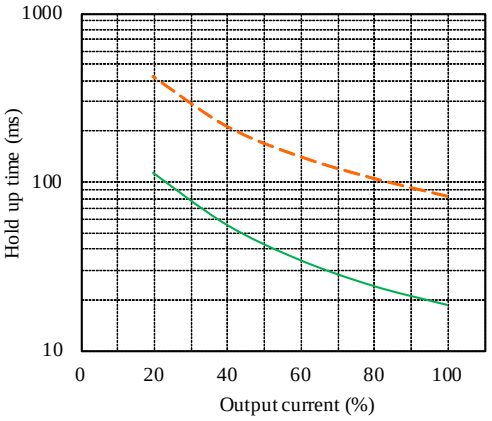
2-3. 出力保持時間特性

Hold up time characteristics

Conditions Vin : 100 VAC
200 VAC
Ta : 25 °C



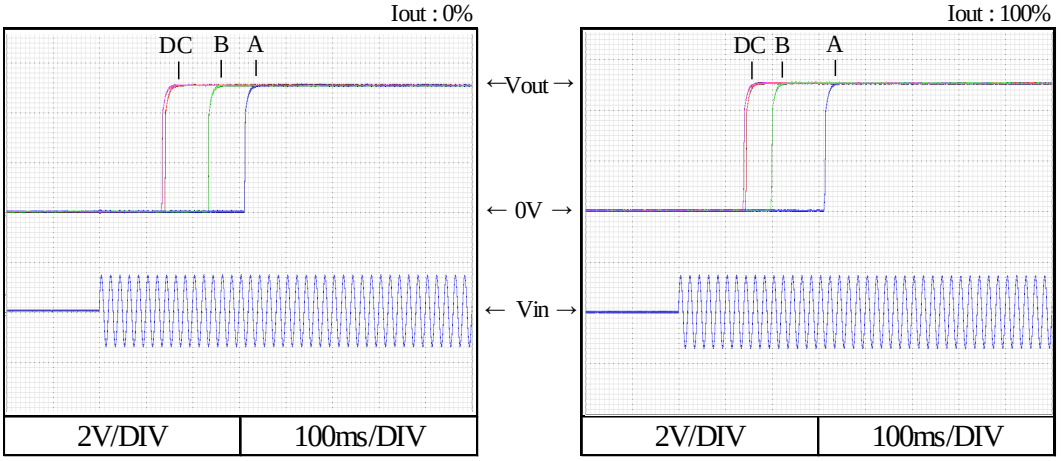




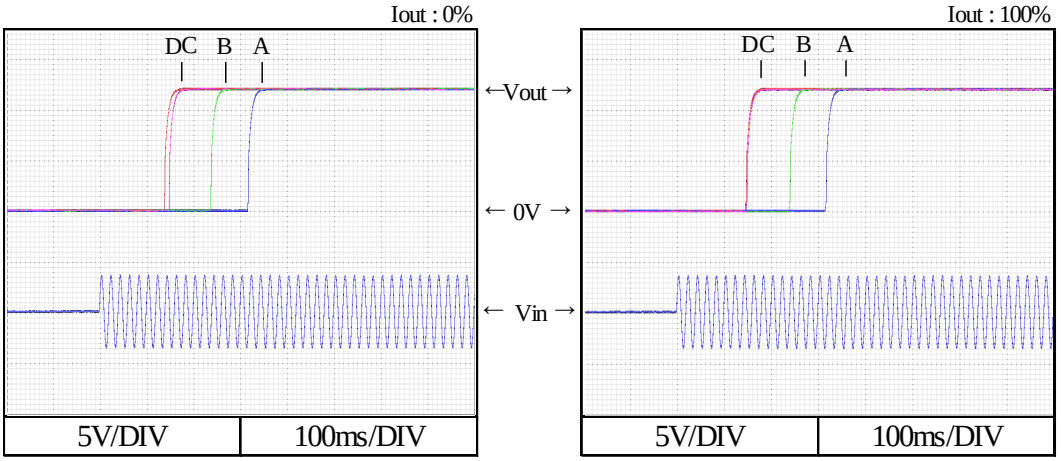
2-4. 出力立ち上がり特性 Output rise characteristics

Conditions Vin : 85 VAC (A)
100 VAC (B)
200 VAC (C)
265 VAC (D)
Ta : 25 °C

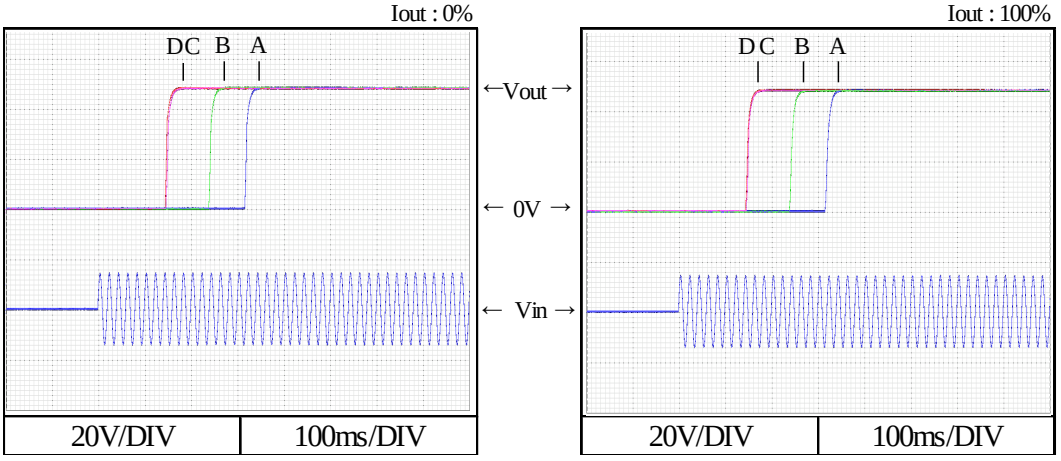
5V



12V



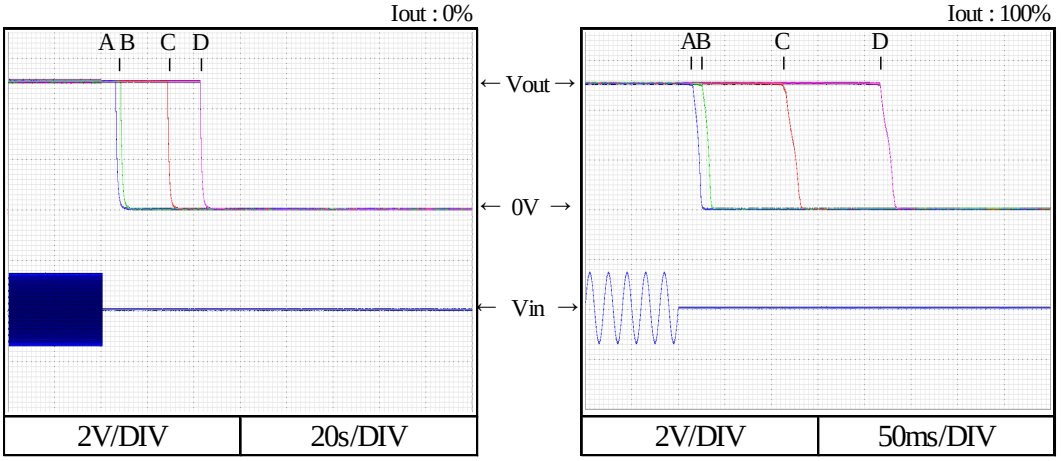
48V



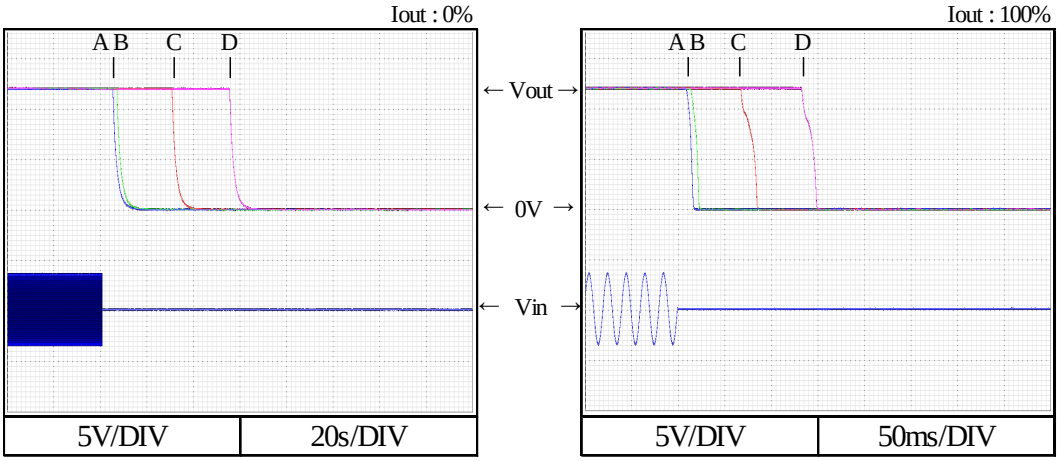
2-5. 出力立ち下がり特性 Output fall characteristics

Conditions Vin : 85 VAC (A)
100 VAC (B)
200 VAC (C)
265 VAC (D)
Ta : 25 °C

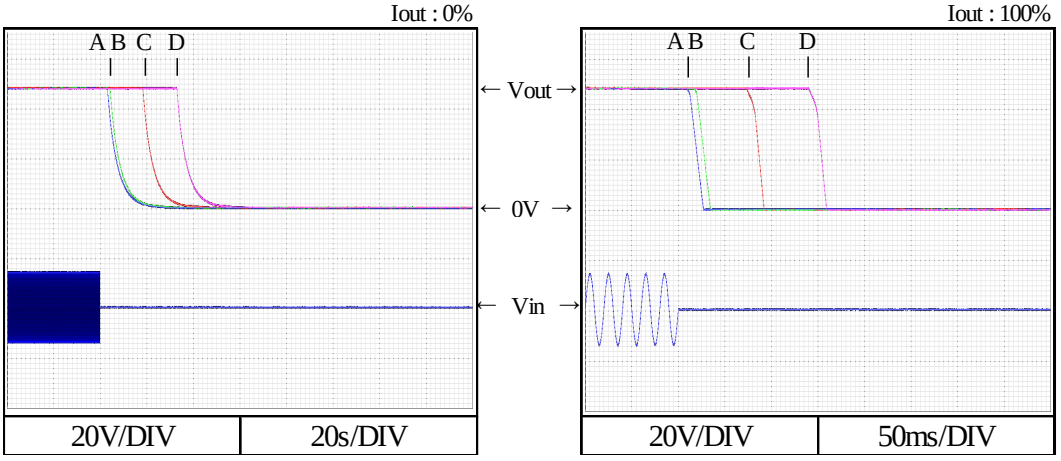
5V



12V



48V

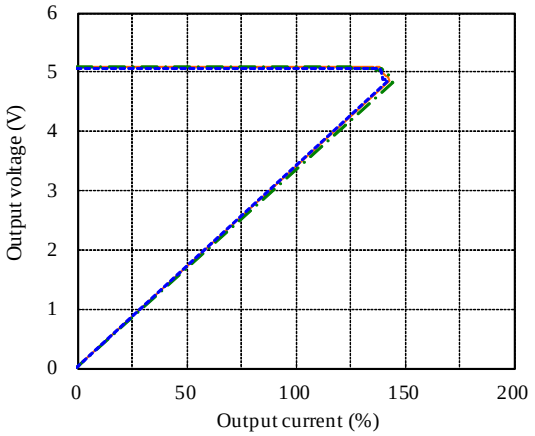


2-6. 過電流保護特性

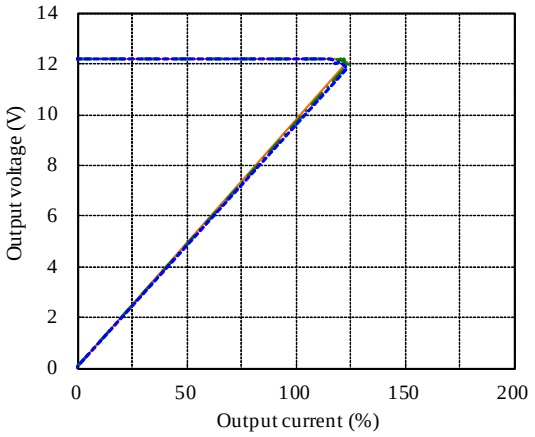
Over current protection (OCP) characteristics

Conditions Vin : 100 VAC
Ta : -10 °C
25 °C
50 °C

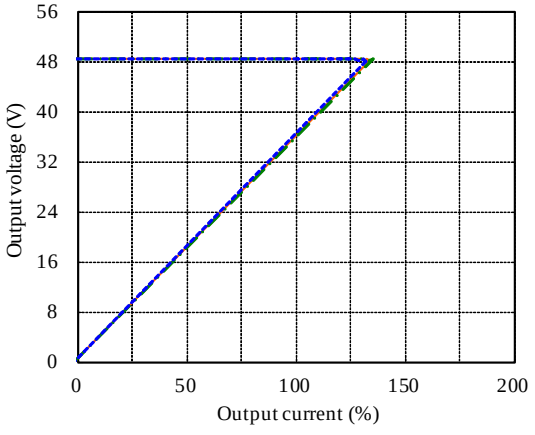
5V



12V



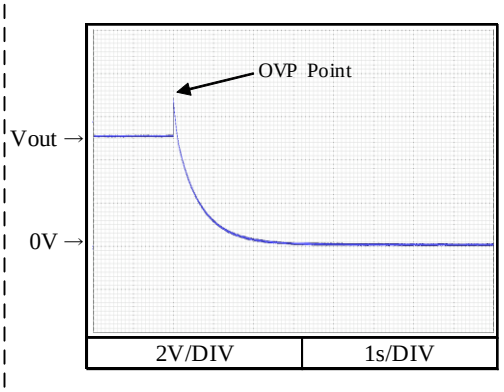
48V

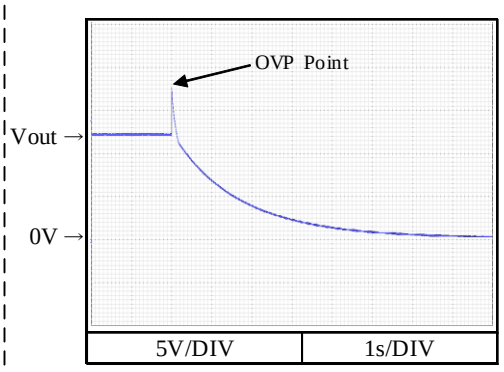


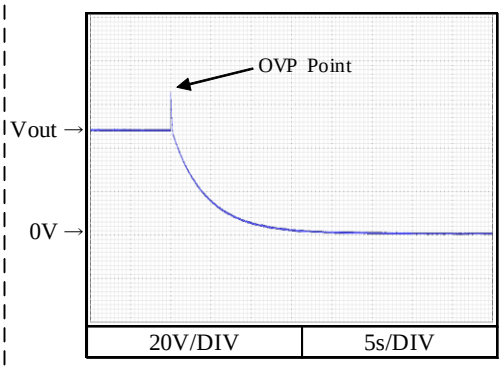
2-7. 過電圧保護特性

Over voltage protection (OVP) characteristics

Conditions Vin : 100 VAC
Iout : 0 %
Ta : 25 °C



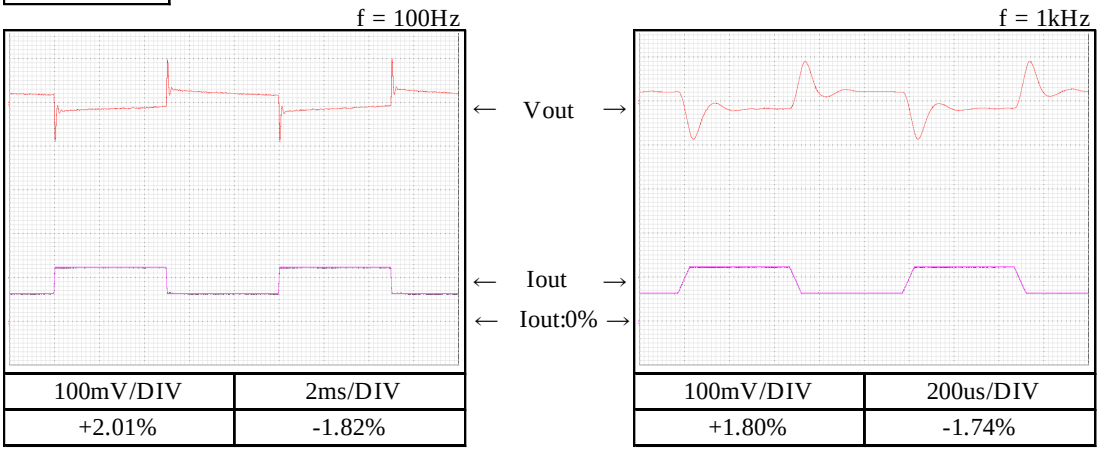




2-8. 過渡応答(負荷急変)特性 Dynamic load response characteristics

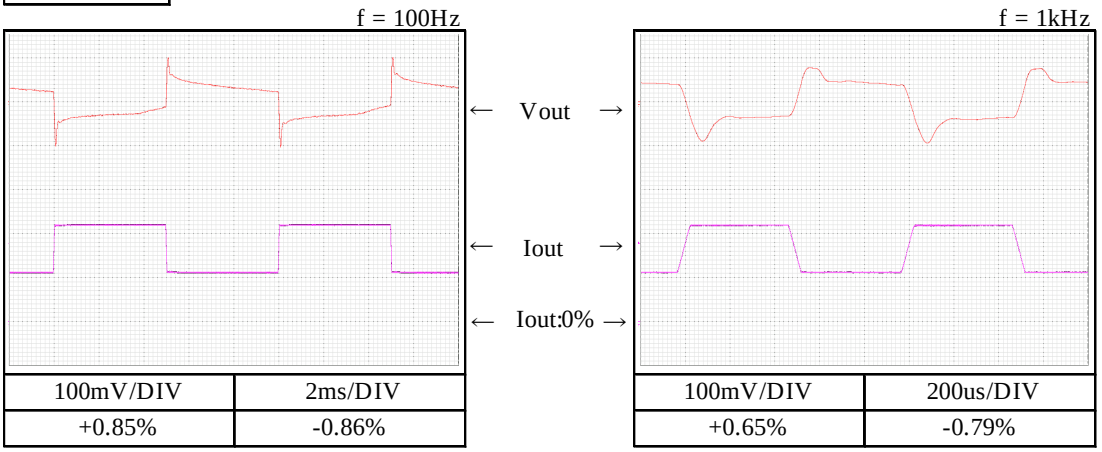
Conditions Vin : 100 VAC
Iout : 50 % ↔ 100 %
(tr = tf = 50us)
Ta : 25 °C

5V



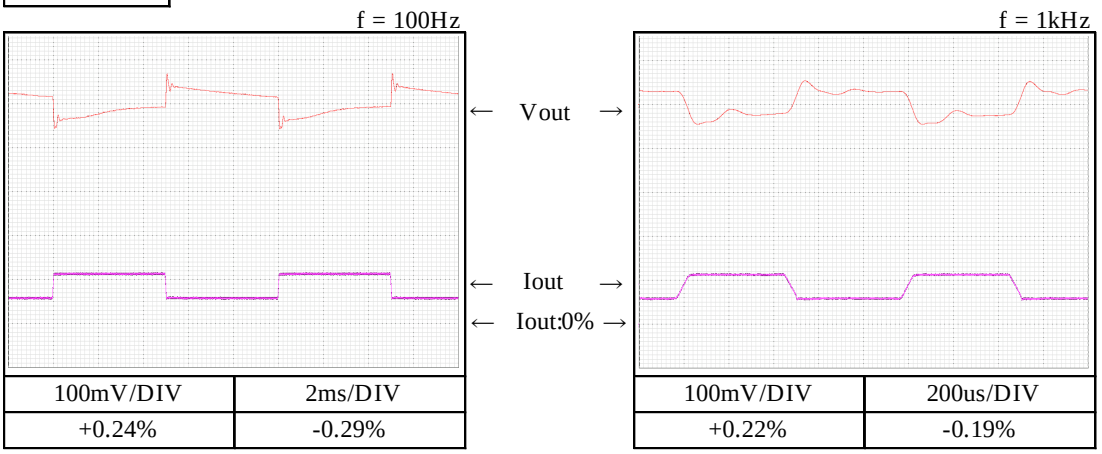
100mV/DIV	2ms/DIV	100mV/DIV	200us/DIV
+2.01%	-1.82%	+1.80%	-1.74%

12V



100mV/DIV	2ms/DIV	100mV/DIV	200us/DIV
+0.85%	-0.86%	+0.65%	-0.79%

48V



100mV/DIV	2ms/DIV	100mV/DIV	200us/DIV
+0.24%	-0.29%	+0.22%	-0.19%

2-9. 入力電圧瞬停特性 Response to brown out characteristics

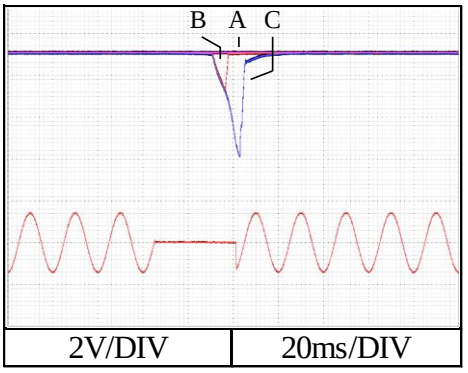
Conditions Ta : 25 °C
Iout : 100 %

瞬停時間 Interruption time

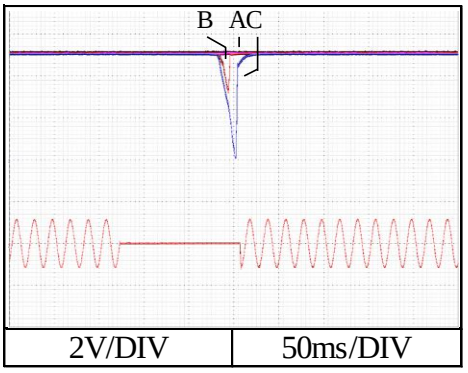
A : 出力電圧が低下なし Output voltage does not drop.
B : 出力電圧が0Vまで低下しない Output voltage drop down not reaching 0V.
C : 出力電圧が0Vまで低下 Output voltage drops until 0V.

5V

Vin : 100VAC
A = 20ms, B = 29ms, C = 36ms

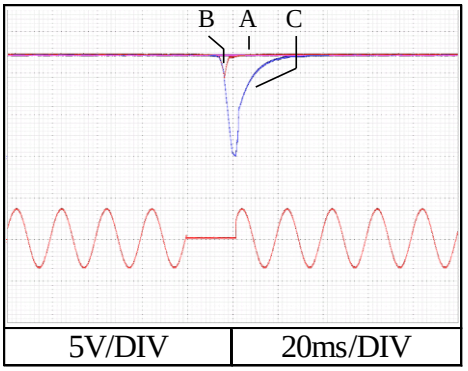


Vin : 200VAC
A = 108ms, B = 119ms, C = 136ms

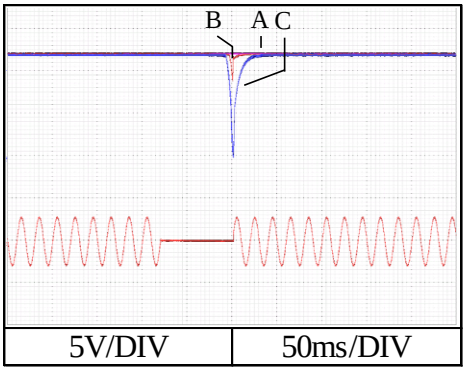


12V

Vin : 100VAC
A = 12ms, B = 17ms, C = 23ms

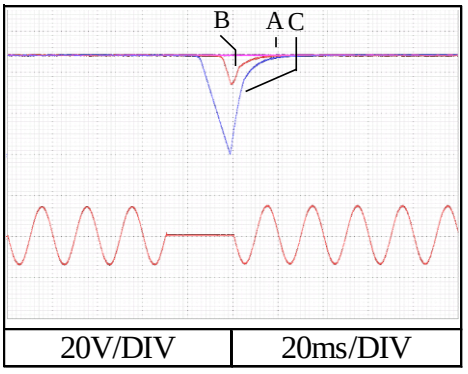


Vin : 200VAC
A = 65ms, B =74ms, C = 82ms

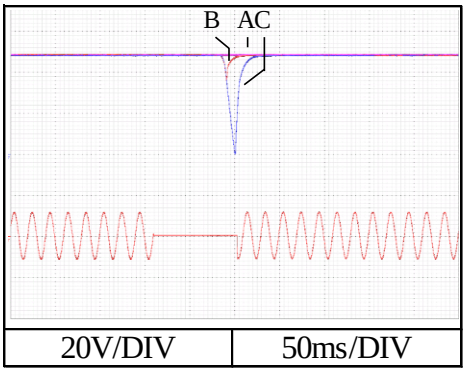


48V

Vin : 100VAC
A = 14ms, B = 20ms, C = 32ms



Vin : 200VAC
A = 68ms, B = 82ms, C = 93ms

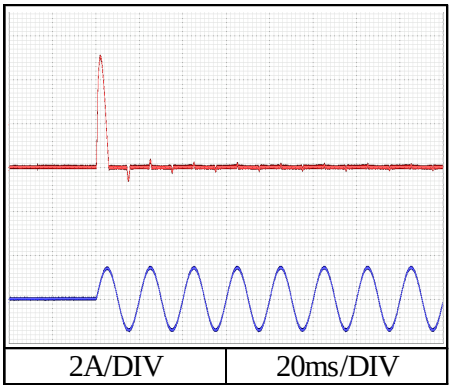


2-10. 入力サージ電流(突入電流)波形 Inrush current waveform

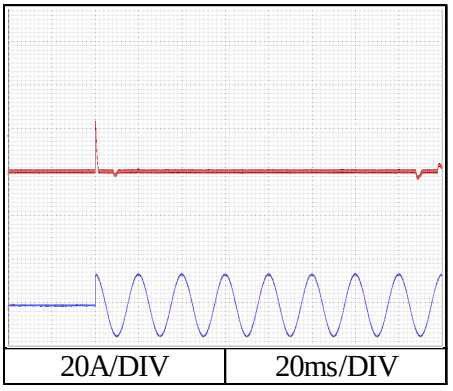
48V

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C

Switch on phase angle of input AC voltage
θ = 0°

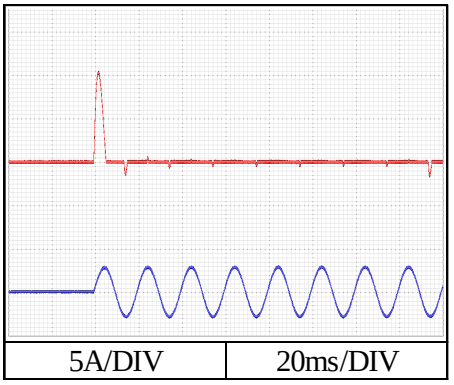


Switch on phase angle of input AC voltage
θ = 90°

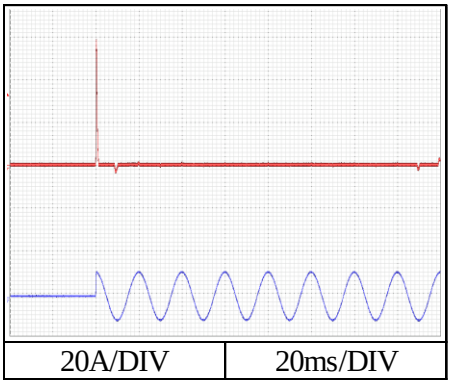


Conditions Vin : 200 VAC
Iout : 100 %
Ta : 25°C

Switch on phase angle of input AC voltage
θ = 0°



Switch on phase angle of input AC voltage
θ = 90°

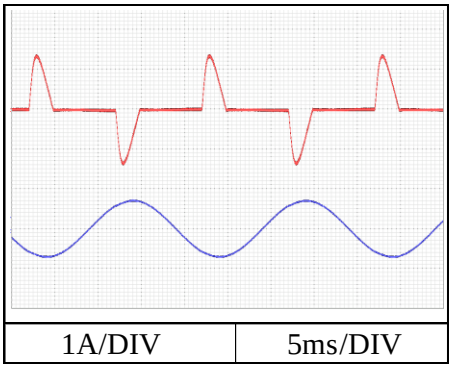


2-11. 入力電流波形 Input current waveform

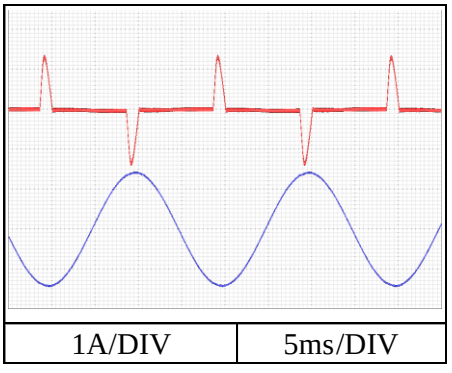
Conditions Iout : 100
Ta : 25°C

48V

Vin : 100VAC



Vin : 200VAC

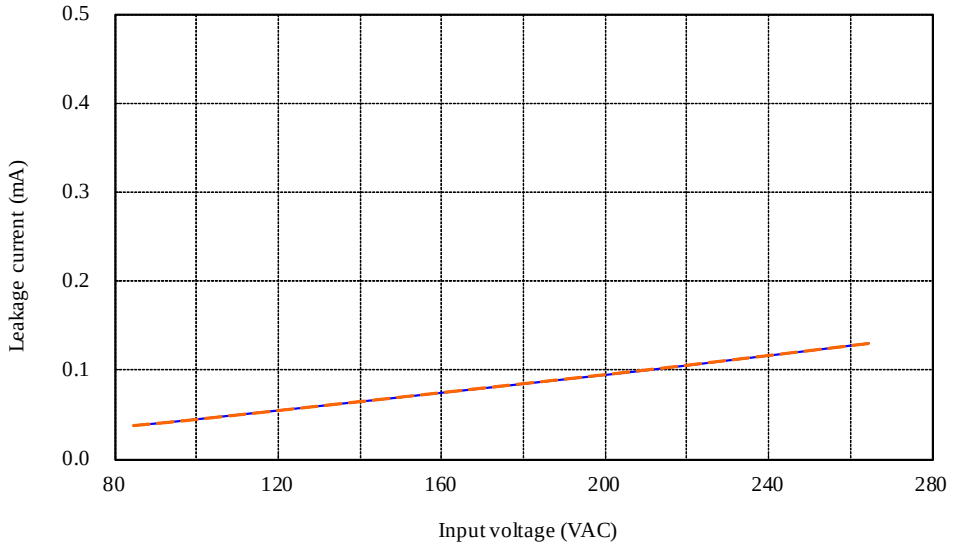


2-12. リーク電流特性 Leakage current characteristics

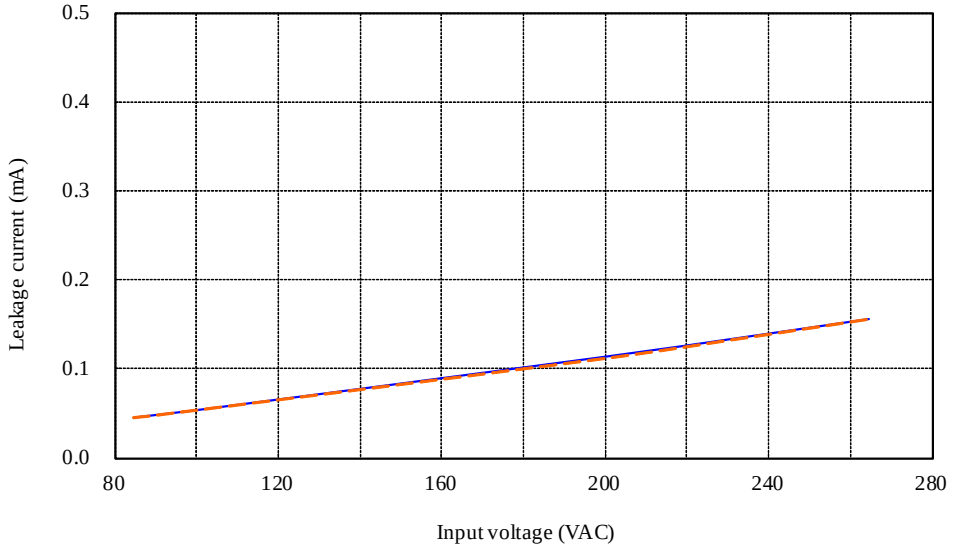
Conditions Iout : 0 %
100 %
Ta : 25°C
Equipment used : 7611(EXTECH)

48V

f : 50 Hz



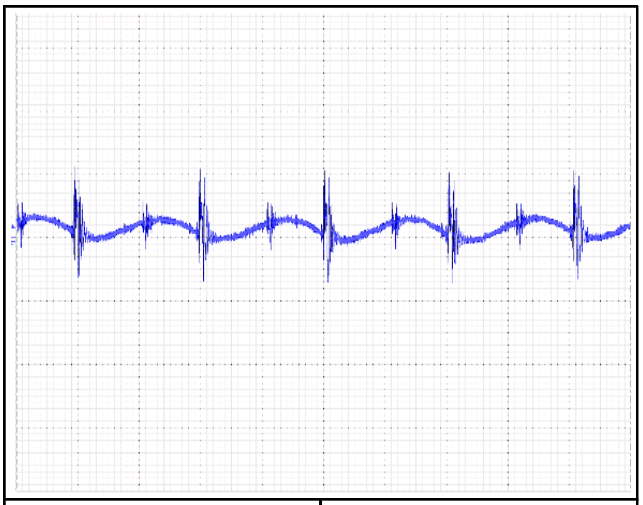
f : 60 Hz



2-13. 出力リップル、ノイズ波形 Output ripple and noise waveform

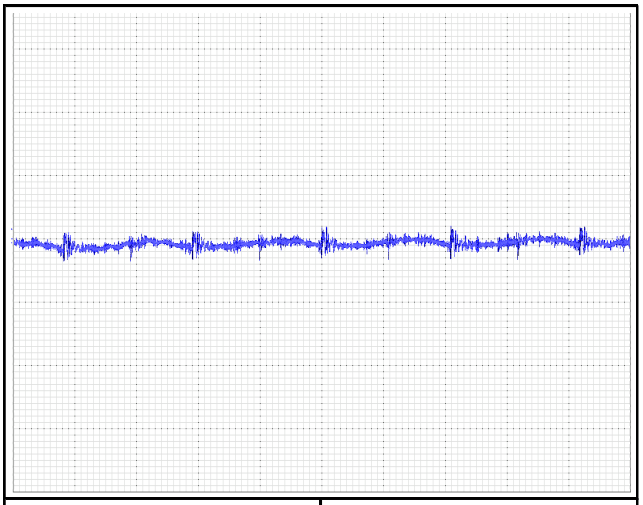
Conditions Vin： 100 VAC
Iout： 100 %
Ta： 25°C

5V



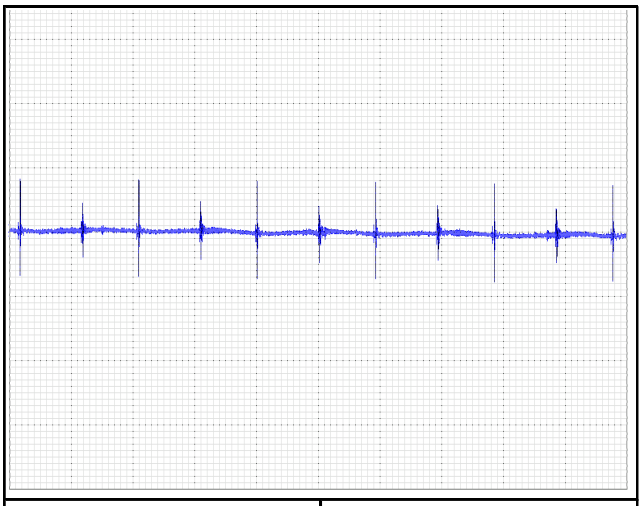
5mV/DIV	5μs/DIV

12V



10mV/DIV	5μs/DIV

48V



10mV/DIV	5μs/DIV

2-14. EMI特性 Electro-Magnetic Interference characteristics

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

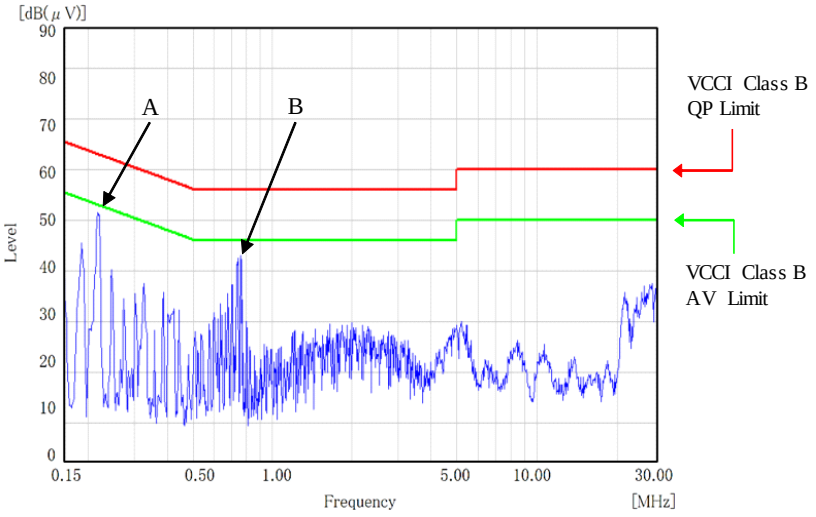
雑音端子電圧
Conducted Emission

5V

Ref. Data	Point A (218KHz) Limit (dB)	Measure (dB)
QP	62.9	48.1
AV	52.9	29.0

Ref. Data	Point B (746KHz) Limit (dB)	Measure (dB)
QP	56.0	40.3
AV	46.0	22.3

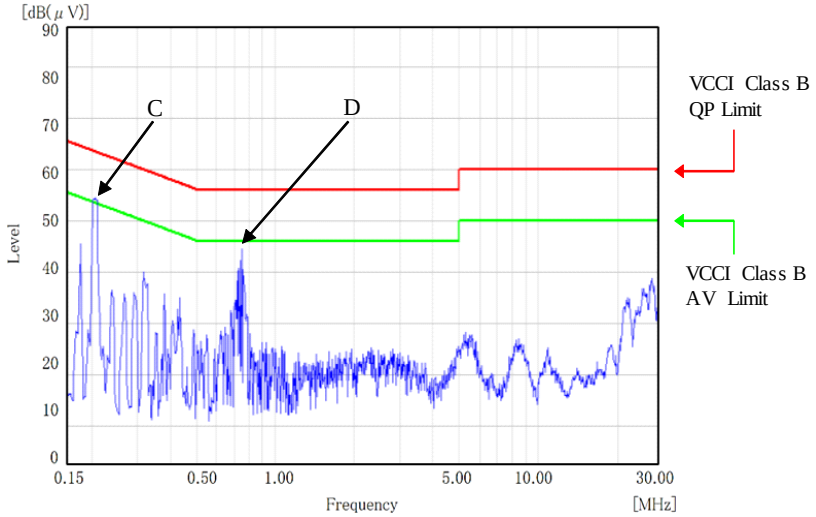
Phase : N



Ref. Data	Point C (206KHz) Limit (dB)	Measure (dB)
QP	63.4	51.1
AV	53.4	33.2

Ref. Data	Point D (750KHz) Limit (dB)	Measure (dB)
QP	56.0	41.5
AV	46.0	23.1

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

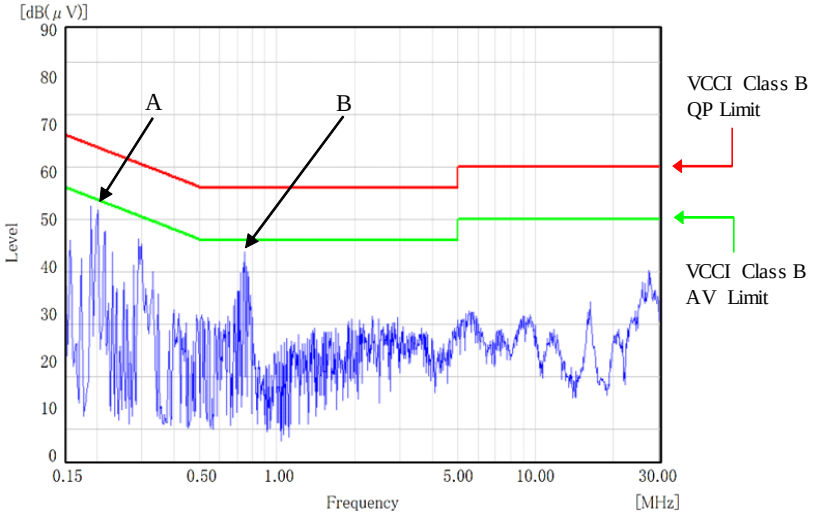
雑音端子電圧
Conducted Emission

12V

Phase : N

Ref. Data	Point A (202KHz) Limit (dB)	Measure (dB)
QP	63.5	50.2
AV	53.5	33.3

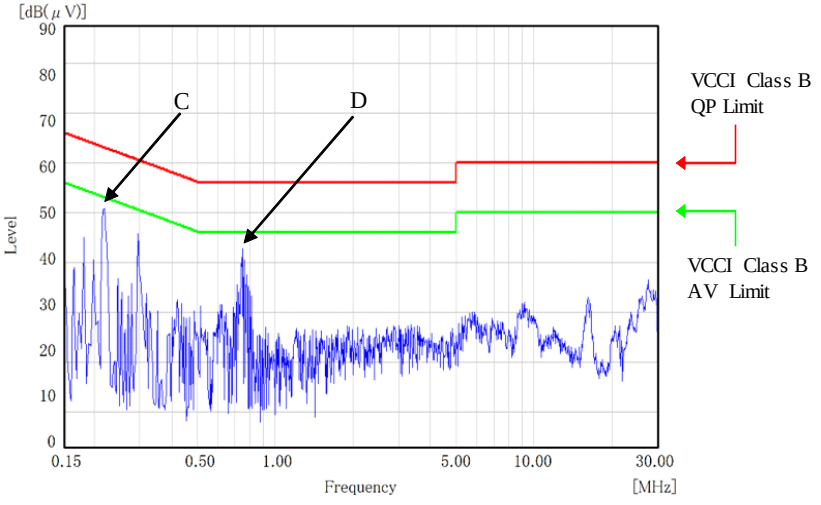
Ref. Data	Point B (750KHz) Limit (dB)	Measure (dB)
QP	56.0	40.1
AV	46.0	21.1



Phase : L

Ref. Data	Point C (218KHz) Limit (dB)	Measure (dB)
QP	62.9	48.6
AV	52.9	28.4

Ref. Data	Point D (750KHz) Limit (dB)	Measure (dB)
QP	56.0	40.8
AV	46.0	21.0



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

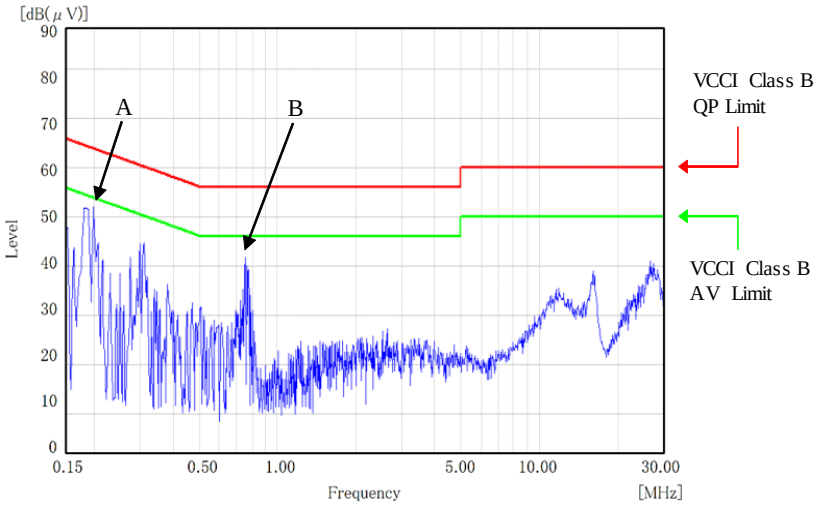
雑音端子電圧
Conducted Emission

48V

Phase : N

Ref. Data	Point A (198KHz) Limit (dB)	Measure (dB)
QP	63.7	50.3
AV	53.7	33.9

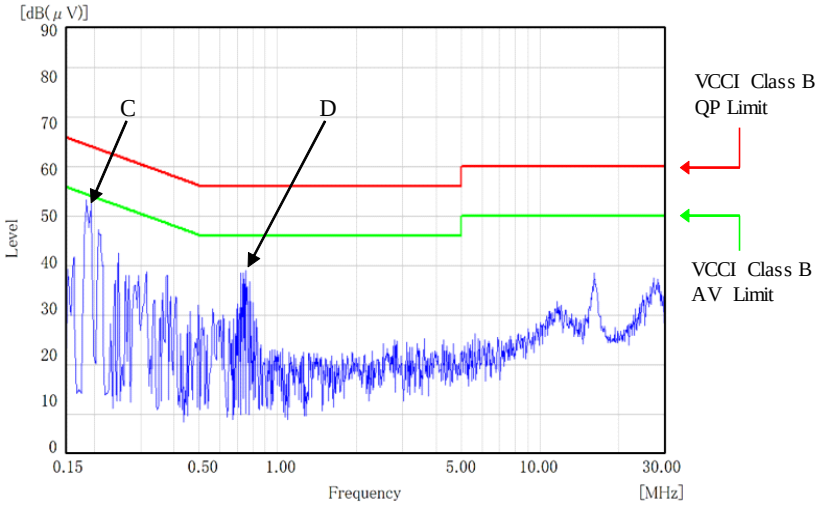
Ref. Data	Point B (758KHz) Limit (dB)	Measure (dB)
QP	56.0	37.7
AV	46.0	17.2



Phase : L

Ref. Data	Point C (194KHz) Limit (dB)	Measure (dB)
QP	63.9	51.1
AV	53.9	34.6

Ref. Data	Point D (758Hz) Limit (dB)	Measure (dB)
QP	56.0	40.3
AV	46.0	18.3



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

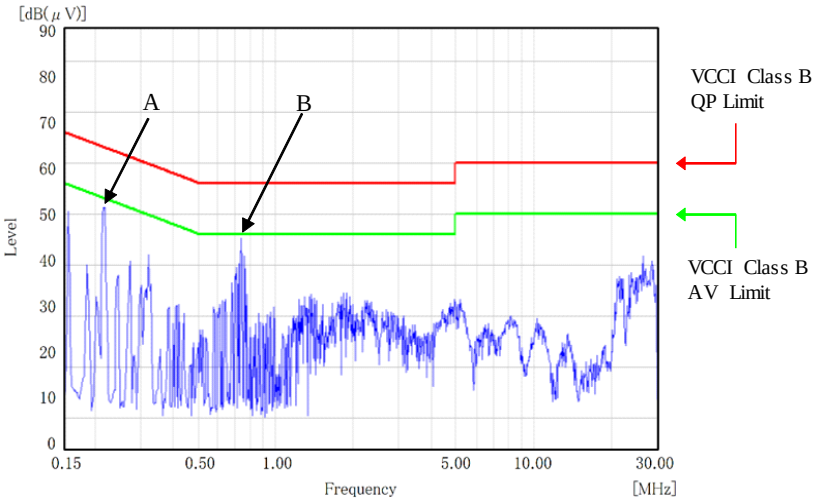
雑音端子電圧
Conducted Emission

5V

Ref. Data	Point A (218KHz) Limit (dB)	Measure (dB)
QP	62.9	48.2
AV	52.9	27.1

Ref. Data	Point B (742KHz) Limit (dB)	Measure (dB)
QP	56.0	41.6
AV	46.0	23.4

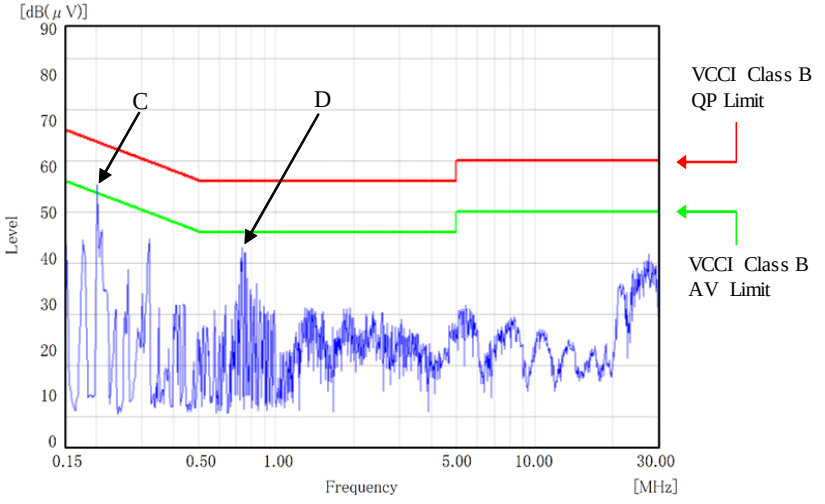
Phase : N



Ref. Data	Point C (202KHz) Limit (dB)	Measure (dB)
QP	63.5	51.6
AV	53.5	30.9

Ref. Data	Point D (762KHz) Limit (dB)	Measure (dB)
QP	56.0	42.7
AV	46.0	23.6

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

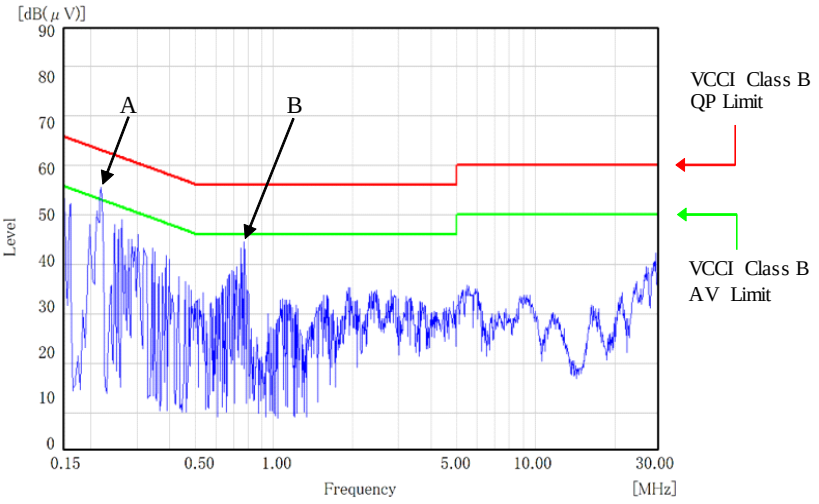
雑音端子電圧
Conducted Emission

12V

Ref. Data	Point A (218KHz) Limit (dB)	Measure (dB)
QP	62.9	51.3
AV	52.9	28.3

Ref. Data	Point B (774KHz) Limit (dB)	Measure (dB)
QP	56.0	42.2
AV	46.0	21.0

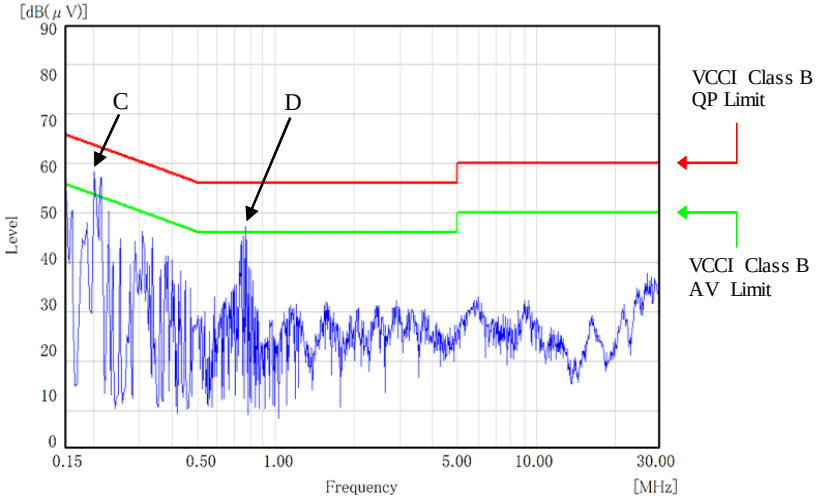
Phase : N



Ref. Data	Point C (202KHz) Limit (dB)	Measure (dB)
QP	63.5	56.3
AV	53.5	36.4

Ref. Data	Point D (770KHz) Limit (dB)	Measure (dB)
QP	56.0	45.1
AV	46.0	24.4

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I (L,N,FG)

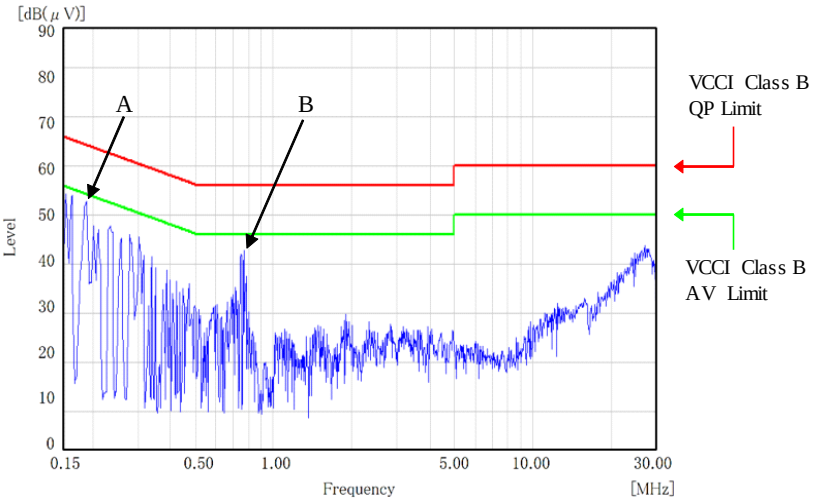
雑音端子電圧
Conducted Emission

48V

Ref. Data	Point A (190kHz) Limit (dB)	Measure (dB)
QP	64.0	54.8
AV	54.0	35.1

Ref. Data	Point B (770KHz) Limit (dB)	Measure (dB)
QP	56.0	40.3
AV	46.0	20.7

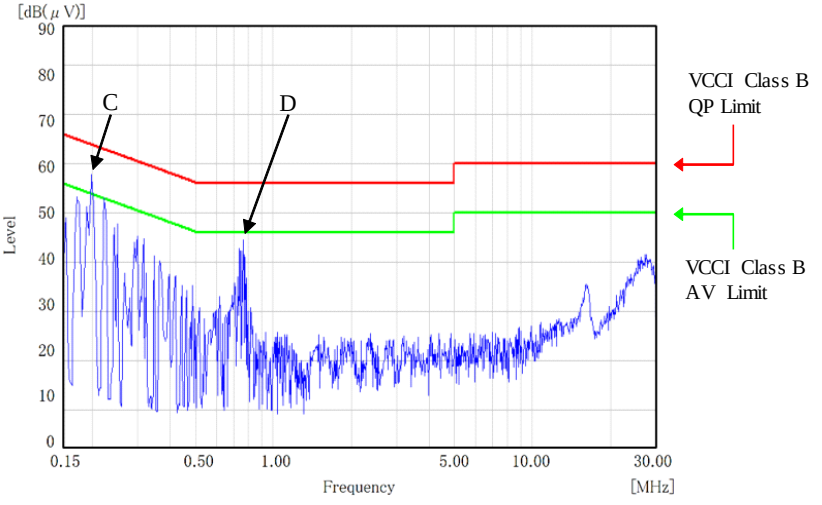
Phase : N



Ref. Data	Point C (198KHz) Limit (dB)	Measure (dB)
QP	63.7	56.6
AV	53.7	36.7

Ref. Data	Point D (766KHz) Limit (dB)	Measure (dB)
QP	56.0	41.3
AV	46.0	21.8

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

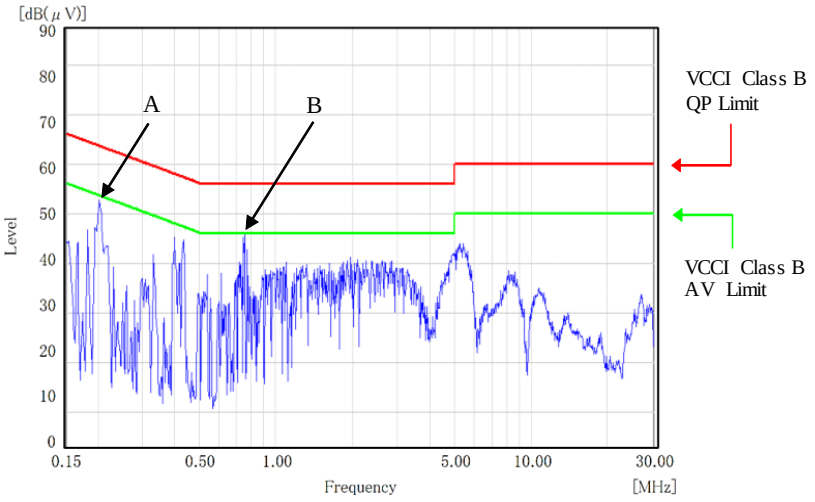
雑音端子電圧
Conducted Emission

5V

Ref. Data	Point A (202KHz) Limit (dB)	Measure (dB)
QP	63.5	50.6
AV	53.5	36.8

Ref. Data	Point B (754KHz) Limit (dB)	Measure (dB)
QP	56.0	42.2
AV	46.0	25.2

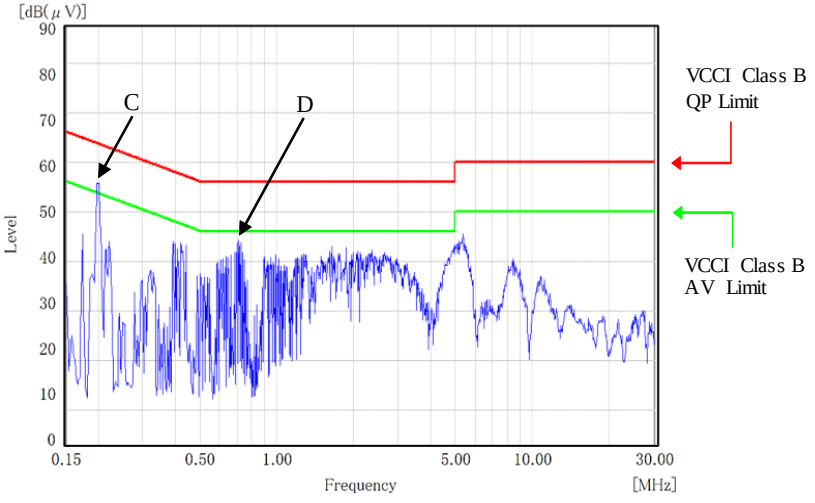
Phase : N



Ref. Data	Point C (202KHz) Limit (dB)	Measure (dB)
QP	63.5	52.6
AV	53.5	36.5

Ref. Data	Point D (714KHz) Limit (dB)	Measure (dB)
QP	56.0	41.3
AV	46.0	24.6

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

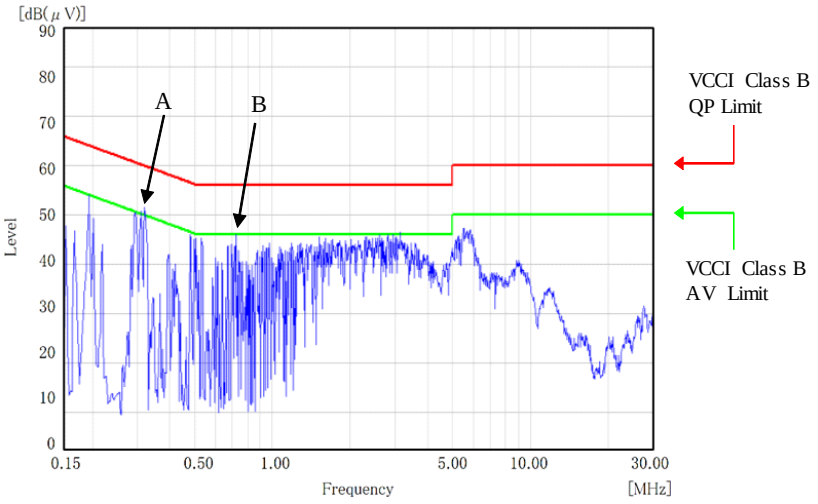
雑音端子電圧
Conducted Emission

12V

Ref. Data	Point A (318KHz) Limit (dB)	Measure (dB)
QP	59.8	49.1
AV	49.8	36.8

Ref. Data	Point B (726KHz) Limit (dB)	Measure (dB)
QP	56.0	42.5
AV	46.0	25.4

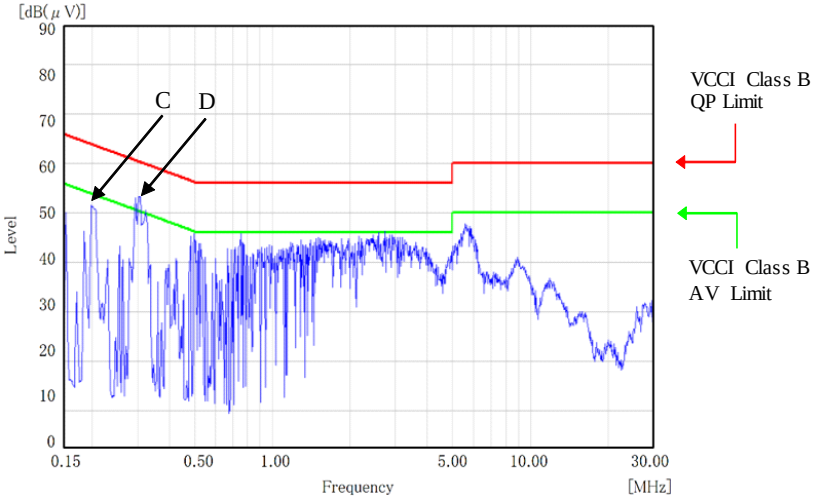
Phase : N



Ref. Data	Point C (198KHz) Limit (dB)	Measure (dB)
QP	63.7	49.8
AV	53.7	33.7

Ref. Data	Point D (322KHz) Limit (dB)	Measure (dB)
QP	59.7	50.4
AV	49.7	36.3

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

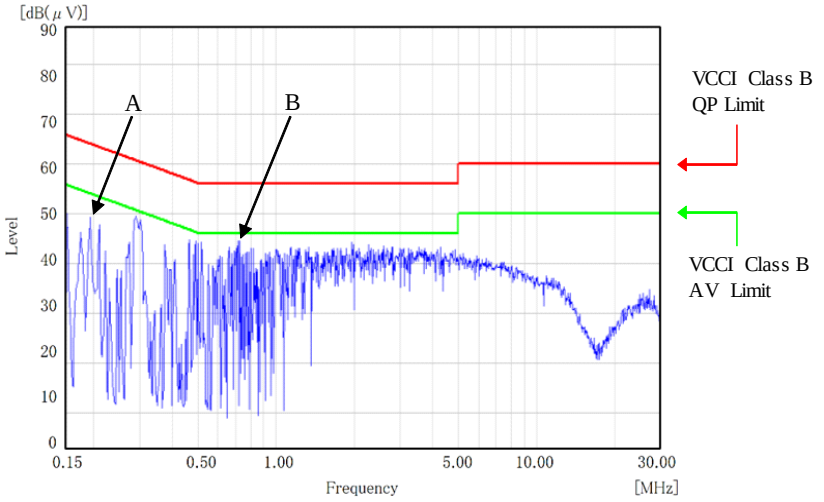
雑音端子電圧
Conducted Emission

48V

Ref. Data	Point A (194KHz) Limit (dB)	Measure (dB)
QP	63.9	51.0
AV	53.9	34.4

Ref. Data	Point B (302KHz) Limit (dB)	Measure (dB)
QP	60.2	47.1
AV	50.2	35.7

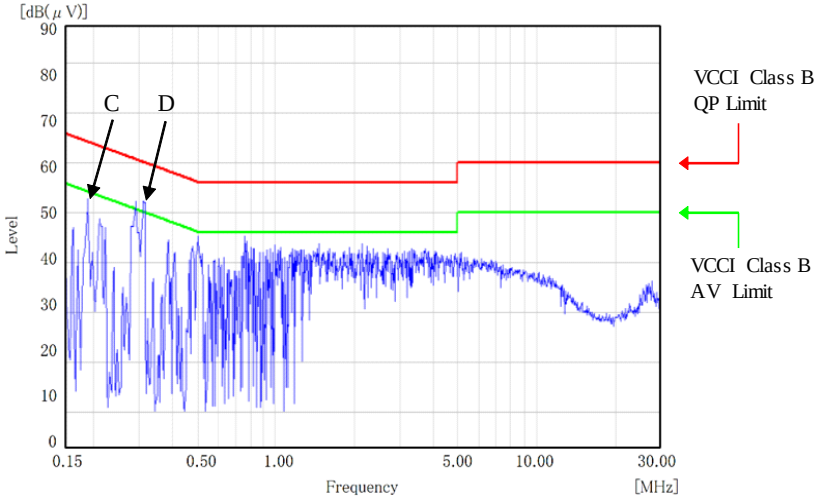
Phase : N



Ref. Data	Point C (190KHz) Limit (dB)	Measure (dB)
QP	64.0	50.8
AV	54.0	54.0

Ref. Data	Point D (310KHz) Limit (dB)	Measure (dB)
QP	60.0	49.0
AV	50.0	35.0

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

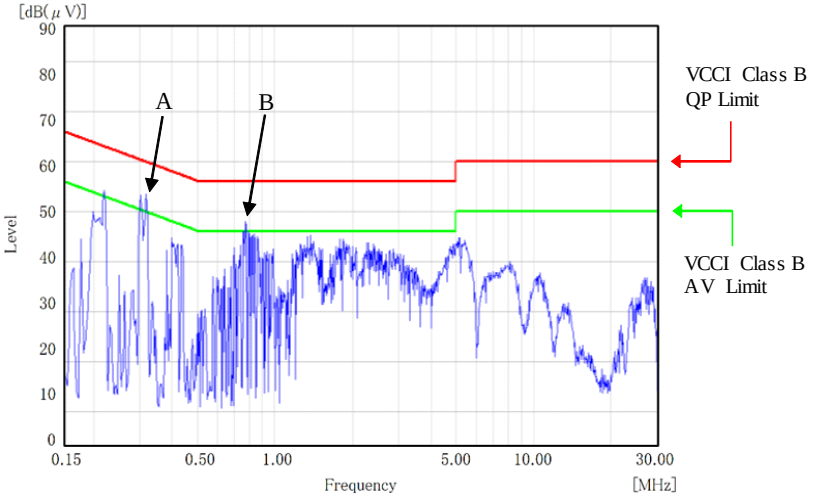
雑音端子電圧
Conducted Emission

5V

Ref. Data	Point A (318KHz) Limit (dB)	Measure (dB)
QP	59.8	50.4
AV	49.8	37.7

Ref. Data	Point B (770KHz) Limit (dB)	Measure (dB)
QP	56.0	47.4
AV	46.0	29.1

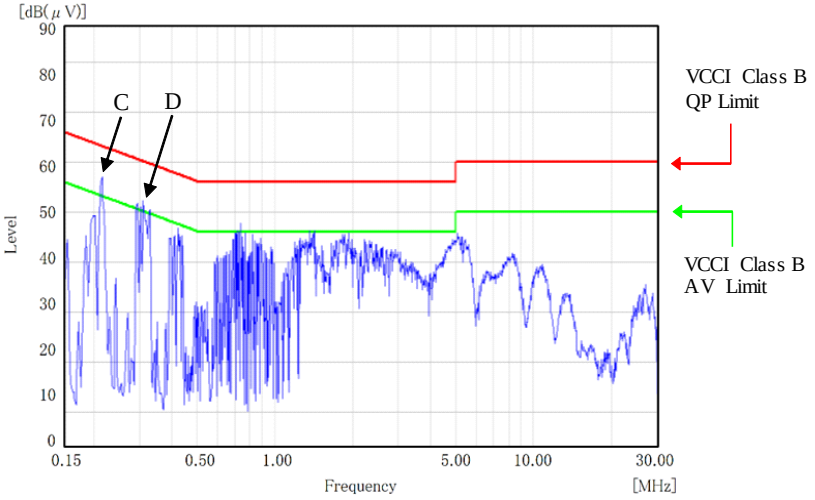
Phase : N



Ref. Data	Point C (214KHz) Limit (dB)	Measure (dB)
QP	63.1	52.9
AV	53.1	41.0

Ref. Data	Point D (330KHz) Limit (dB)	Measure (dB)
QP	59.5	50.2
AV	49.5	33.6

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

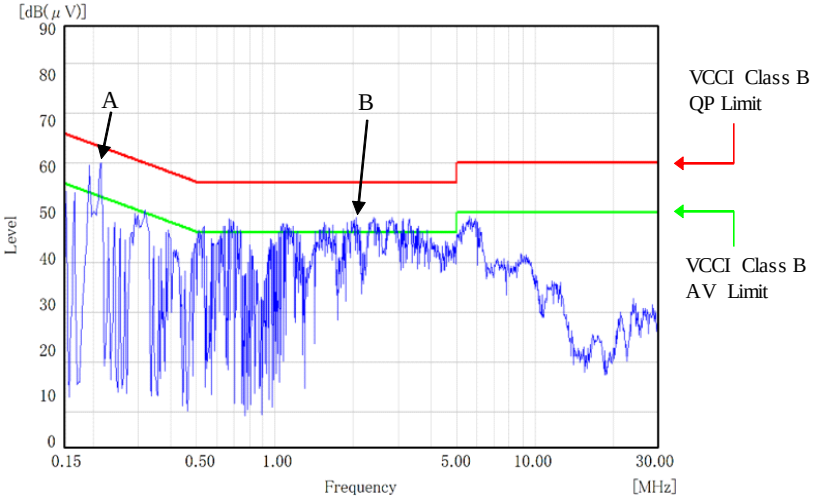
雑音端子電圧
Conducted Emission

12V

Ref. Data	Point A (214KHz) Limit (dB)	Measure (dB)
QP	63.1	57.7
AV	53.1	43.0

Ref. Data	Point B (2.058MHz) Limit (dB)	Measure (dB)
QP	56.0	46.2
AV	46.0	29.8

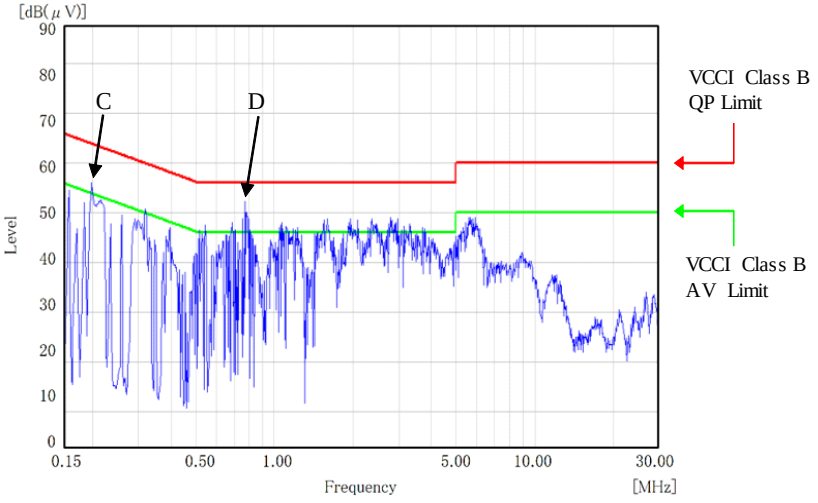
Phase : N



Ref. Data	Point C (214KHz) Limit (dB)	Measure (dB)
QP	63.1	55.8
AV	53.1	43.5

Ref. Data	Point D (770KHz) Limit (dB)	Measure (dB)
QP	56.0	50.0
AV	46.0	31.3

Phase : L



EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II (L,N)

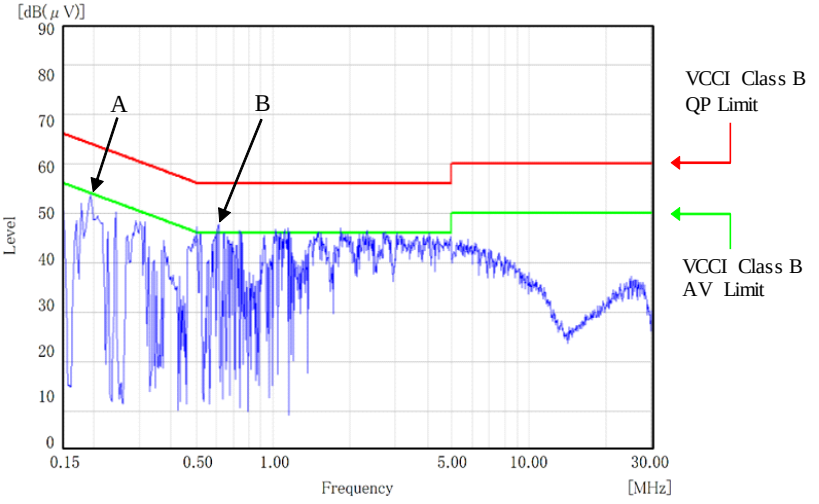
雑音端子電圧
Conducted Emission

48V

Ref. Data	Point A (194KHz) Limit (dB)	Measure (dB)
QP	63.9	57.5
AV	53.9	42.8

Ref. Data	Point B (614KHz) Limit (dB)	Measure (dB)
QP	56.0	46.2
AV	46.0	29.7

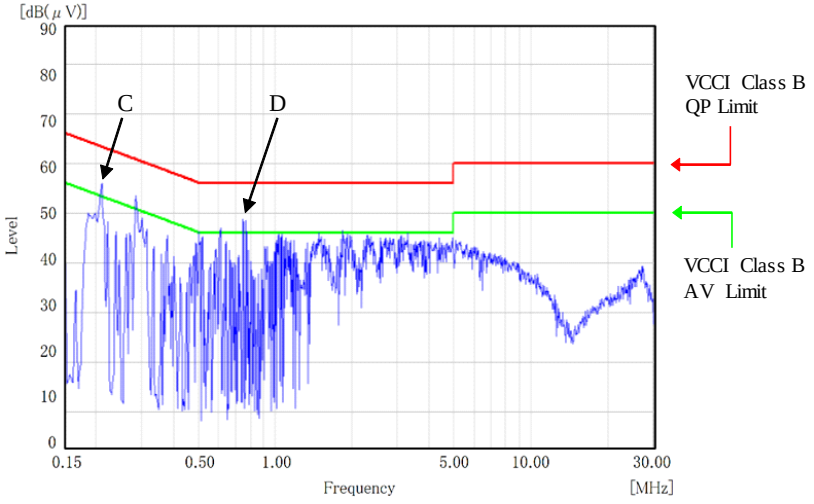
Phase : N



Ref. Data	Point C (210KHz) Limit (dB)	Measure (dB)
QP	63.2	53.0
AV	53.2	36.8

Ref. Data	Point D (750KHz) Limit (dB)	Measure (dB)
QP	56.0	45.2
AV	46.0	27.1

Phase : L



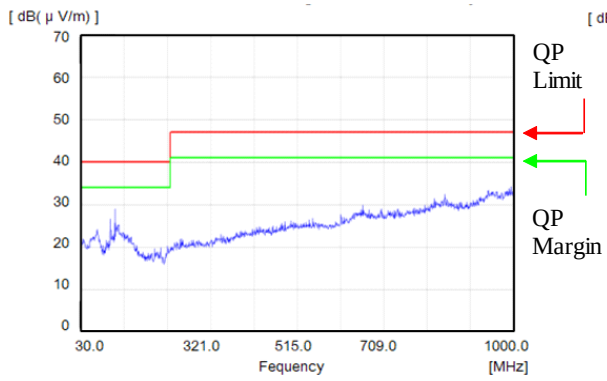
EN55011-B,EN55032-B,FCC-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B,FCC-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I
(L,N,FG)

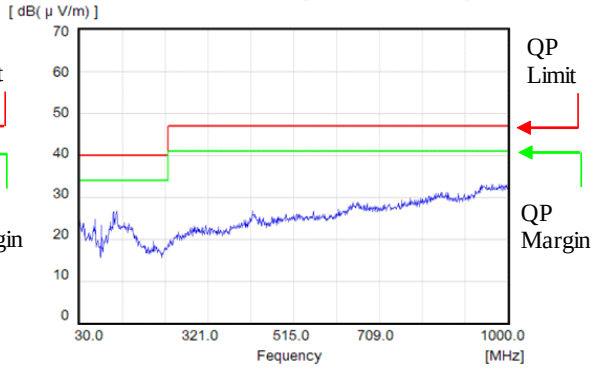
雑音電界強度
Radiated Emission

5V

HORIZONTAL

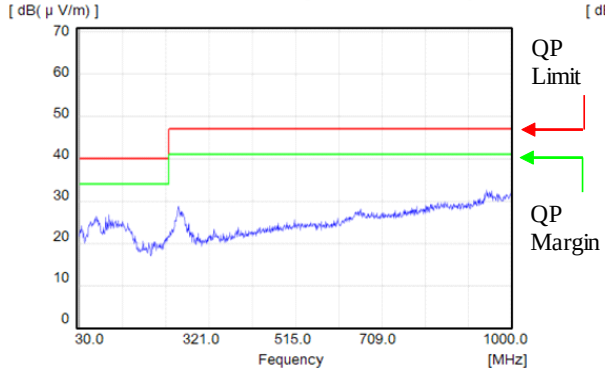


VERTICAL

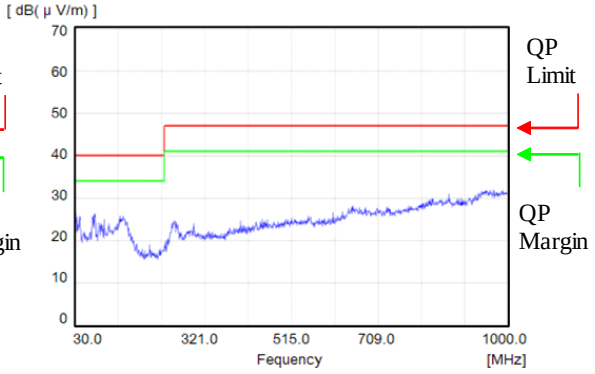


12V

HORIZONTAL

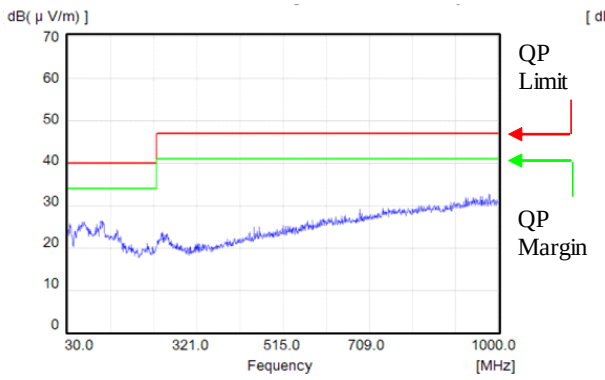


VERTICAL

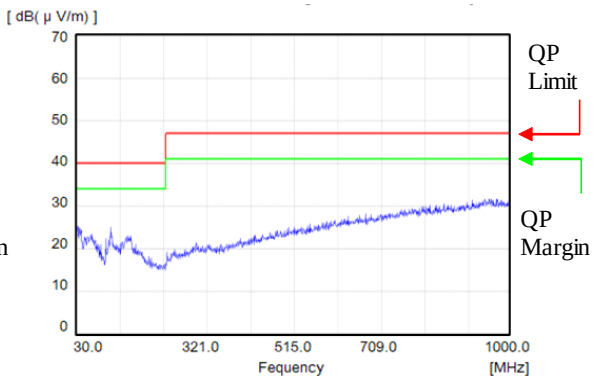


48V

HORIZONTAL



VERTICAL



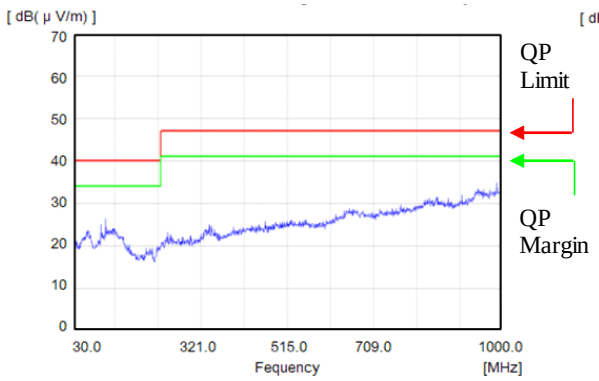
EN55011-B,EN55032-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class I
(L,N,FG)

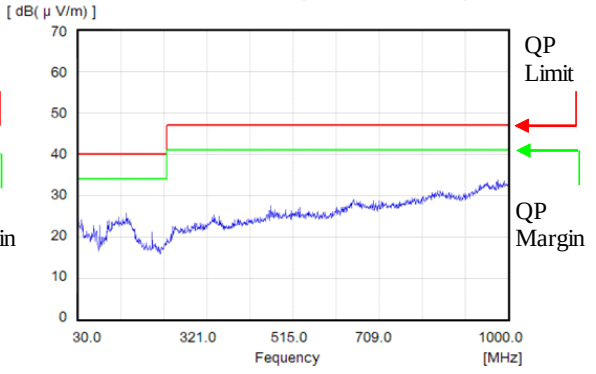
雑音電界強度
Radiated Emission

5V

HORIZONTAL

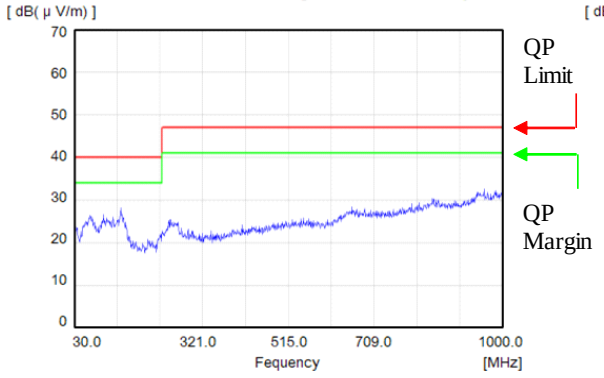


VERTICAL

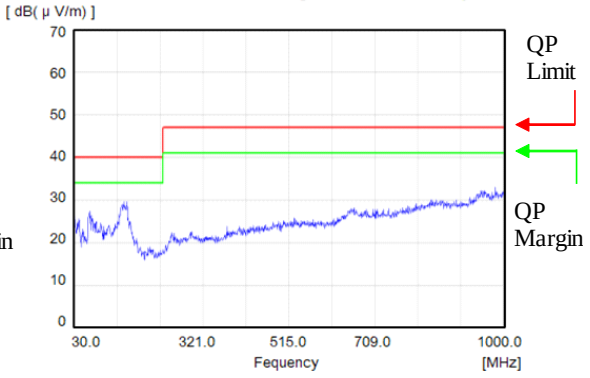


12V

HORIZONTAL

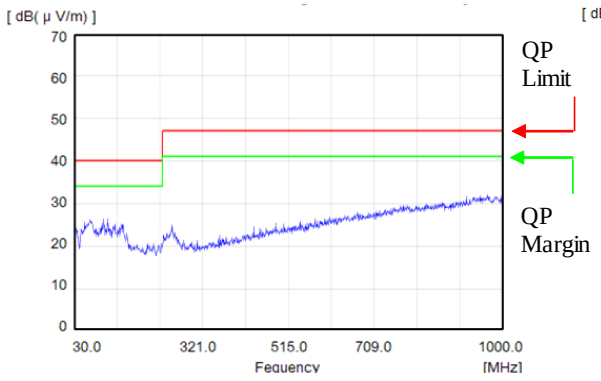


VERTICAL

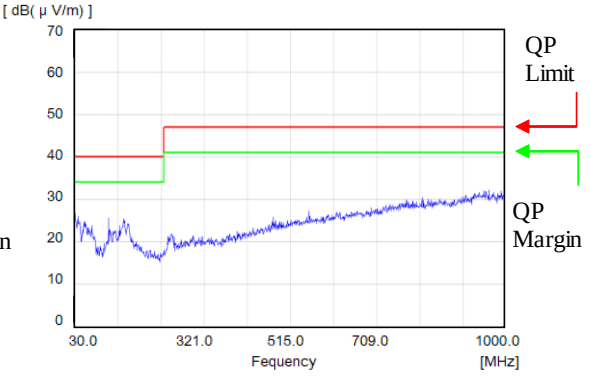


48V

HORIZONTAL



VERTICAL



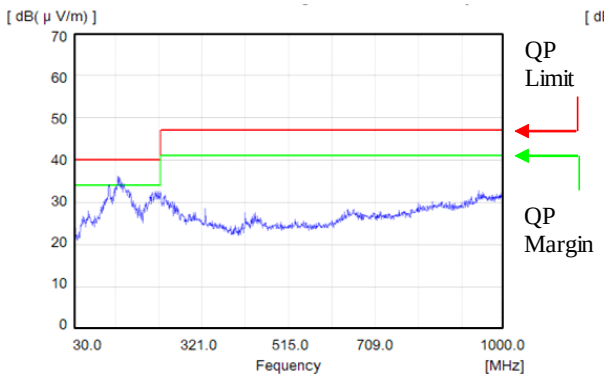
EN55011-B,EN55032-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 100 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II
(L,N)

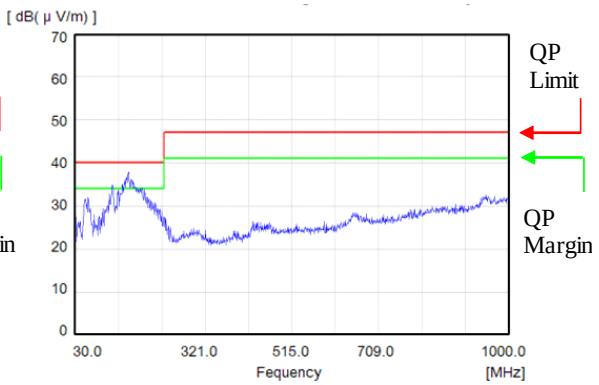
雑音電界強度
Radiated Emission

5V

HORIZONTAL

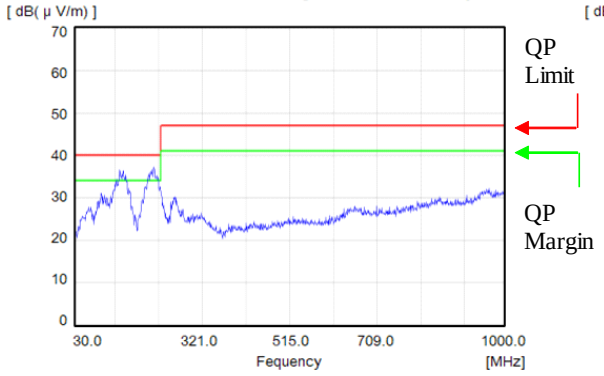


VERTICAL

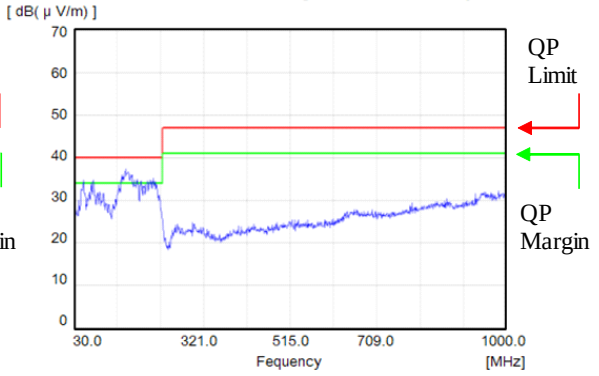


12V

HORIZONTAL

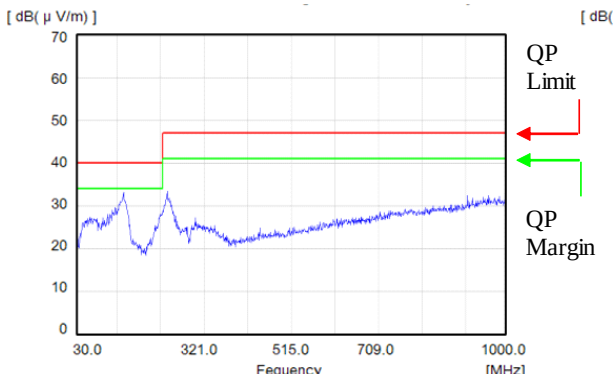


VERTICAL

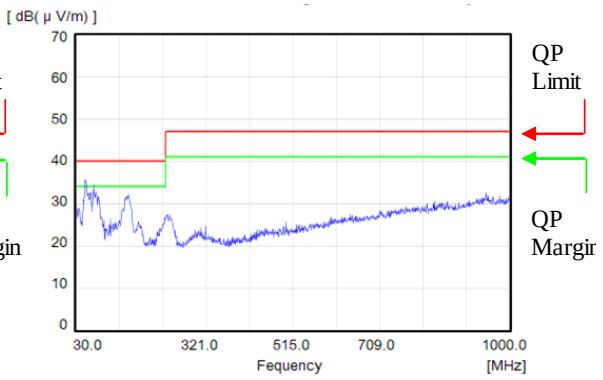


48V

HORIZONTAL



VERTICAL



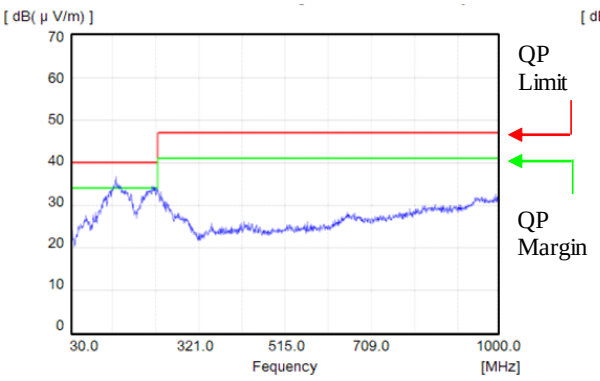
EN55011-B,EN55032-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.

Conditions Vin : 230 VAC
Iout : 100 %
Ta : 25°C
Isolation Class : Class II
(L,N)

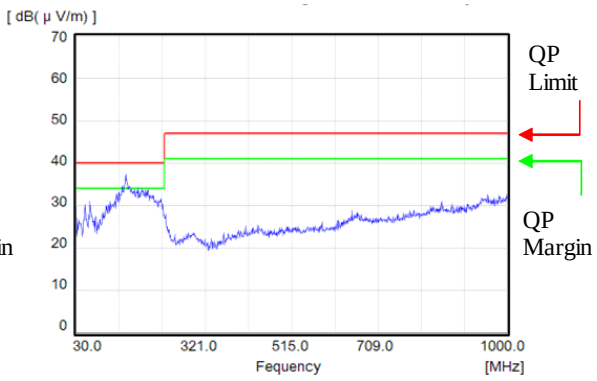
雑音電界強度
Radiated Emission

5V

HORIZONTAL

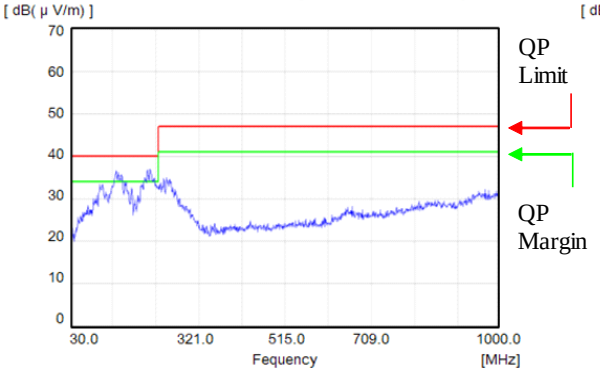


VERTICAL

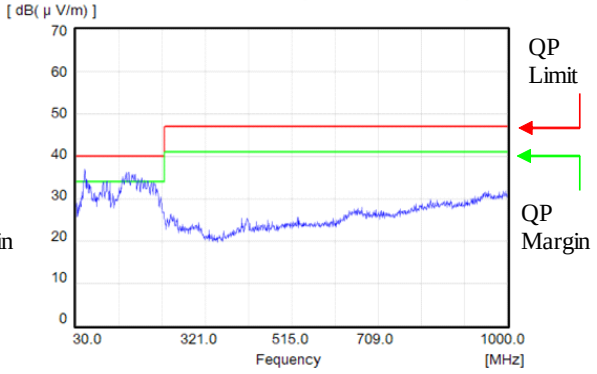


12V

HORIZONTAL

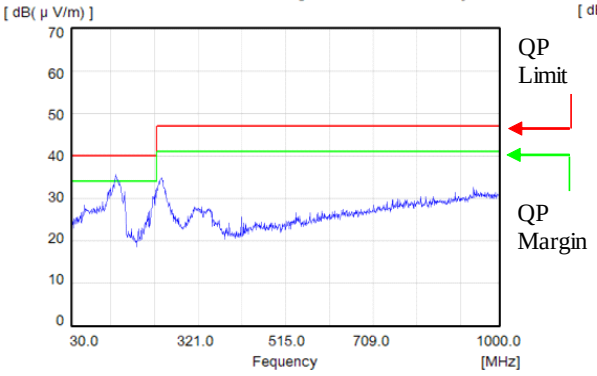


VERTICAL

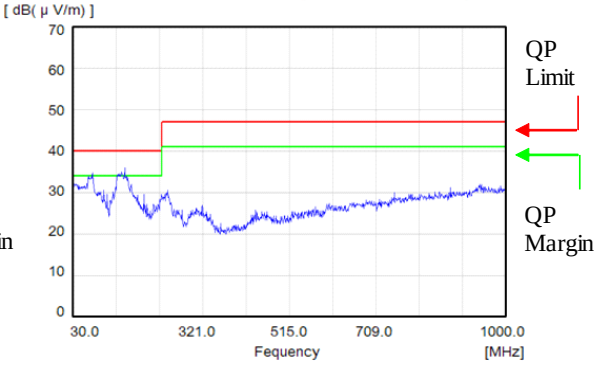


48V

HORIZONTAL



VERTICAL



EN55011-B,EN55032-Bの限界値はVCCI class Bの限界値と同じ
Limit of EN55011-B,EN55032-B are same as its VCCI class B.
表示はピーク値
Indication is peak values.