

# **RWS1000B**

## **EVALUATION DATA**

### 型式データ

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----- RWS1000B -----

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\* 準標準品RWS1000B-\*/R, /RFO にて対応

For option model RWS1000B-\*/R, /RFO

#### 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
Vstb	..... スタンバイ電圧	Standby voltage
Istb	..... スタンバイ電流	Standby current

※ 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。

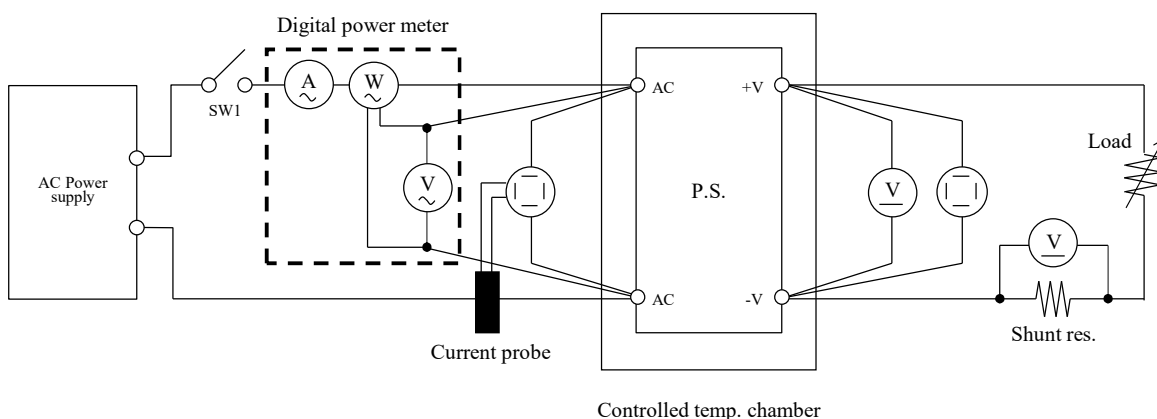
Test results are reference data based on our measurement condition.

# 1. 測定方法 Evaluation Method

## 1-1. 測定回路 Circuit used for determination

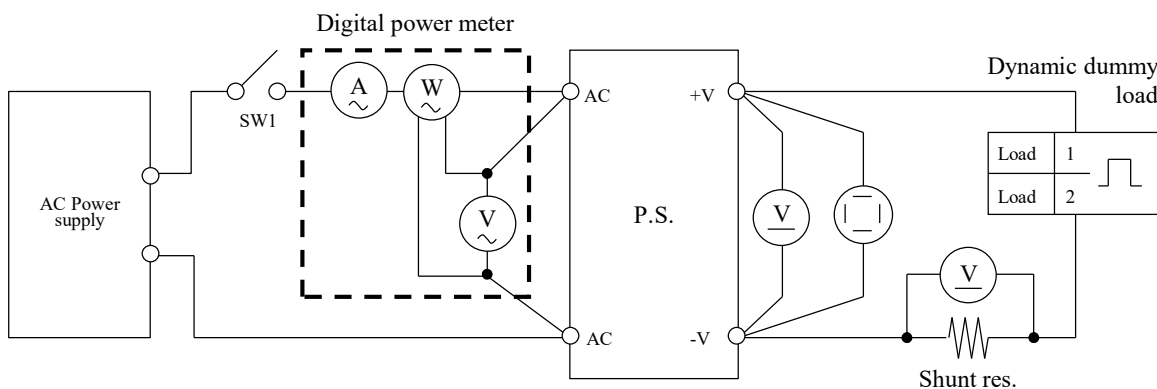
### 測定回路1 Circuit 1 used for determination

- 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

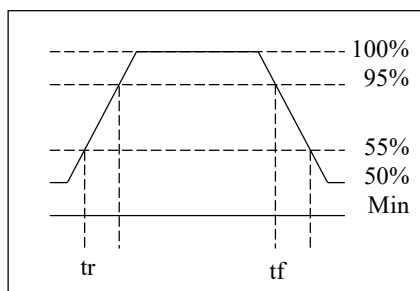


### 測定回路2 Circuit 2 used for determination

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

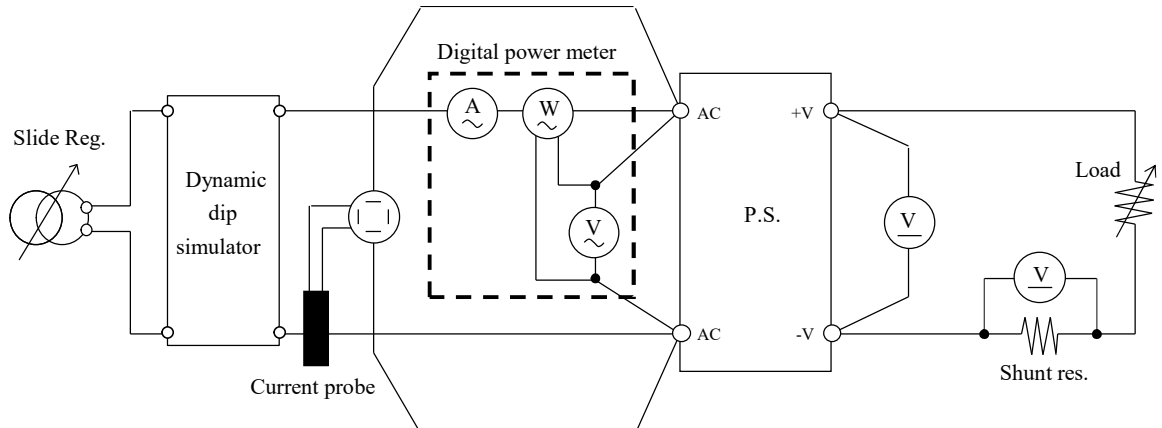


Output current waveform  
I<sub>out</sub> 50% <=> 100%



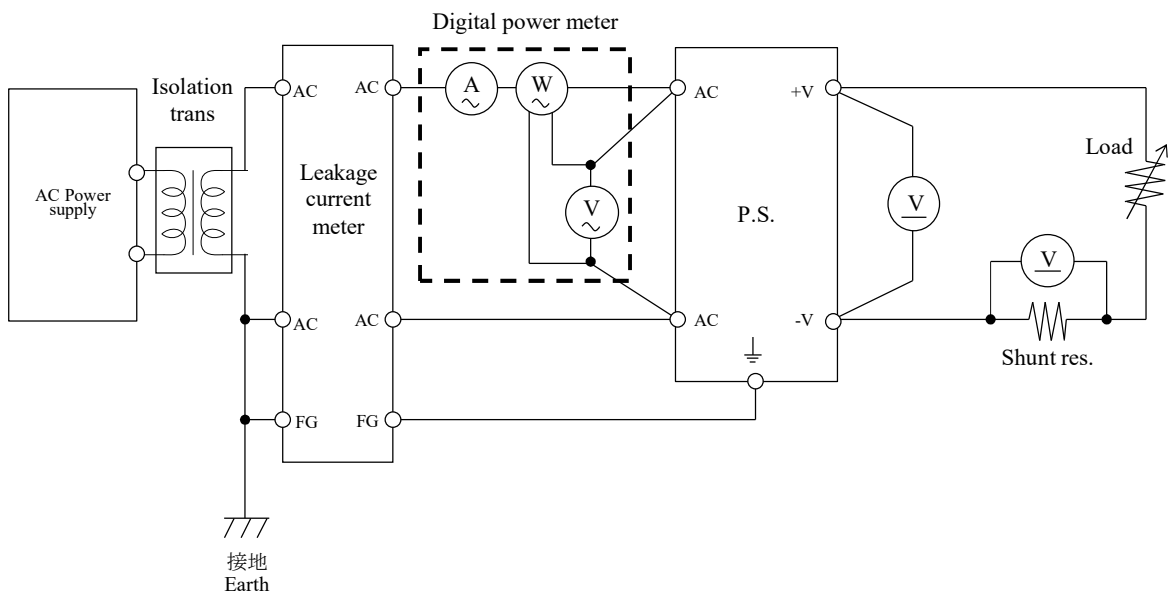
測定回路3 Circuit 3 used for determination

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



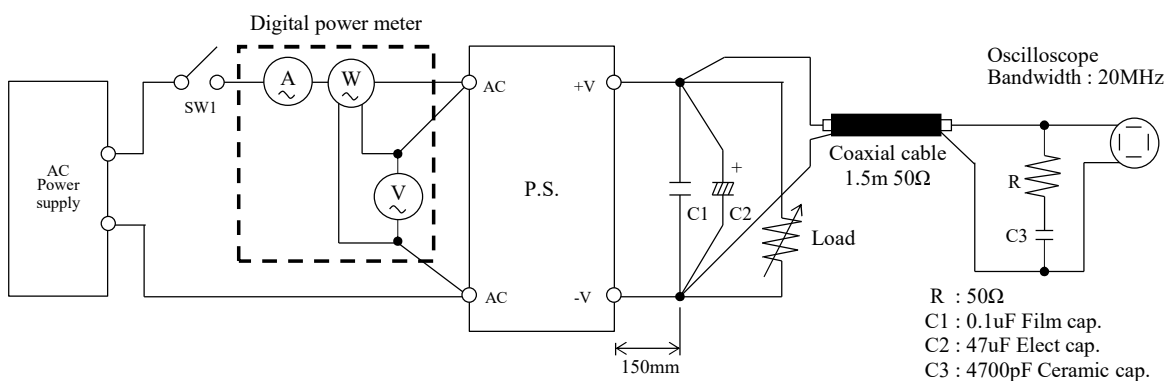
測定回路4 Circuit 4 used for determination

- 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



測定回路6 Circuit 6 used for determination

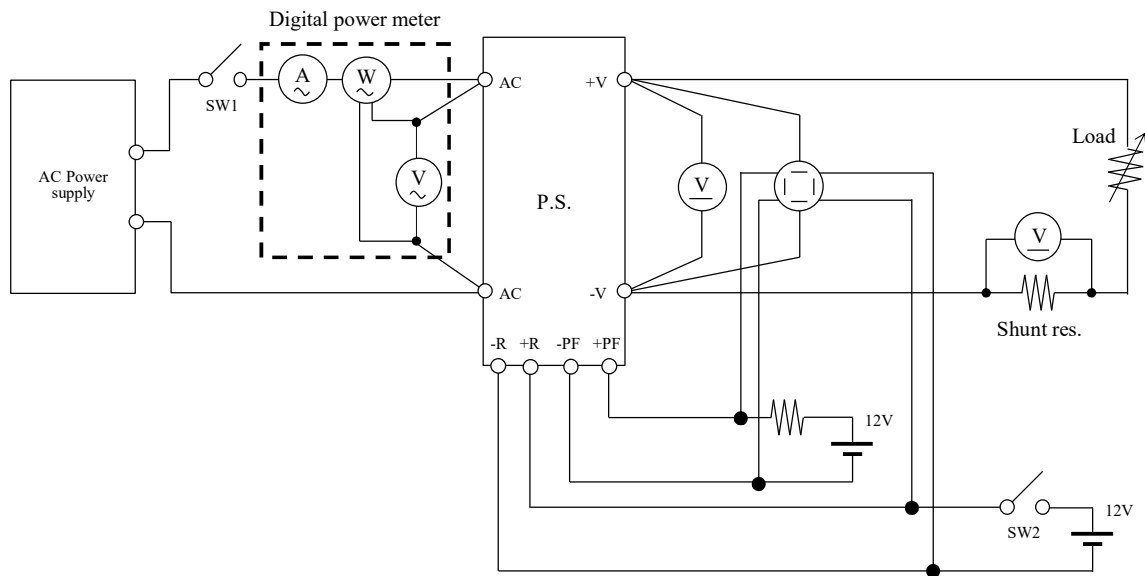
- ON/OFFコントロール時出力立ち上がり、立下がり特性  
Output rise, fall characteristics with ON/OFF Control

標準品 RWS1000B-\*/R, /RFO にて対応

For option model RWS1000B-\*/R, /RFO

\* PF信号端子は、RWS1000B-\*/RFOのみ対応

PF signal terminal is applied to only RWS1000B-\*/RFO

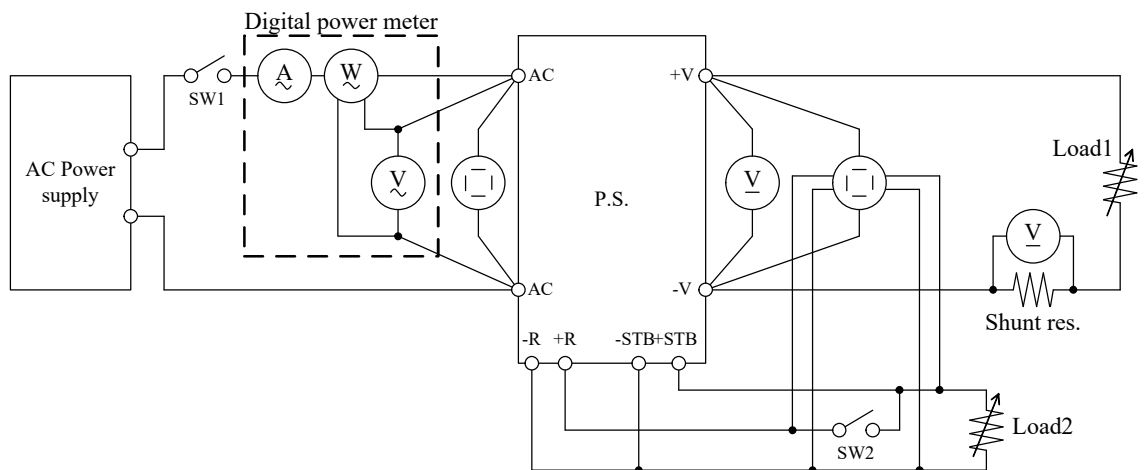


測定回路7 Circuit 7 used for determination

- 無負荷時入力電力、電流 No load input power and current
- スタンバイ立ち上がり、立ち下がり特性 Standby rise, fall characteristics
- ON/OFFコントロール時出力立ち上がり、立下がり特性  
Output rise, fall characteristics with ON/OFF Control

標準品 RWS1000B-\*/S にて対応

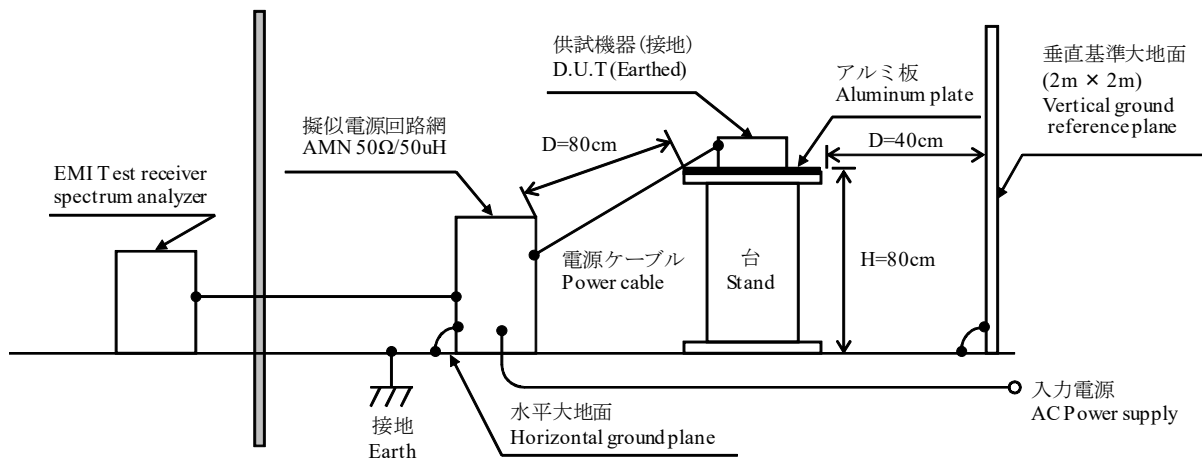
For option model RWS1000B-\*/S



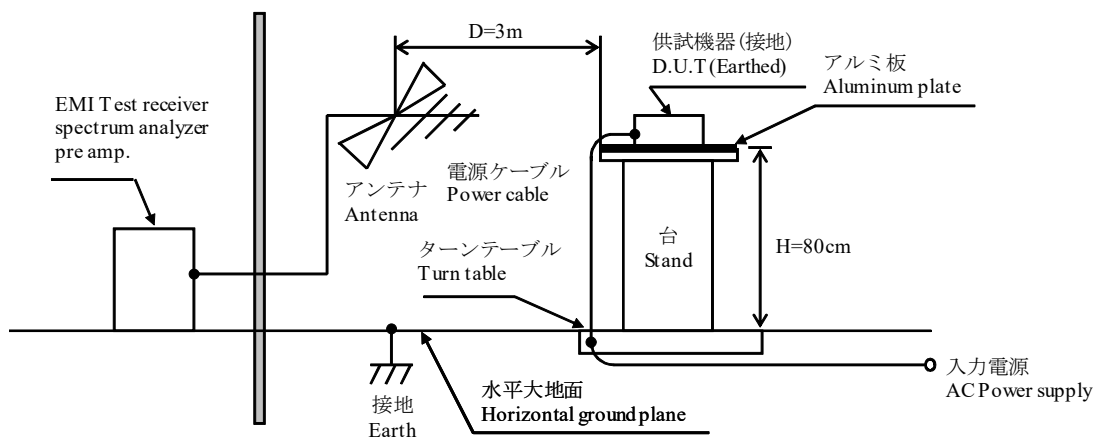
測定構成 Configuration used for determination

- 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.	DLM2054
2	DIGITAL MULTIMETER	AGILENT	34970A
3	DIGITAL POWER METER	YOKOGAWA ELECT.	WT310HC
4	DIGITAL POWER METER	HIOKI	3331 / 3332
5	CURRENT PROBE	YOKOGAWA ELECT.	701928 / 701930
6	DYNAMIC DUMMY LOAD	KIKUSUI	PLZ1004W / PLZ2004WB
7	DYNAMIC DUMMY LOAD	TEXIO	LSG-1050
8	DUMMY LOAD	PCN	RHF250 SIRIES
9	SLIDE REGULATOR	MATSUNAGA	SD-2650
10	ISOLATION TRANS	MATSUNAGA	3WTC-50K
11	CVCF	KIKUSUI	PCR4000L / PCR4000LA
12	CVCF	KIKUSUI	PCR4000LE / PCR6000LE
13	LEAKAGE CURRENT METER	HIOKI	3156
14	DYNAMIC DIP SIMULATOR	TAKAMISAWA	PSA-210
15	CONTROLLED TEMP. CHAMBER	ESPEC	PL-1KP
16	EMI TEST RECEIVER / SPECTRUM ANALYZER	ROHDE & SCHWARZ	ESCI
17	PRE AMP.	SONOMA	310N
18	AMN	SCHWARZBECK	NNLK8121
19	ANTENNA	SCHWARZBECK	CBL6111D
20	HARMONIC / FLICKER ANALYZER	KIKUSUI	KHA1000
21	SINGLE-PHASE MASTER	NF	4420
22	REFERENCE IMPEDANCE NETWORK 20A	NF	4150
23	MULTI OUTLET UNIT	KIKUSUI	OT01-KHA



## 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

12V 1. Regulation - line and load Condition Ta : 25 °C

Iout \ Vin	90VAC	100VAC	200VAC	265VAC	Line regulation	
0%	11.993V	11.994V	11.994V	11.994V	1mV	0.008%
50%	11.972V	11.972V	11.972V	11.972V	0mV	0.000%
100%	11.953V	11.953V	11.953V	11.953V	0mV	0.000%
Load regulation	40mV	41mV	41mV	41mV		
	0.333%	0.342%	0.342%	0.342%		

#### 2. Temperature drift

Conditions Vin : 100 VAC  
Iout : 100 %

Ta	-20°C	+25°C	+50°C	Temperature stability	
Vout	11.959V	11.953V	11.939V	20mV	0.167%

#### 3. Start up voltage and Drop out voltage

Conditions Ta : 25 °C  
Iout : 100 %

Start up voltage (Vin)	77VAC
Drop out voltage (Vin)	71VAC

24V 1. Regulation - line and load Condition Ta : 25 °C

Iout \ Vin	90VAC	100VAC	200VAC	265VAC	Line regulation	
0%	23.964V	23.965V	23.965V	23.965V	1mV	0.004%
50%	23.949V	23.950V	23.949V	23.950V	1mV	0.004%
100%	23.939V	23.939V	23.939V	23.939V	0mV	0.000%
Load regulation	25mV	26mV	26mV	26mV		
	0.104%	0.108%	0.108%	0.108%		

#### 2. Temperature drift

Conditions Vin : 100 VAC  
Iout : 100 %

Ta	-20°C	+25°C	+50°C	Temperature stability	
Vout	23.910V	23.939V	23.952V	42mV	0.175%

#### 3. Start up voltage and Drop out voltage

Conditions Ta : 25 °C  
Iout : 100 %

Start up voltage (Vin)	78VAC
Drop out voltage (Vin)	71VAC

48V 1. Regulation - line and load Condition Ta : 25 °C

Iout \ Vin	90VAC	100VAC	200VAC	265VAC	Line regulation	
0%	47.954V	47.954V	47.954V	47.954V	0mV	0.000%
50%	47.935V	47.936V	47.936V	47.935V	1mV	0.002%
100%	47.930V	47.930V	47.930V	47.930V	0mV	0.000%
Load regulation	24mV	24mV	24mV	24mV		
	0.050%	0.050%	0.050%	0.050%		

#### 2. Temperature drift

Conditions Vin : 100 VAC  
Iout : 100 %

Ta	-20°C	+25°C	+50°C	Temperature stability	
Vout	47.933V	47.930V	47.927V	6mV	0.013%

#### 3. Start up voltage and Drop out voltage

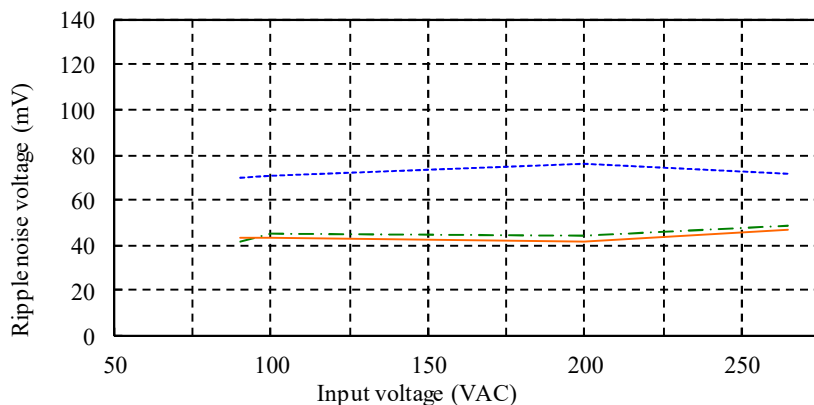
Conditions Ta : 25 °C  
Iout : 100 %

Start up voltage (Vin)	77VAC
Drop out voltage (Vin)	70VAC

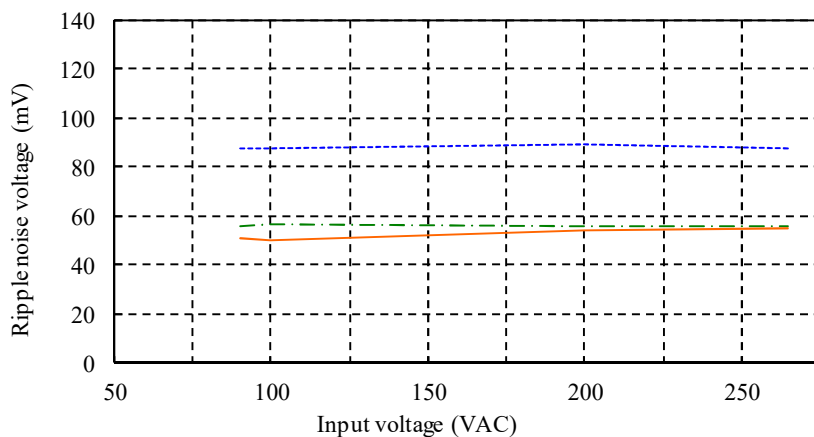
(2) リップルノイズ電圧対入力電圧 Ripple noise voltage vs. Input voltage

Conditions Iout : 100 %  
 Ta : -20 °C ---  
 25 °C - - -  
 50 °C ———

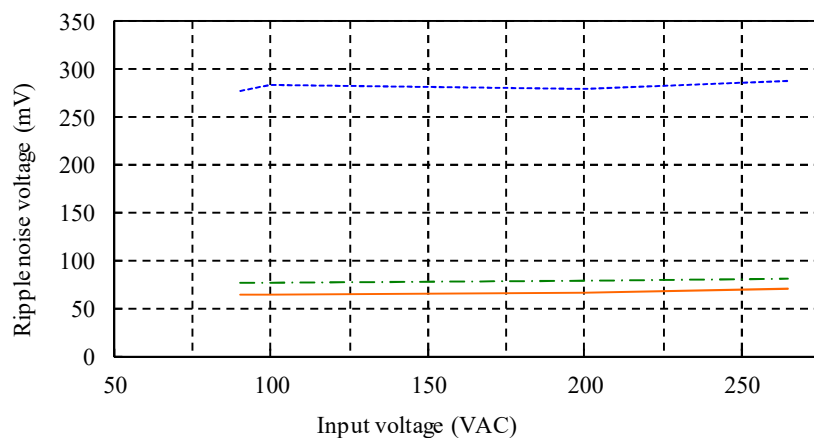
12V



24V



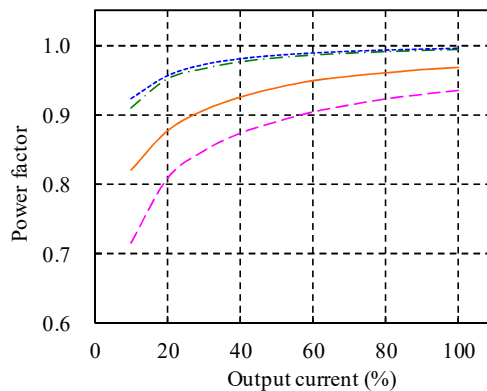
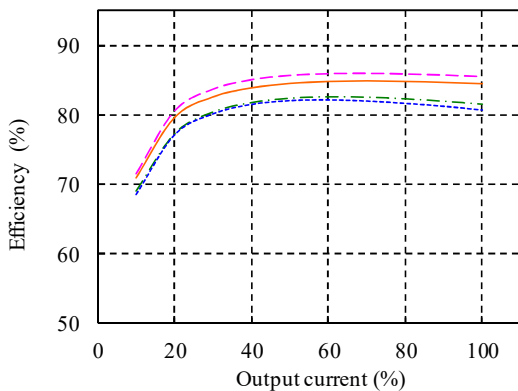
48V



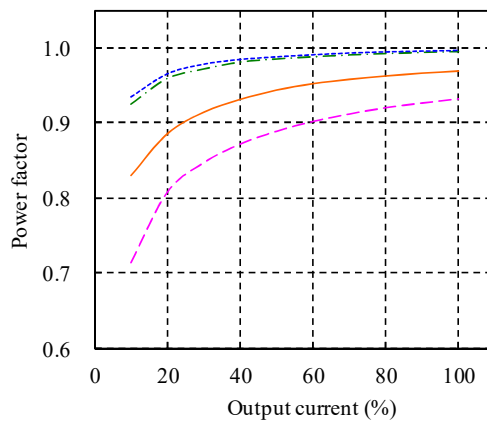
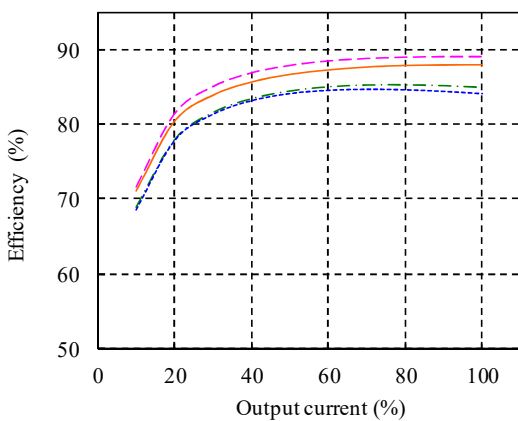
(3) 効率・力率対出力電流 Efficiency and Power factor vs. Output current

Conditions Vin : 90 VAC ---  
 100 VAC - - -  
 200 VAC ———  
 265 VAC - · - ·  
 Ta : 25 °C

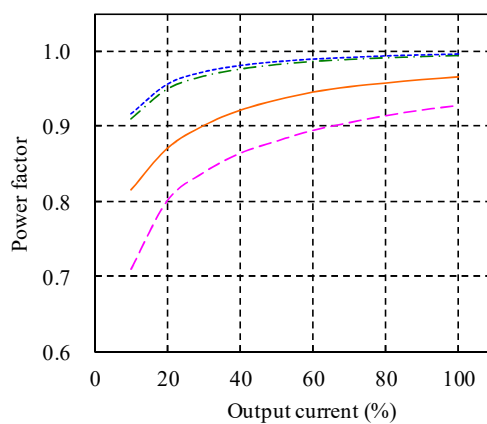
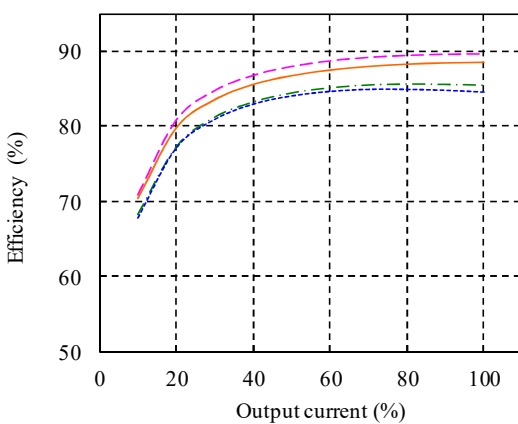
12V



24V



48V

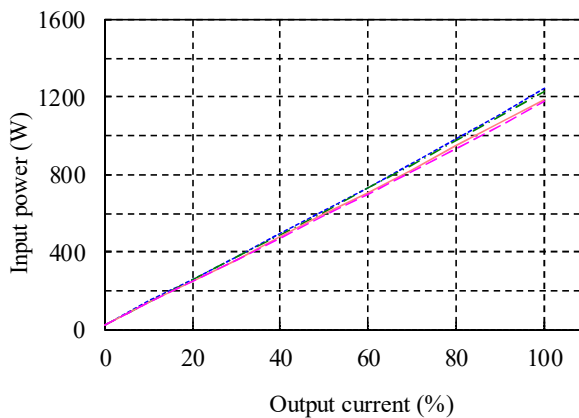


(4) 入力電力対出力電流 Input power vs. Output current

Conditions Vin : 90 VAC ---  
 100 VAC ---  
 200 VAC ---  
 265 VAC ---  
 Ta : 25 °C

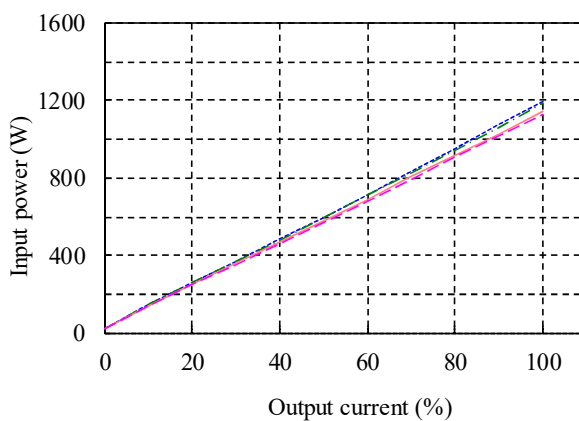
12V

Vin	Input power	
	Iout : 0%	Control OFF*
90VAC	25.4W	2.6W
100VAC	25.4W	2.6W
200VAC	24.6W	2.7W
265VAC	25.0W	2.8W



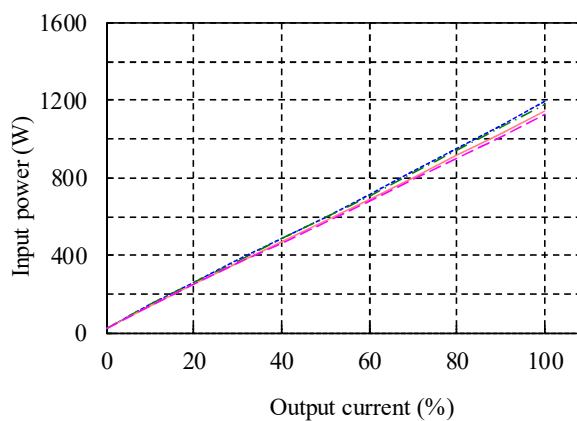
24V

Vin	Input power	
	Iout : 0%	Control OFF*
90VAC	27.0W	2.7W
100VAC	26.9W	2.6W
200VAC	26.1W	2.7W
265VAC	26.5W	2.8W



48V

Vin	Input power	
	Iout : 0%	Control OFF*
90VAC	27.4W	2.8W
100VAC	27.2W	2.8W
200VAC	26.4W	2.7W
265VAC	26.6W	2.9W



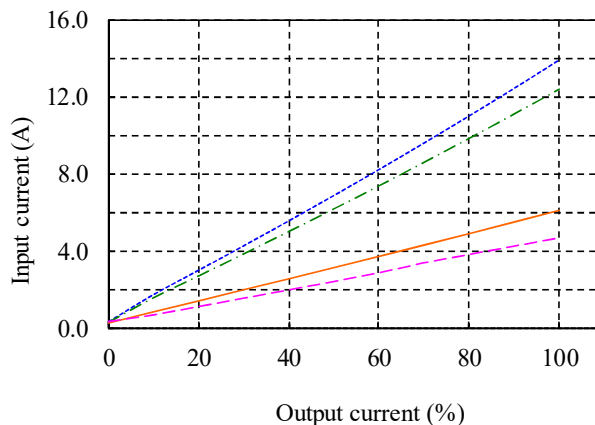
\* 標準品 RWS1000B-\*/R, /RFO にて対応  
 For option model RWS1000B-\*/R, /RFO

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

Conditions Vin : 90 VAC ---  
 100 VAC - - -  
 200 VAC ———  
 265 VAC - · - ·  
 Ta : 25 °C

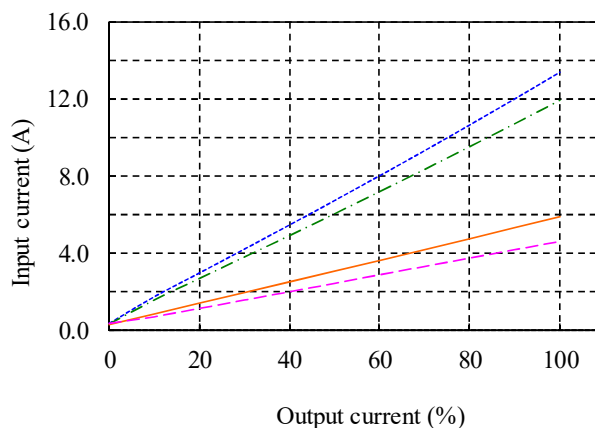
12V

Vin	Input current	
	Iout : 0%	Control OFF*
90VAC	0.35A	0.12A
100VAC	0.33A	0.13A
200VAC	0.29A	0.25A
265VAC	0.38A	0.33A



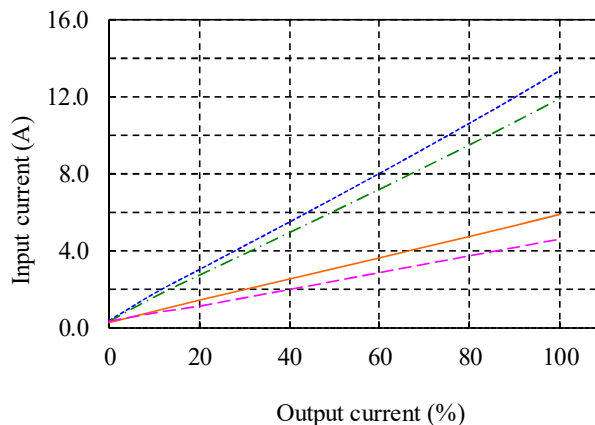
24V

Vin	Input current	
	Iout : 0%	Control OFF*
90VAC	0.37A	0.12A
100VAC	0.34A	0.13A
200VAC	0.30A	0.25A
265VAC	0.39A	0.33A



48V

Vin	Input current	
	Iout : 0%	Control OFF*
90VAC	0.39A	0.12A
100VAC	0.35A	0.13A
200VAC	0.30A	0.25A
265VAC	0.40A	0.33A

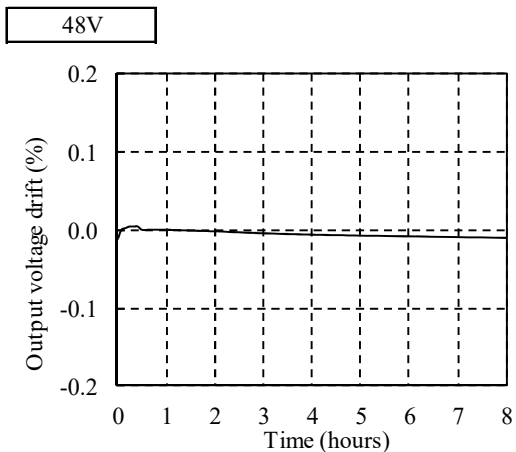
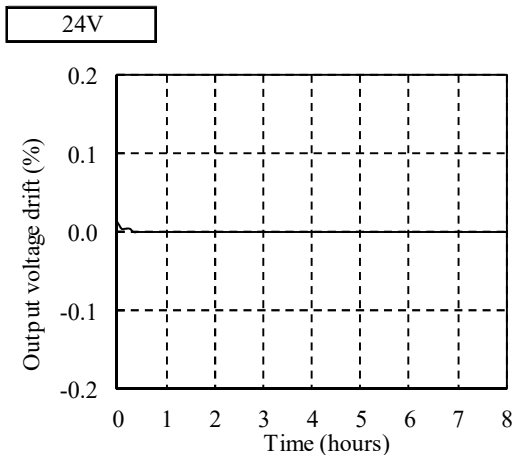
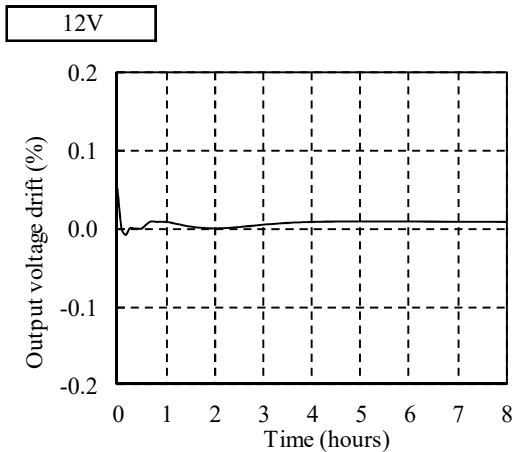


\* 標準品 RWS1000B-\*/R, /RFO にて対応  
 For option model RWS1000B-\*/R, /RFO

2-2. 通電ドリフト特性

Warm up voltage drift characteristics

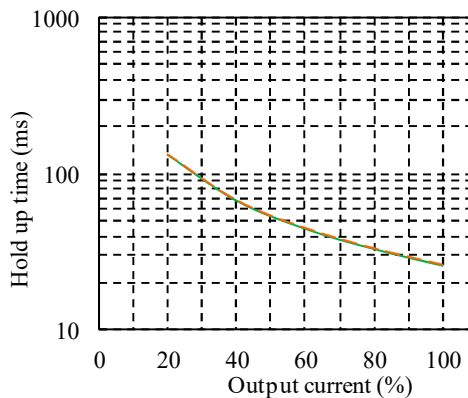
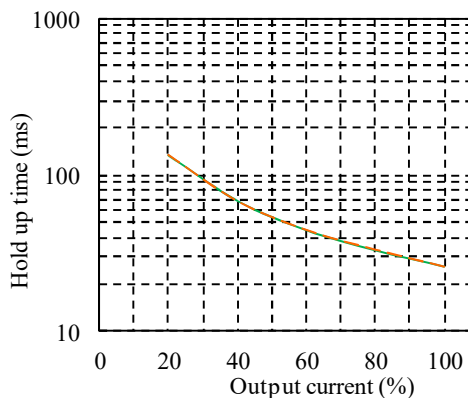
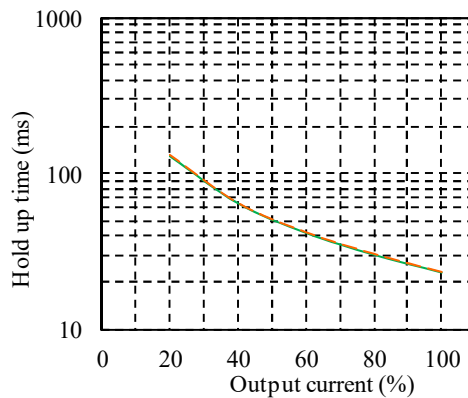
Conditions Vin : 100 VAC  
Iout : 100 %  
Ta : 25 °C



2-3. 出力保持時間特性

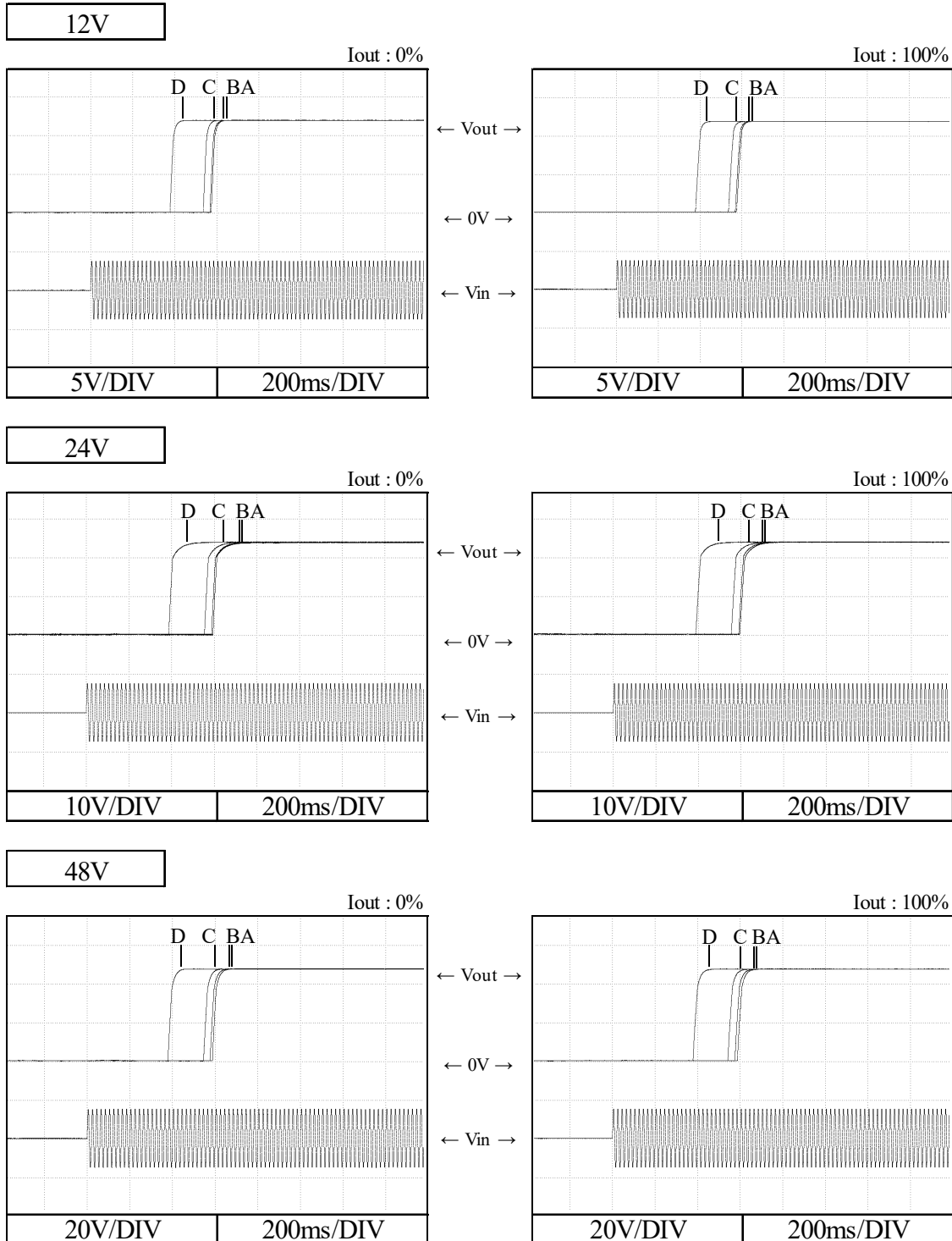
Hold up time characteristics

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



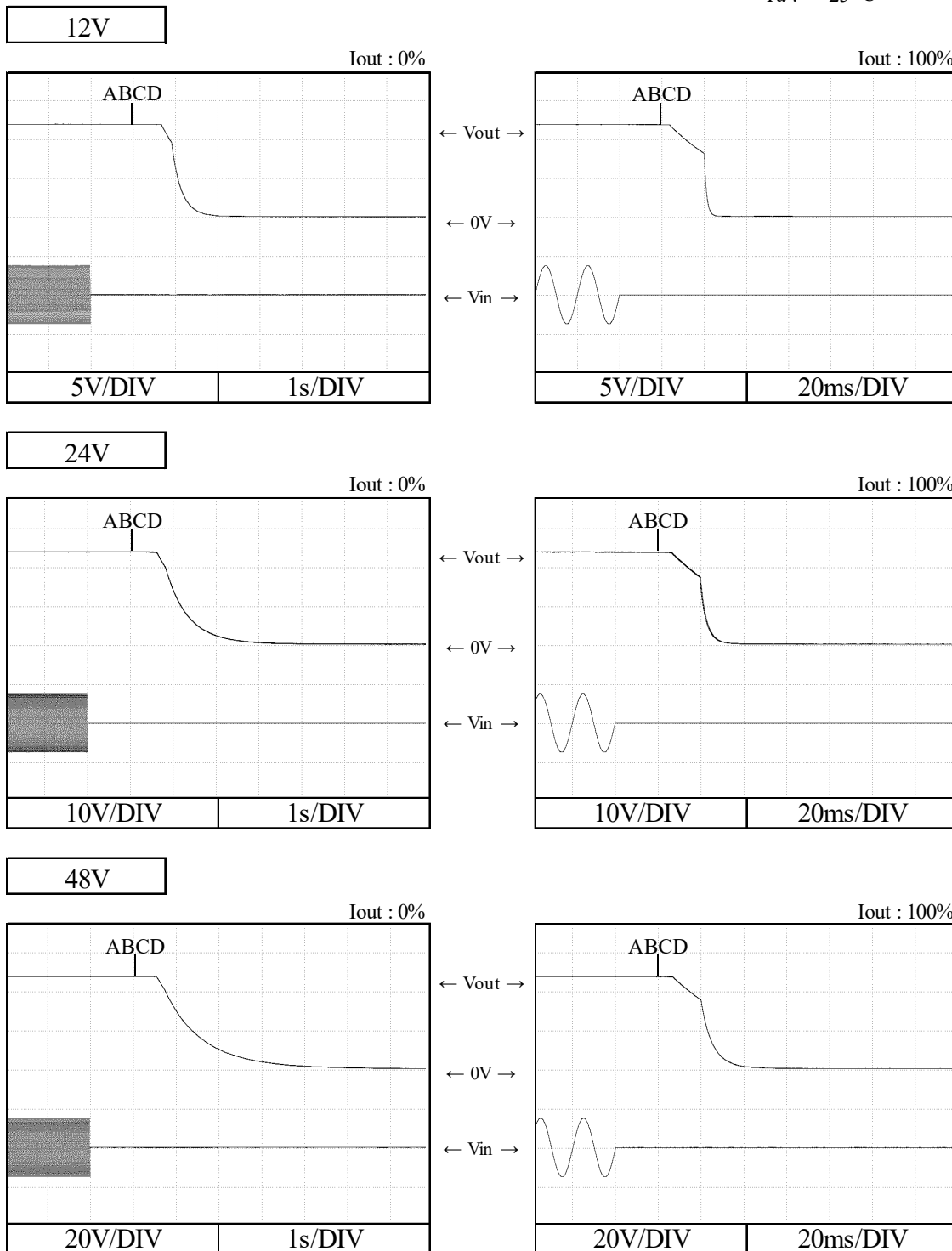
2-4. 出力立ち上がり特性 Output rise characteristics

Conditions Vin : 90 VAC (A)  
 100 VAC (B)  
 200 VAC (C)  
 265 VAC (D)  
 Ta : 25 °C



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

Conditions Vin : 90 VAC (A)  
 100 VAC (B)  
 200 VAC (C)  
 265 VAC (D)  
 Ta : 25 °C





2-6. ON/OFFコントロール時出力立ち上がり、立下がり特性

Output rise, fall characteristics with ON/OFF Control

標準品 RWS1000B-\*/R, /RFO にて対応

For option model RWS1000B-\*/R, /RFO

\* PF信号は、RWS1000B-\*/RFOのみ対応

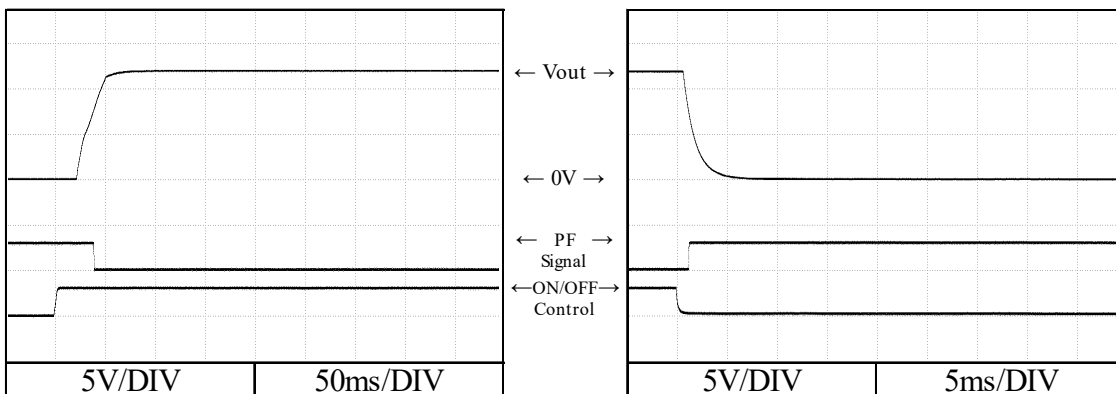
PF signal is applied to only RWS1000B-\*/RFO

Conditions Vin : 100 VAC

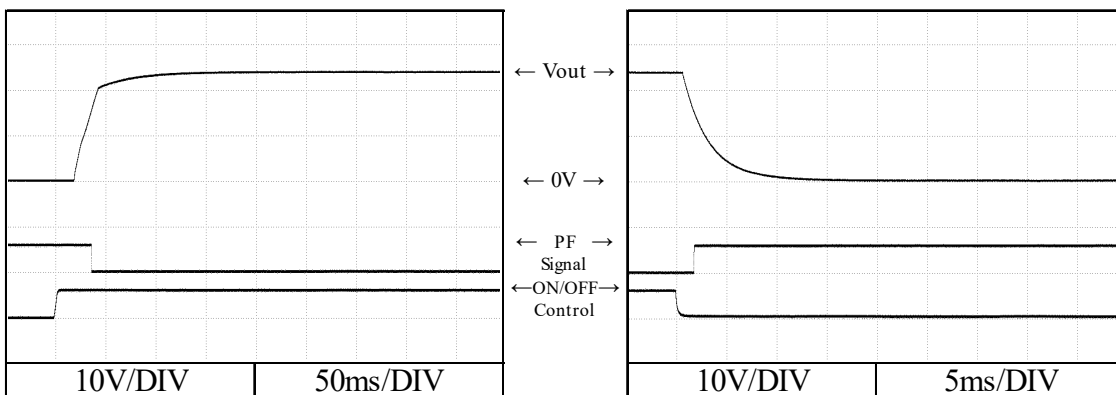
Iout : 100 %

Ta : 25 °C

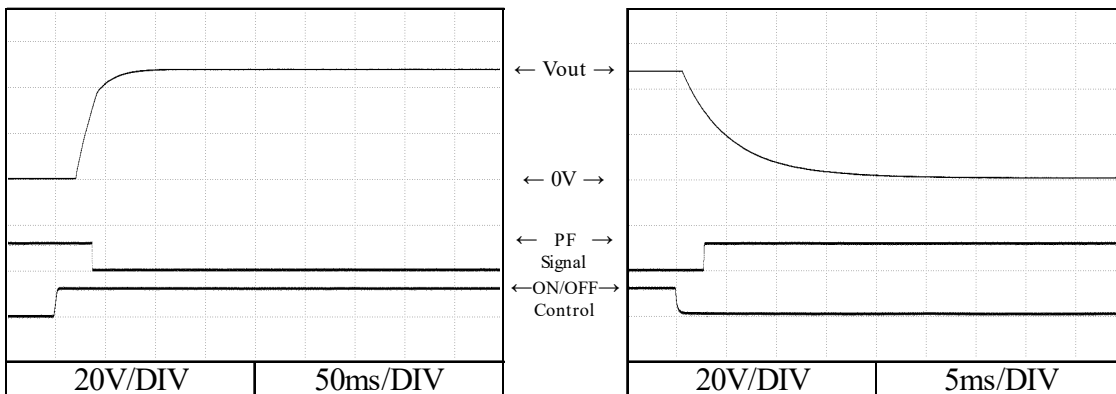
12V



24V



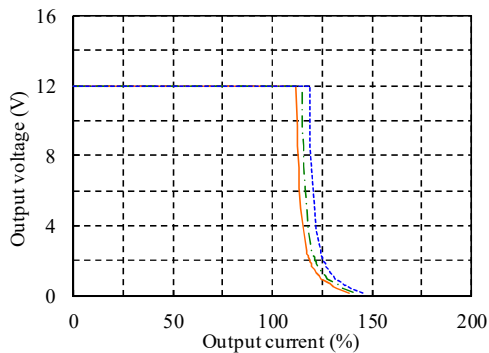
48V



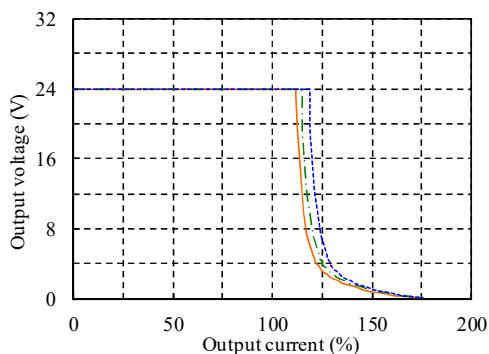
2-7. 過電流保護特性  
Over current protection (OCP) characteristics

Conditions Vin : 100 VAC  
 Ta : -20 °C (---)  
 25 °C (---)  
 50 °C (—)

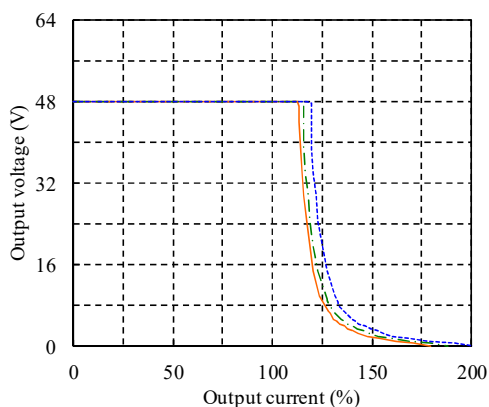
12V



24V

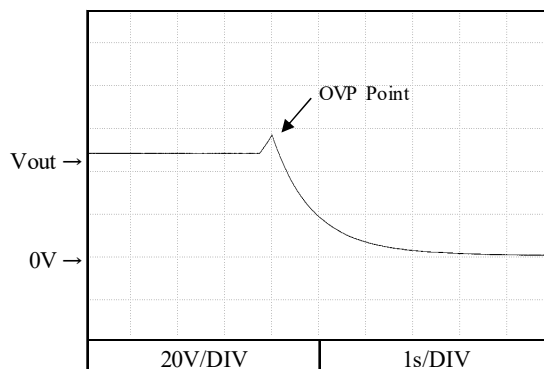
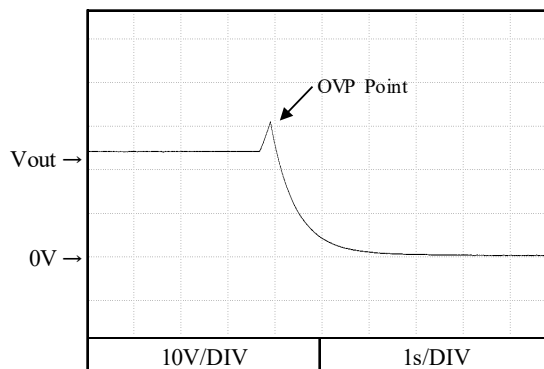
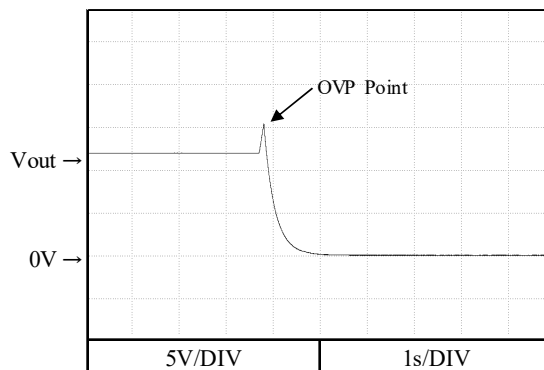


48V



2-8. 過電圧保護特性  
Over voltage protection (OVP) characteristics

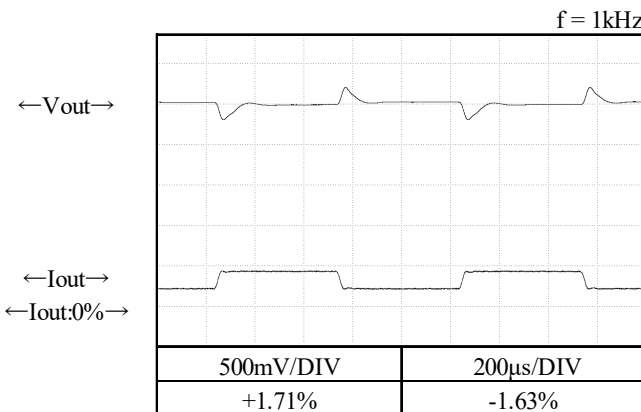
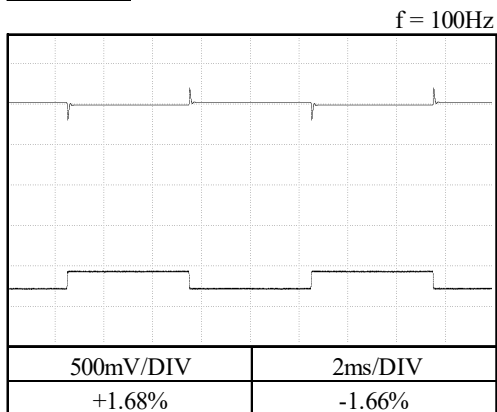
Conditions Vin : 100 VAC  
 Iout : 0 %  
 Ta : 25 °C



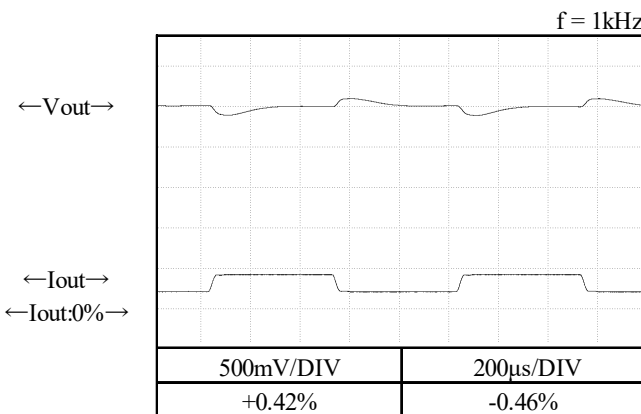
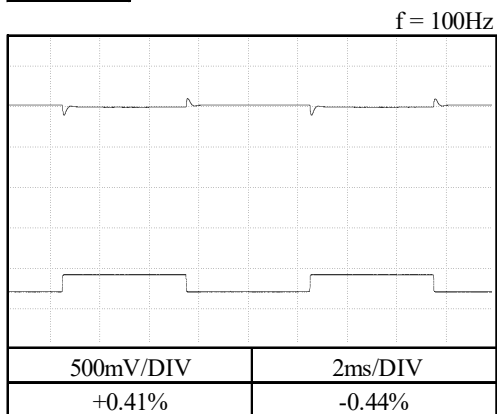
2-9. 過渡応答(負荷急変)特性 Dynamic load response characteristics

Conditions Vin : 100 VAC  
 Iout : 50 % ↔ 100 %  
 (tr = tf = 75us)  
 Ta : 25 °C

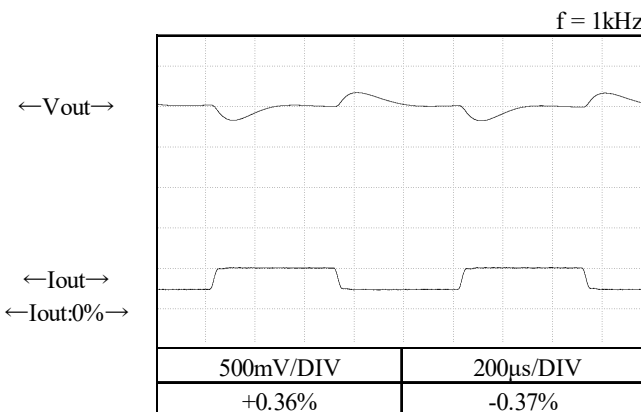
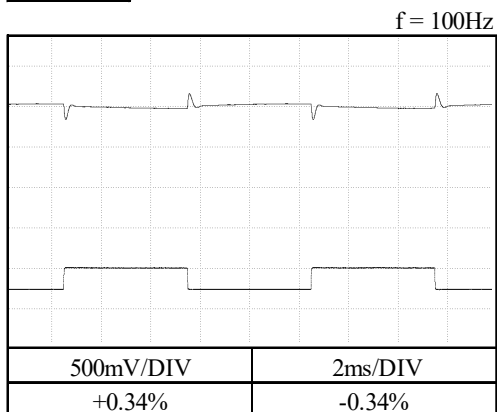
12V



24V



48V

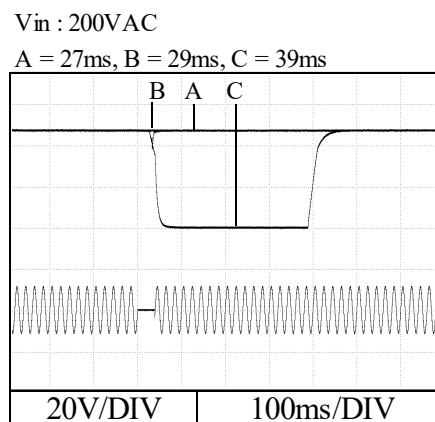
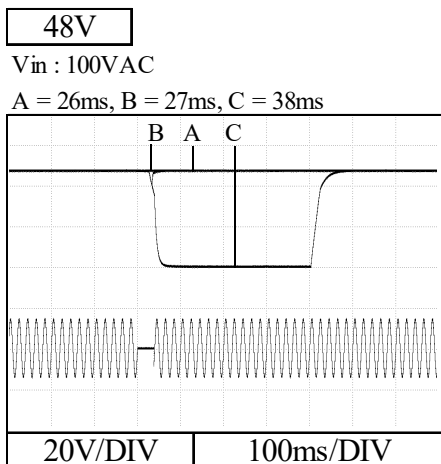
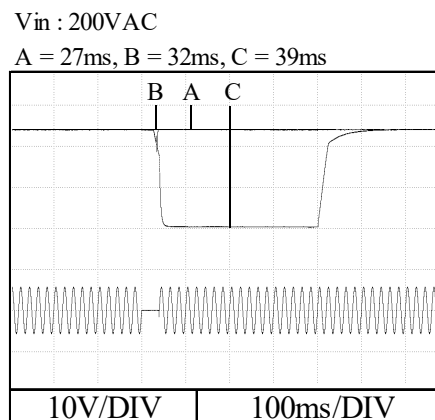
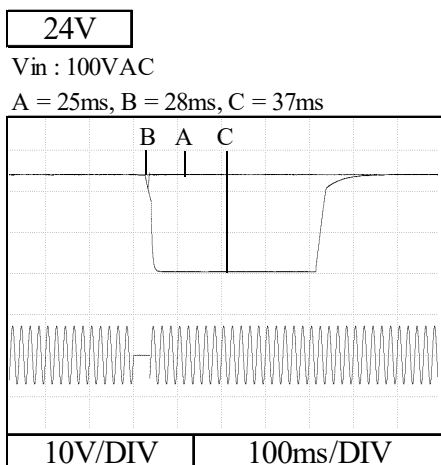
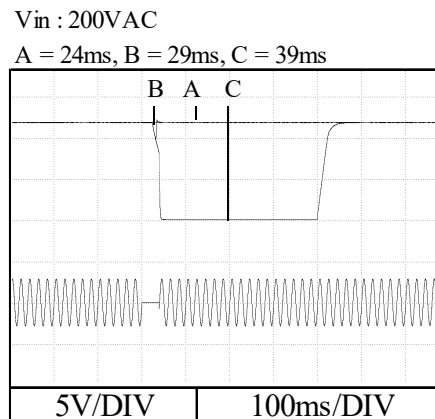
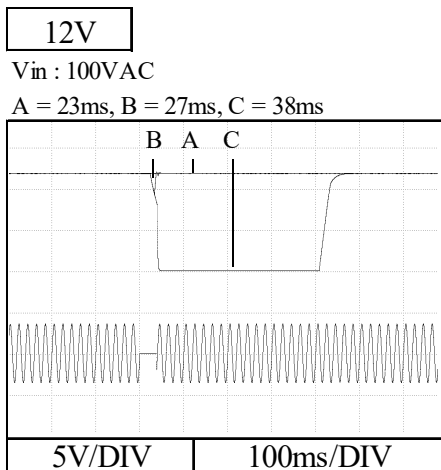


2-10. 入力電圧瞬停特性 Response to brown out characteristics

Conditions  $I_{out} : 100\%$   
 $T_a : 25\text{ }^\circ\text{C}$

瞬停時間 Interruption time

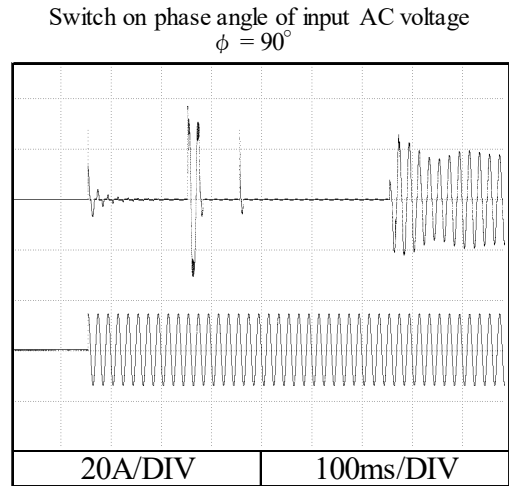
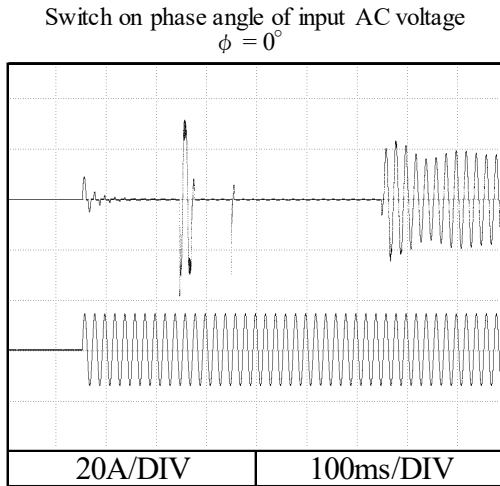
- A : 出力電圧が低下なし Output voltage does not drop.
- B : 出力電圧の低下が0Vまでいかない Output voltage drop down not reaching 0V.
- C : 出力電圧が0Vまで低下 Output voltage drops until 0V.



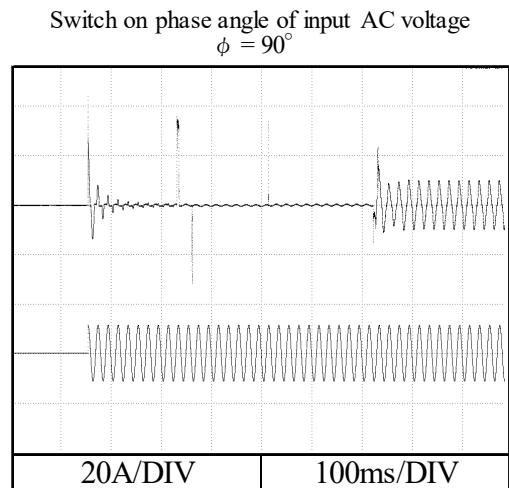
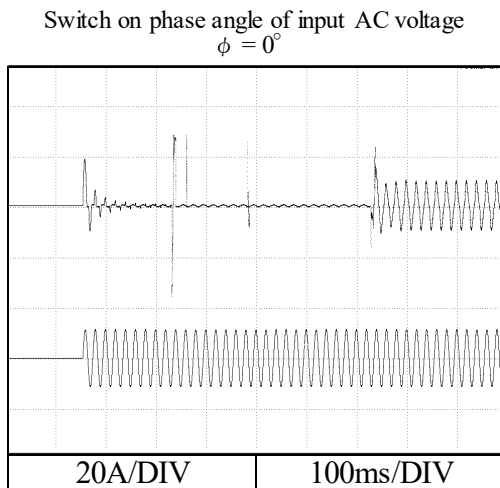
2-11. 入力サージ電流(突入電流)波形 Inrush current waveform

12V

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



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

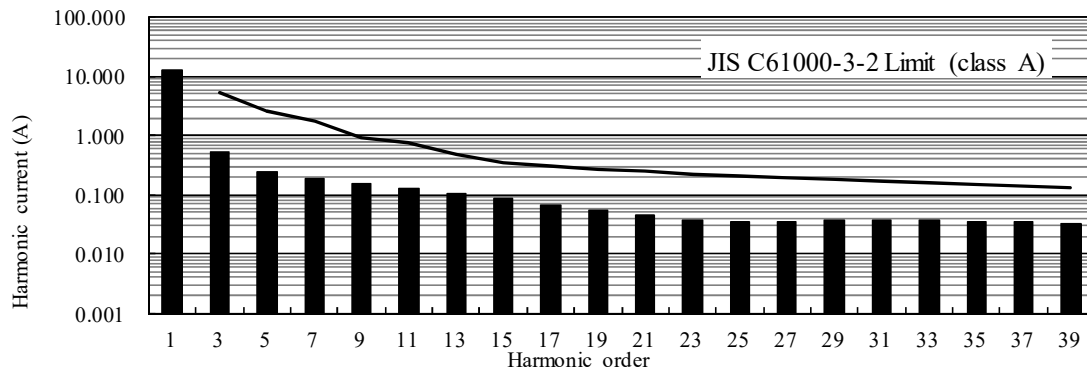


2-12. 高調波成分 Input current harmonics

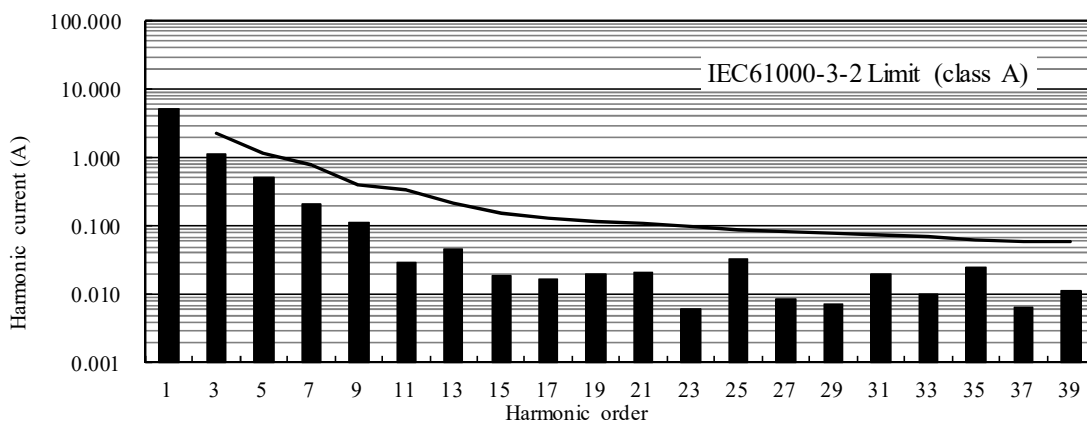
Conditions Iout : 100 %  
Ta : 25 °C

12V

Vin : 100 VAC



Vin : 230 VAC

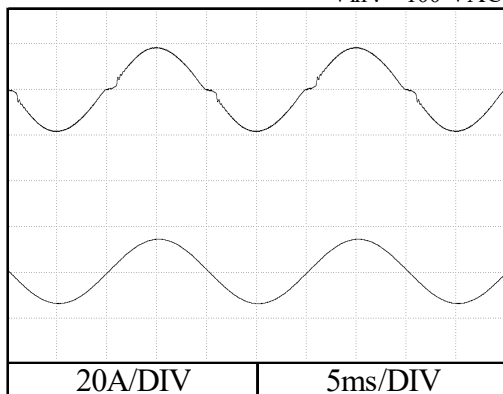


2-13. 入力電流波形 Input current waveform

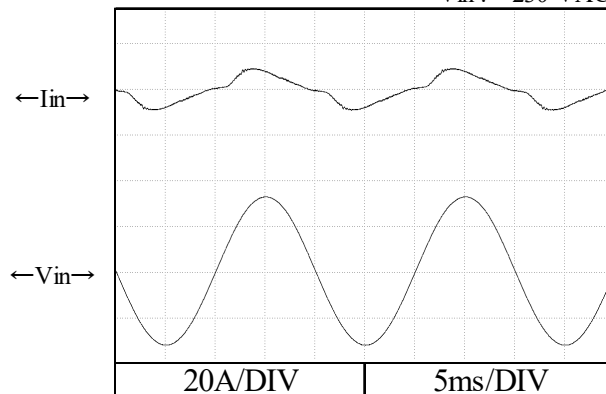
Conditions Iout : 100 %  
Ta : 25 °C

12V

Vin : 100 VAC



Vin : 230 VAC

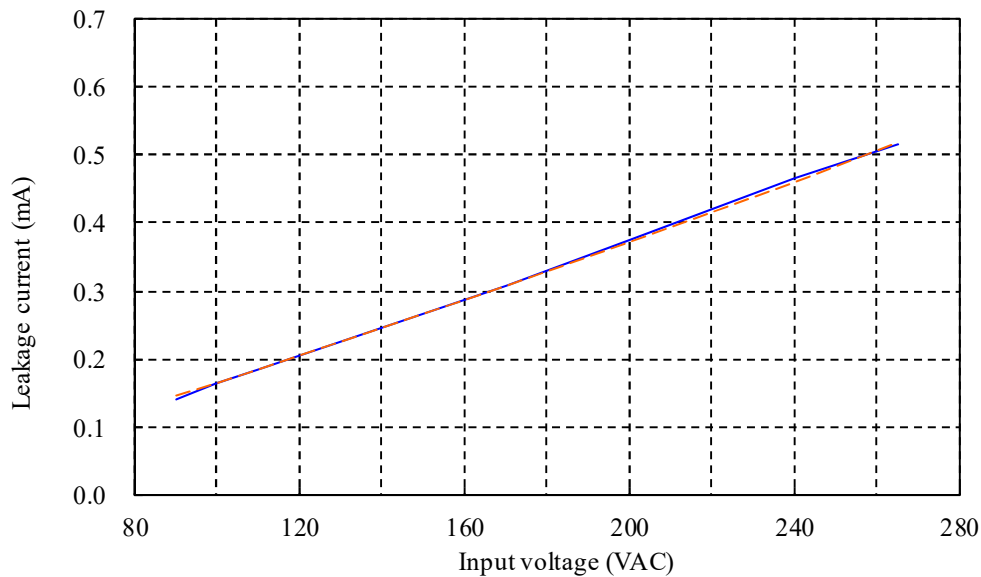


2-14. リーク電流特性 Leakage current characteristics

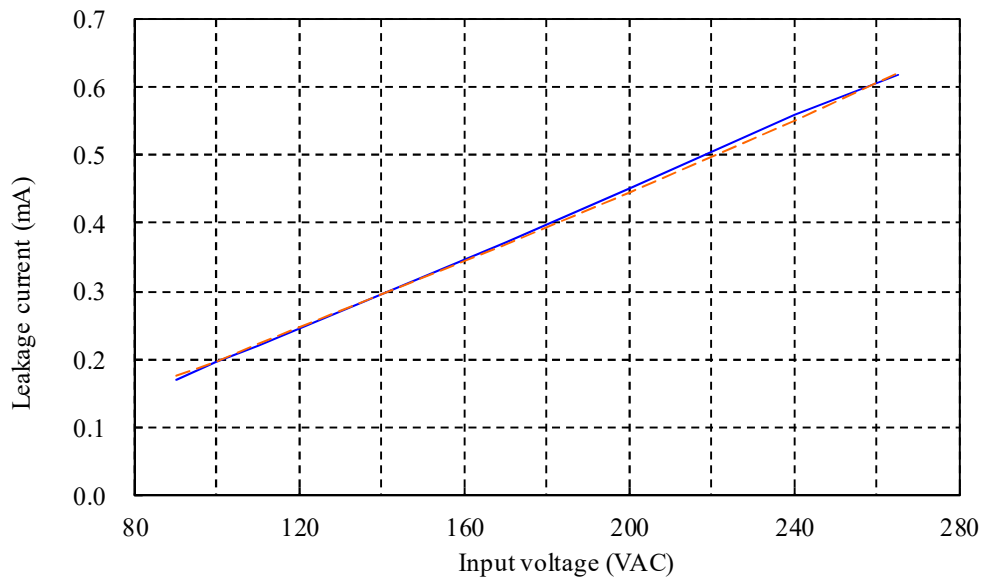
Conditions Iout : 0 % ———  
                  100 % - - - - -  
                  Ta : 25 °C  
Equipment used : 3156 (HIOKI)

12V

f: 50 Hz



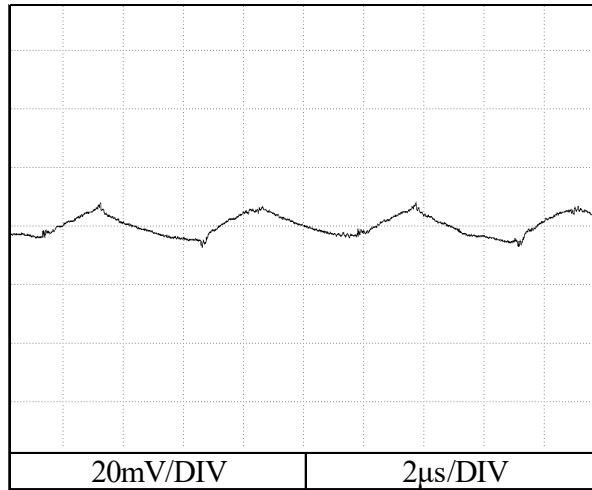
f: 60 Hz



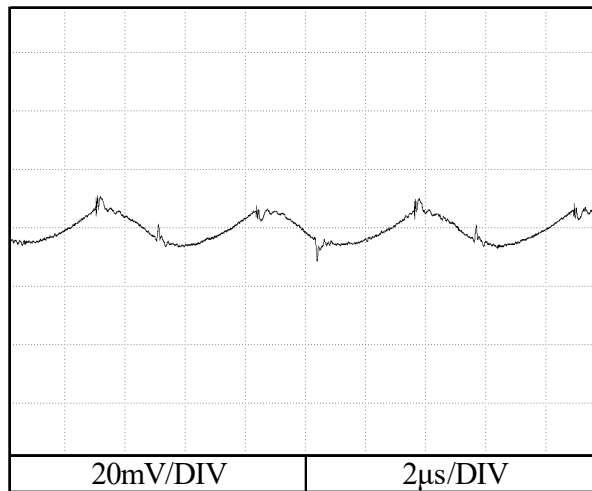
2-15. 出力リップル、ノイズ波形 Output ripple and noise waveform

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

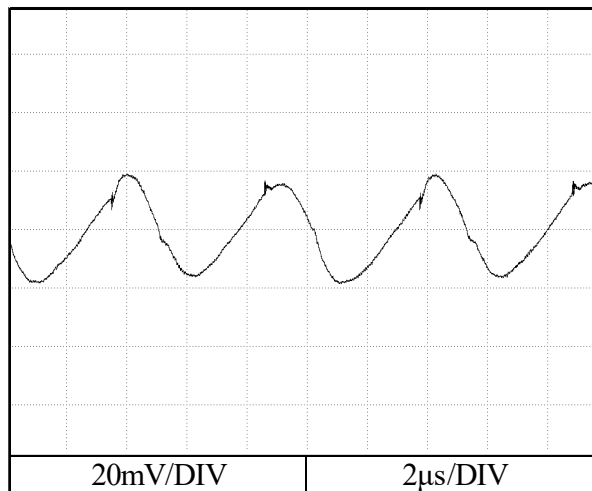
12V



24V



48V





2-16. EMI特性 Electro-Magnetic Interference characteristics

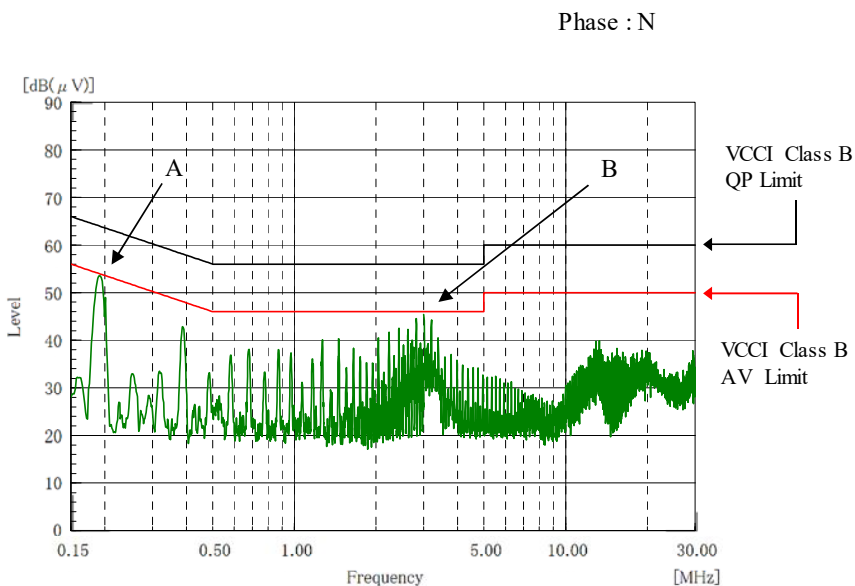
Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

雑音端子電圧  
Conducted Emission

12V

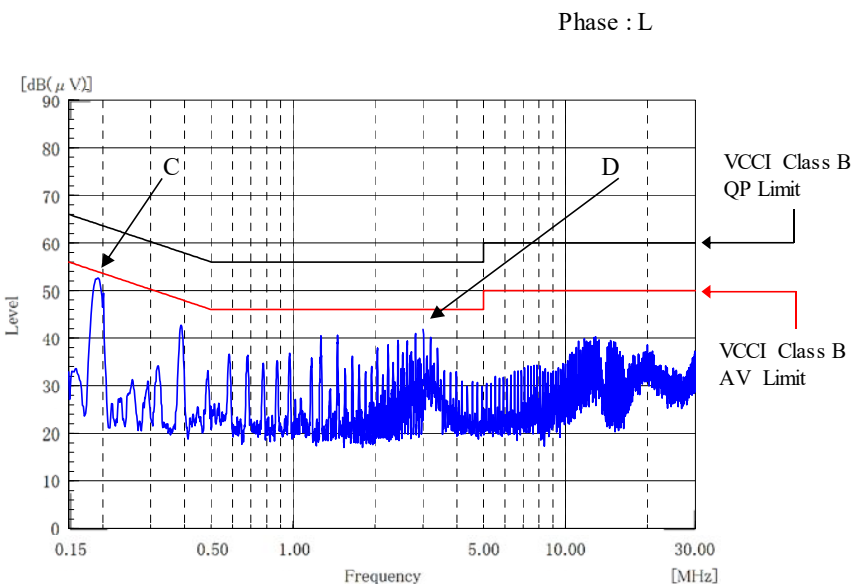
Point A (192kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.0	51.5
AV	54.0	45.1

Point B (3.0MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	56.0	43.8
AV	46.0	42.6



Point C (190kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.0	51.3
AV	54.0	44.6

Point D (3.0MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	56.0	39.9
AV	46.0	38.7



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.

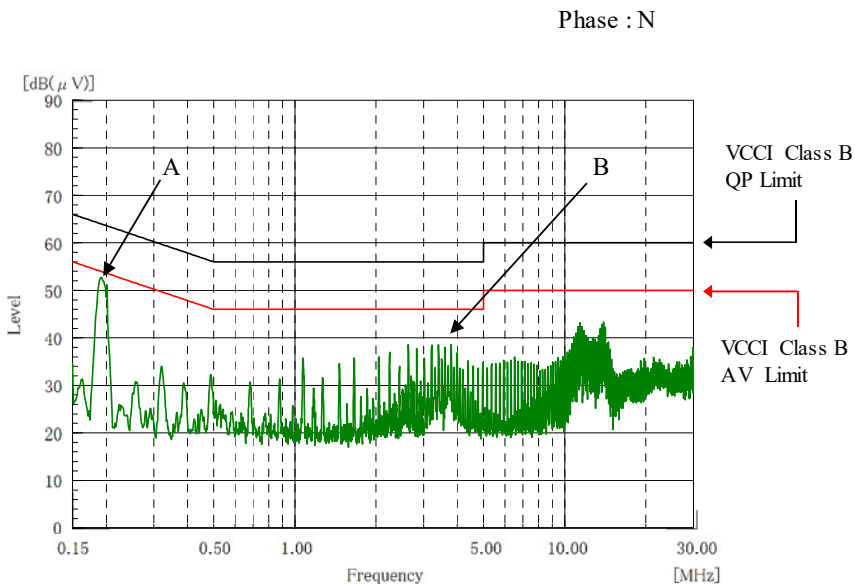
Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

雑音端子電圧  
Conducted Emission

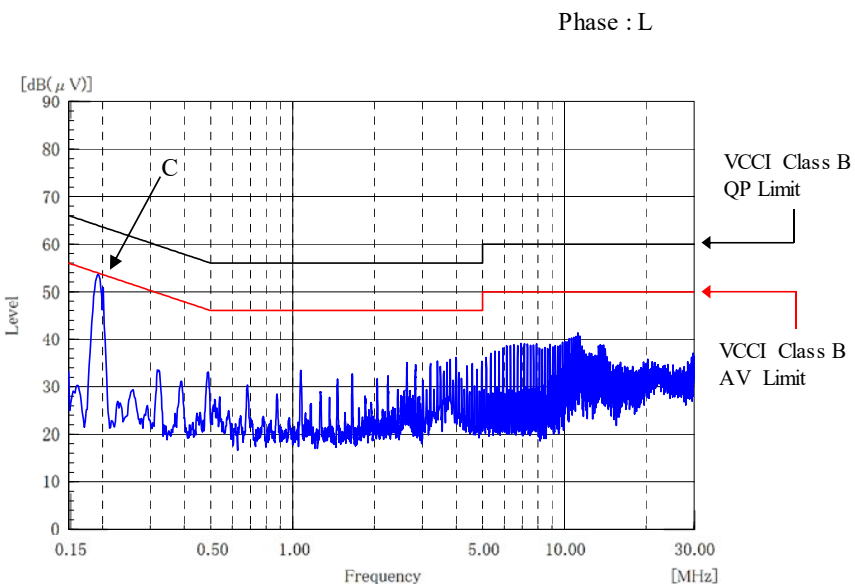
24V

Point A (195kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.8	50.4
AV	53.8	43.9

Point B (3.8MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	56.0	36.9
AV	46.0	35.8



Point C (193kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.9	51.3
AV	53.9	44.6



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.

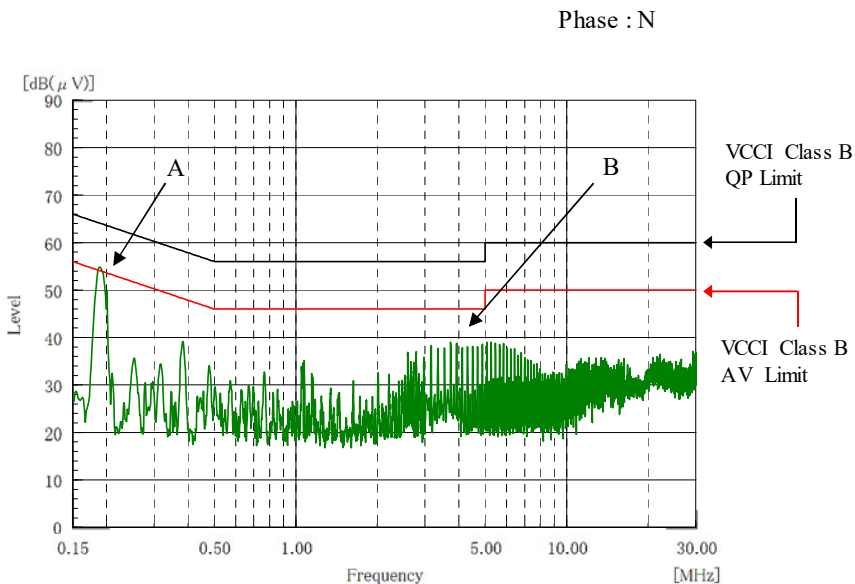
Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

雑音端子電圧  
Conducted Emission

48V

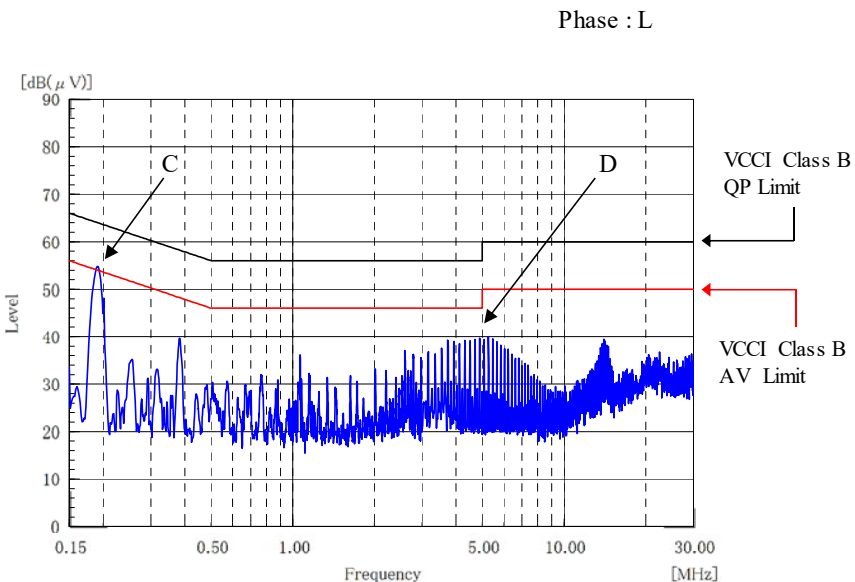
Point A (191kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.0	53.6
AV	54.0	48.5

Point B (3.7MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	56.0	37.2
AV	46.0	36.5



Point C (192kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.0	53.3
AV	54.0	48.5

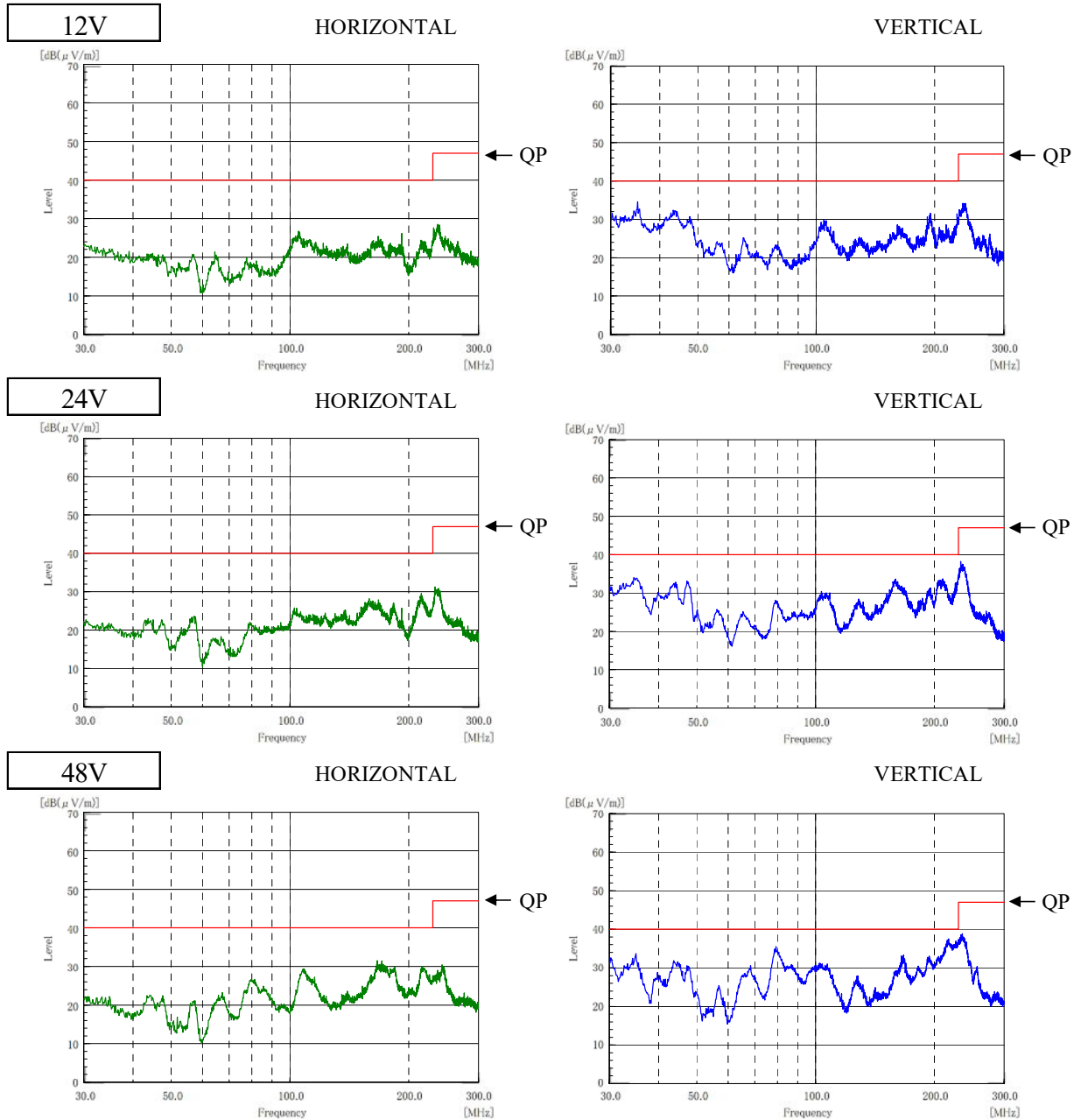
Point D (4.9MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	56.0	38.0
AV	46.0	37.9



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.

Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

雑音電界強度  
Radiated Emission



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.

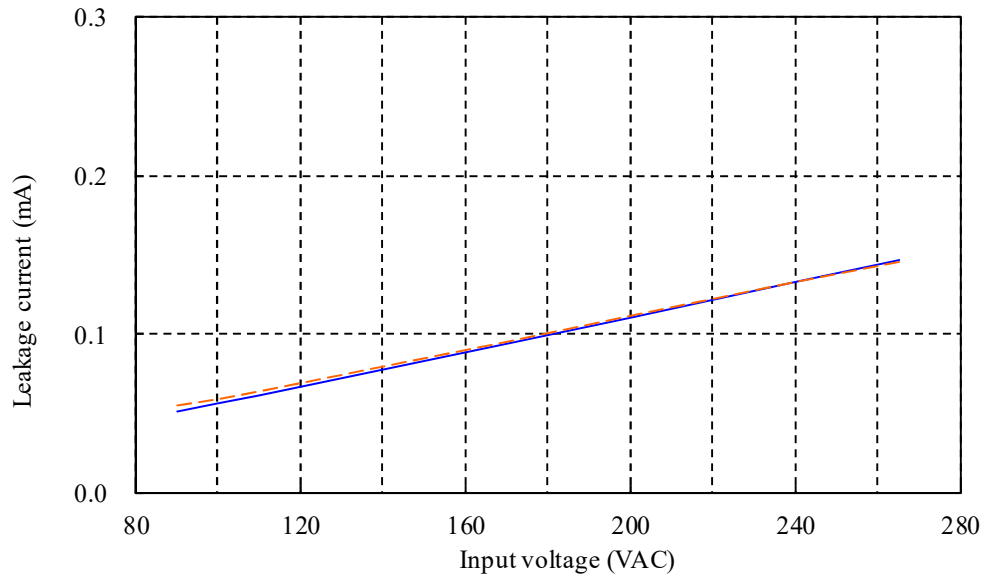
2-17. リーク電流特性 Leakage current characteristics

MODEL : RWS1000B/ME

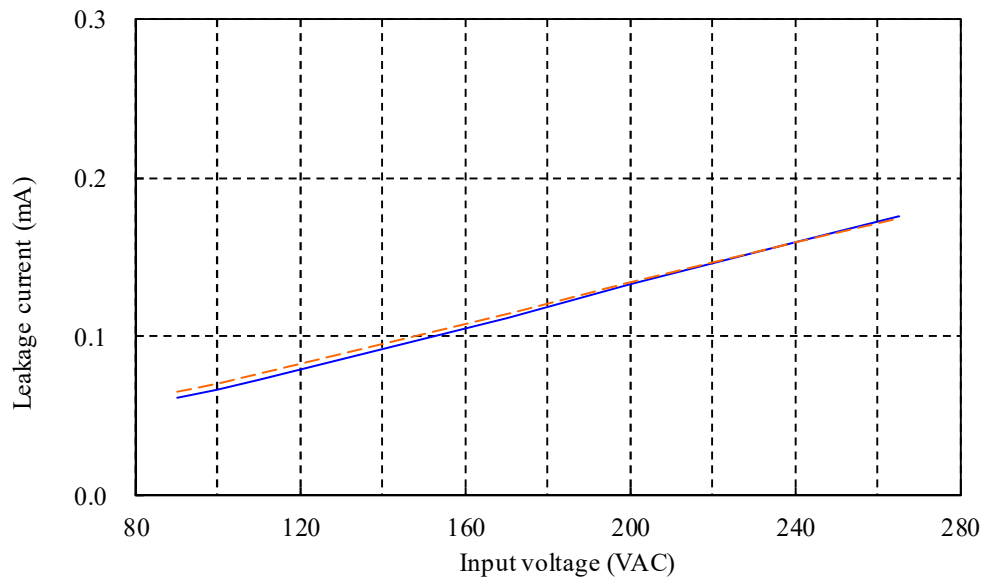
Conditions Iout : 0 % ———  
                  100 % - - - - -  
                  Ta : 25 °C  
Equipment used : 3156 (HIOKI)

12V

f: 50 Hz



f: 60 Hz



2-18. EMI特性 Electro-Magnetic Interference characteristics

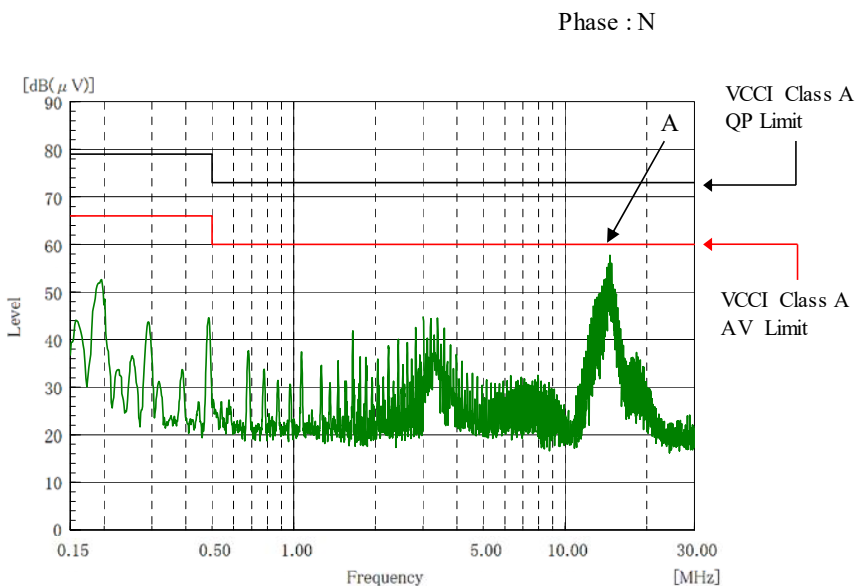
Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

MODEL : RWS1000B/ME

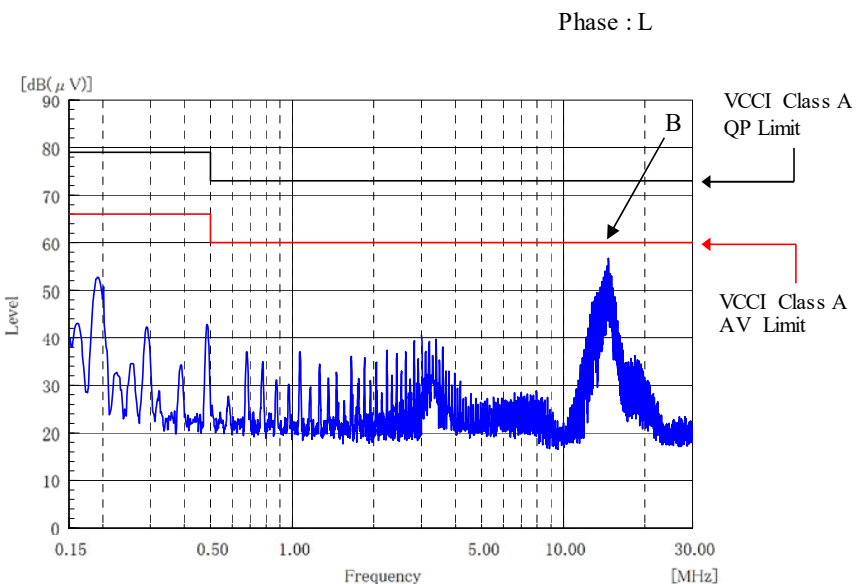
雑音端子電圧  
Conducted Emission

12V

Point A (14.7MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	73.0	55.5
AV	60.0	51.5



Point B (14.7MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	73.0	54.8
AV	60.0	50.8



EN55011-A,EN55032-A,FCC-Aの限界値はVCCI class Aの限界値と同じ  
Limit of EN55011-A,EN55032-A,FCC-A are same as its VCCI class A.

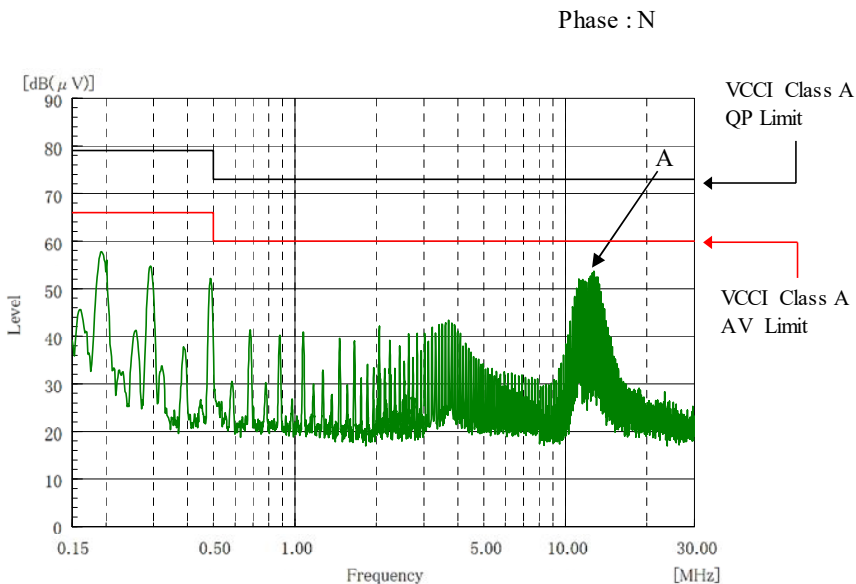
MODEL : RWS1000B/ME

Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

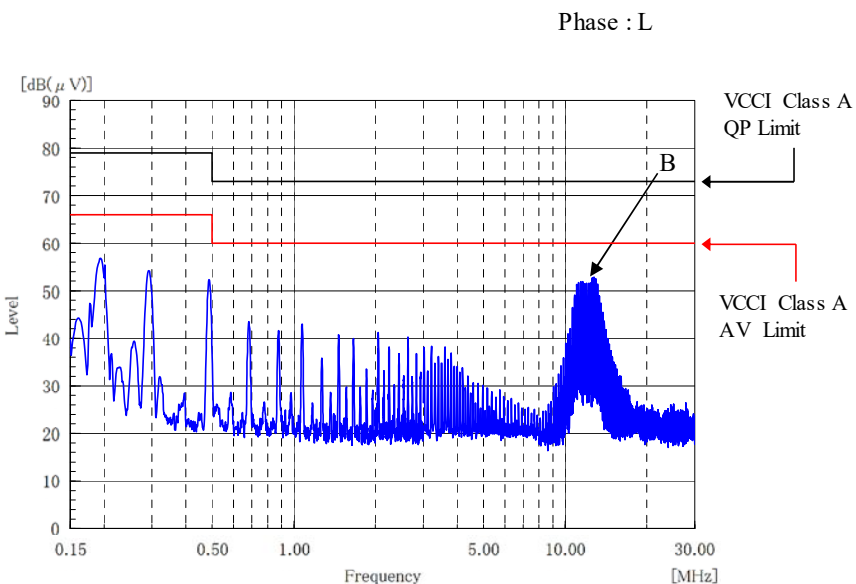
雑音端子電圧  
Conducted Emission

24V

Point A (12.8MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	73.0	52.9
AV	60.0	49.7



Point B (12.8MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	73.0	51.9
AV	60.0	47.8



EN55011-A,EN55032-A,FCC-Aの限界値はVCCI class Aの限界値と同じ  
Limit of EN55011-A,EN55032-A,FCC-A are same as its VCCI class A.

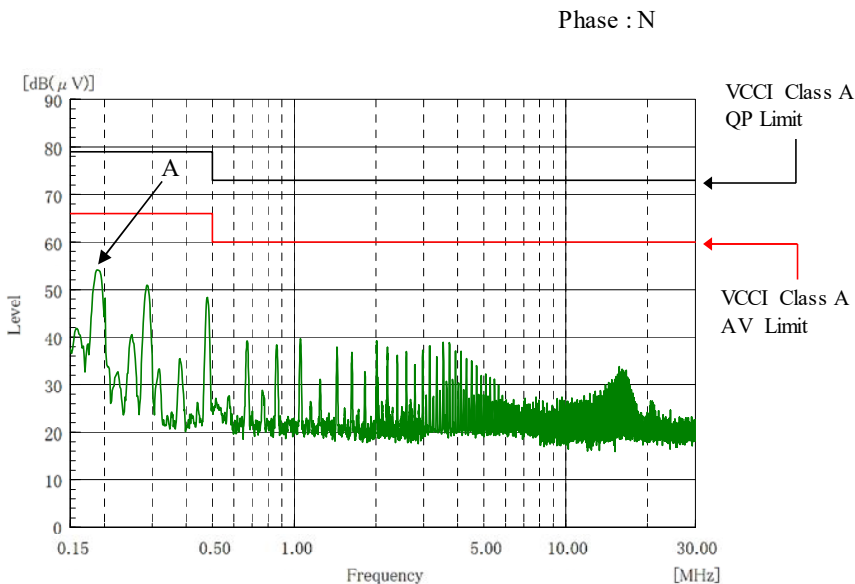
MODEL : RWS1000B/ME

Conditions Vin : 230 VAC  
Iout : 100 %  
Ta : 25 °C

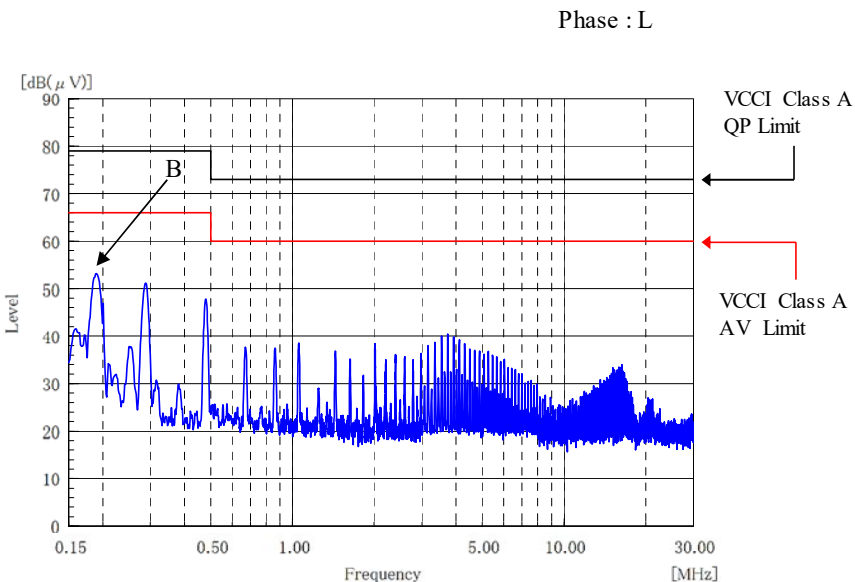
雑音端子電圧  
Conducted Emission

48V

Ref. Data	Point A (191kHz)	
	Limit (dB)	Measure (dB)
QP	79.0	53.5
AV	66.0	48.8



Ref. Data	Point B (191kHz)	
	Limit (dB)	Measure (dB)
QP	79.0	51.3
AV	66.0	46.8



EN55011-A,EN55032-A,FCC-Aの限界値はVCCI class Aの限界値と同じ  
Limit of EN55011-A,EN55032-A,FCC-A are same as its VCCI class A.



Conditions

Vin : 230 VAC

Iout : 100 %

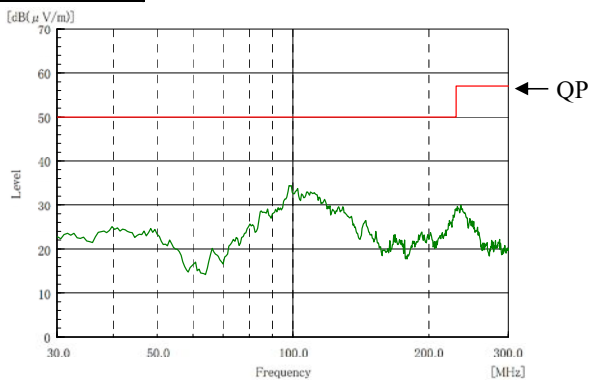
Ta : 25 °C

MODEL : RWS1000B/ME

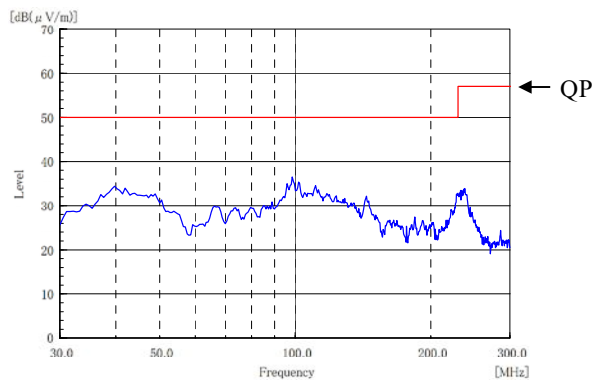
雑音電界強度  
Radiated Emission

12V

HORIZONTAL

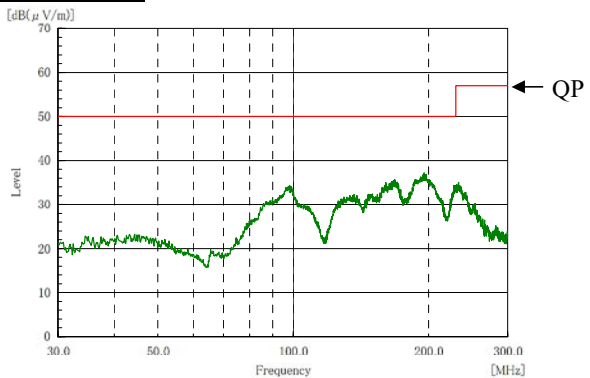


VERTICAL

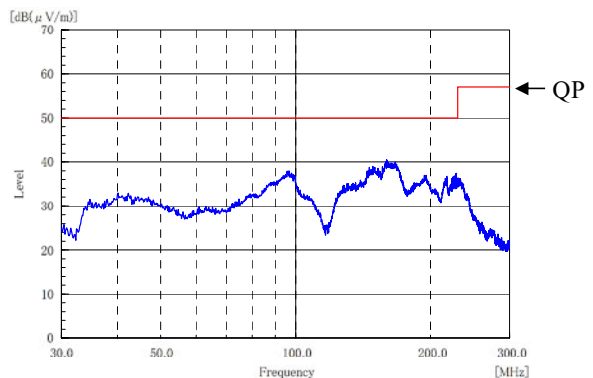


24V

HORIZONTAL

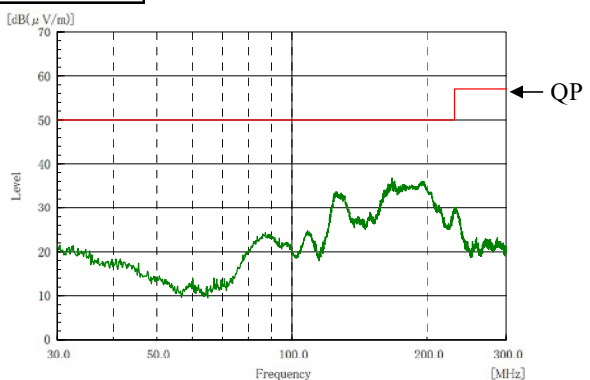


VERTICAL

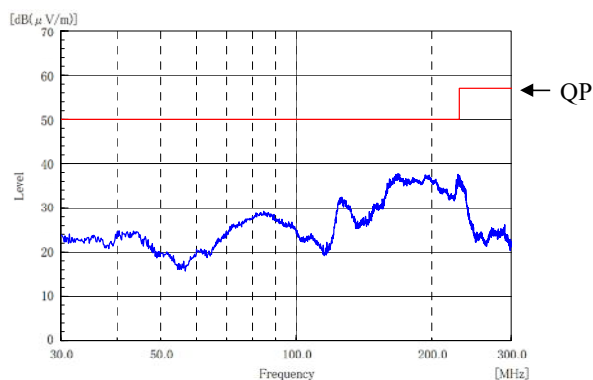


48V

HORIZONTAL



VERTICAL



EN55011-A,EN55032-Aの限界値はVCCI class Aの限界値と同じ  
Limit of EN55011-A,EN55032-A are same as its VCCI class A.

表示はピーク値

Indication is peak values.

2-19. 無負荷時入力電力、電流 No load input power and current

Conditions Istb : 0 %  
Ta : 25 °C

MODEL : RWS1000B/S

12V

V <sub>in</sub>	Input power	
	I <sub>out</sub> : 0%	Control OFF
90VAC	27.0W	4.4W
100VAC	26.7W	4.2W
200VAC	25.9W	4.3W
265VAC	26.2W	4.4W

V <sub>in</sub>	Input current	
	I <sub>out</sub> : 0%	Control OFF
90VAC	0.41A	0.13A
100VAC	0.37A	0.14A
200VAC	0.31A	0.25A
265VAC	0.39A	0.34A

24V

V <sub>in</sub>	Input power	
	I <sub>out</sub> : 0%	Control OFF
90VAC	28.7W	4.0W
100VAC	28.5W	3.9W
200VAC	27.8W	4.0W
265VAC	28.0W	4.1W

V <sub>in</sub>	Input current	
	I <sub>out</sub> : 0%	Control OFF
90VAC	0.42A	0.12A
100VAC	0.39A	0.13A
200VAC	0.32A	0.25A
265VAC	0.40A	0.33A

48V

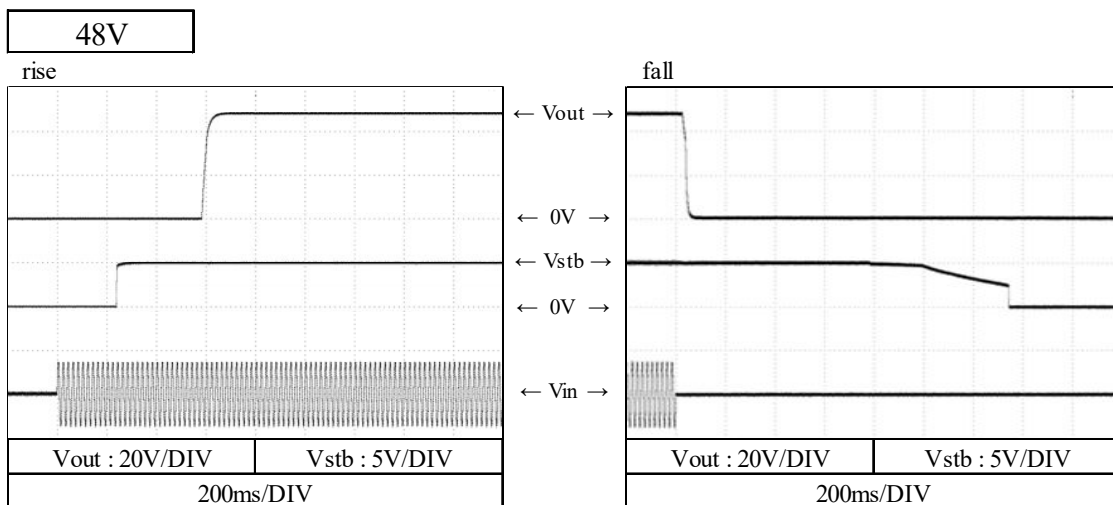
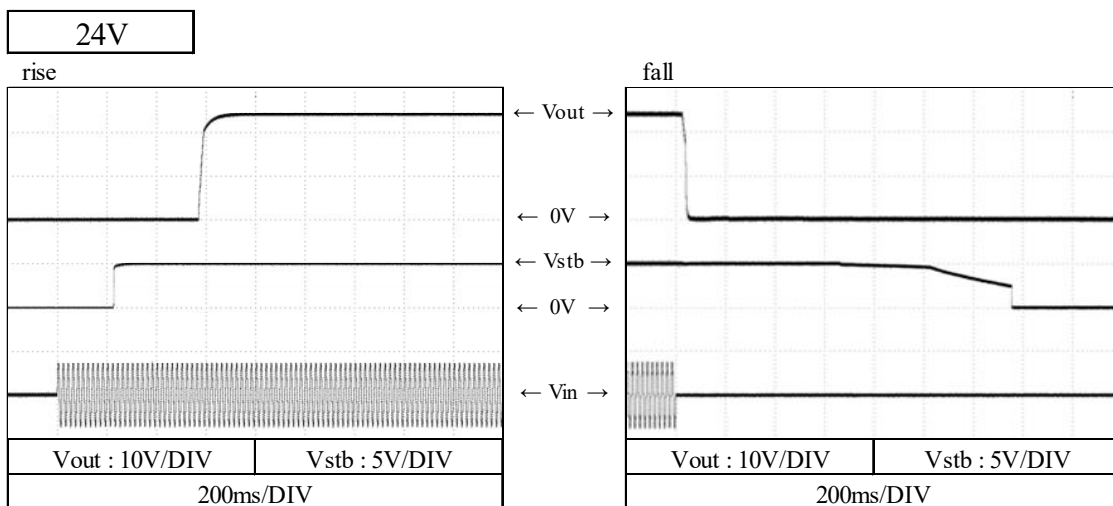
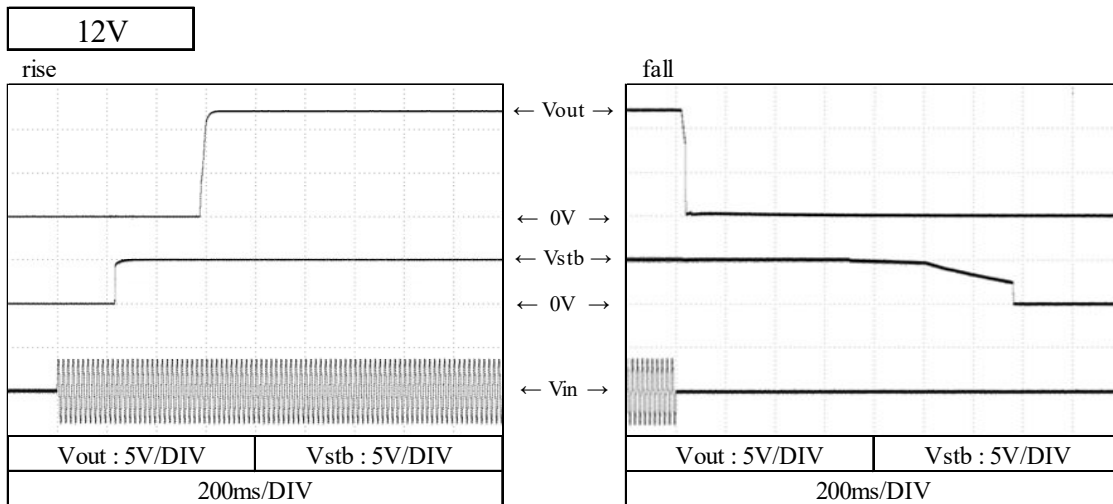
V <sub>in</sub>	Input power	
	I <sub>out</sub> : 0%	Control OFF
90VAC	30.9W	4.1W
100VAC	30.7W	4.0W
200VAC	29.8W	4.0W
265VAC	30.1W	4.2W

V <sub>in</sub>	Input current	
	I <sub>out</sub> : 0%	Control OFF
90VAC	0.47A	0.12A
100VAC	0.43A	0.13A
200VAC	0.32A	0.25A
265VAC	0.40A	0.33A

2-20. スタンバイ立ち上がり、立ち下がり特性 Standby rise,fall characteristics

MODEL : RWS1000B/S

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

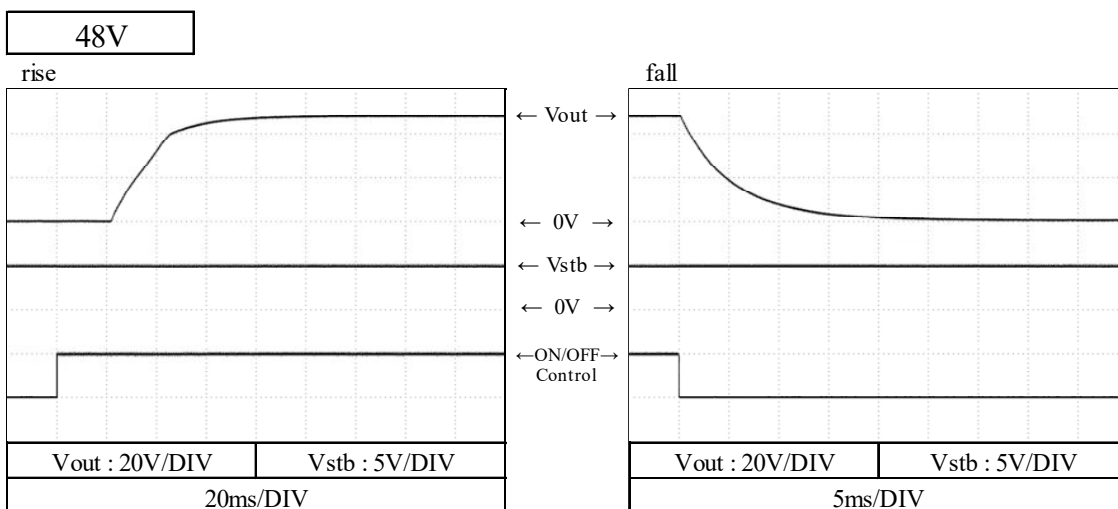
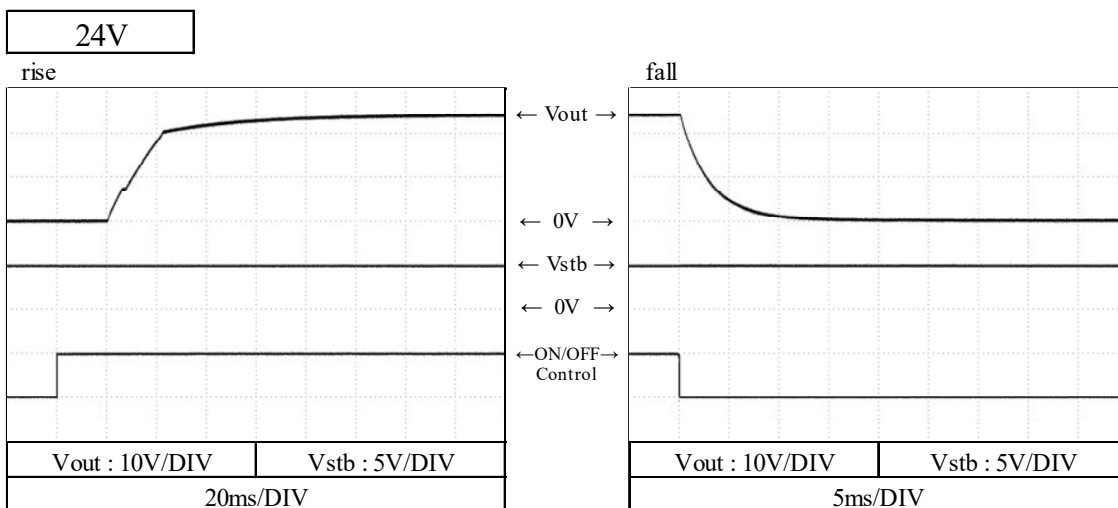
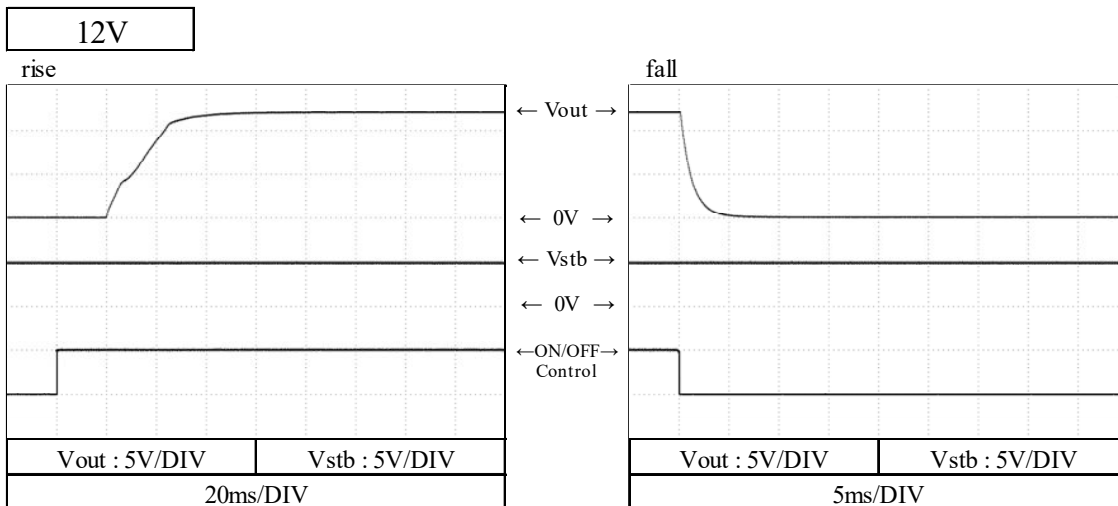


2-21. ON/OFFコントロール時出力立ち上がり、立下がり特性

Output rise, fall characteristics with ON/OFF Control

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

MODEL : RWS1000B/S



2-22. EMI特性 Electro-Magnetic Interference characteristics

MODEL : RWS1000B/S

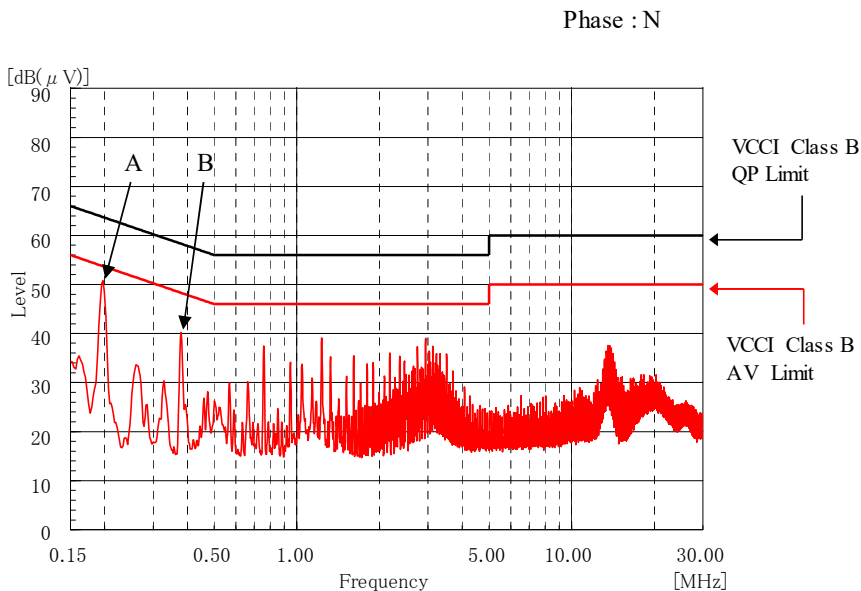
Conditions Vin : 230 VAC  
 Iout : 100 %  
 Istb : 100 %  
 Ta : 25 °C

雑音端子電圧  
 Conducted Emission

12V

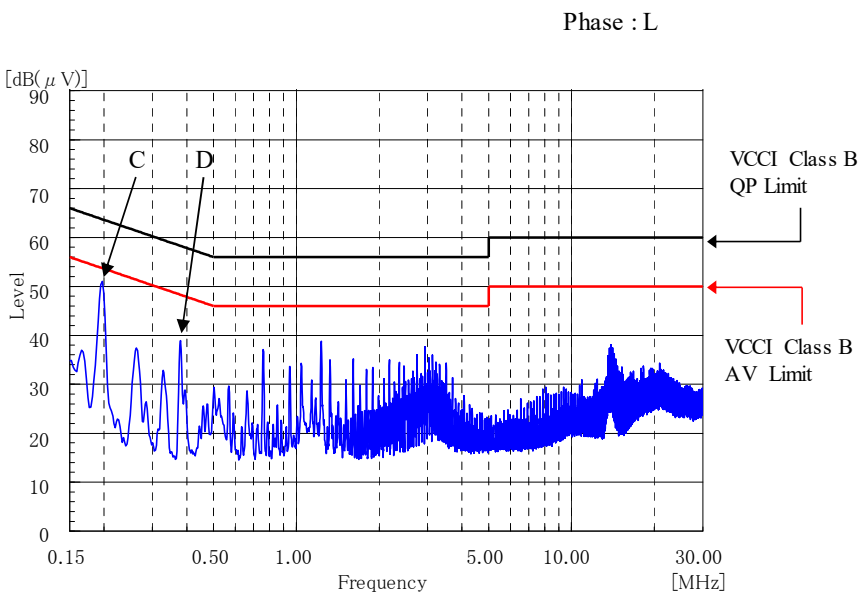
Point A (195kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.8	49.0
AV	53.8	43.0

Point B (380kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	58.3	40.0
AV	48.3	39.6



Point C (195kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.8	50.0
AV	53.8	43.0

Point D (380kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	58.3	39.0
AV	48.3	38.1



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.

MODEL : RWS1000B/S

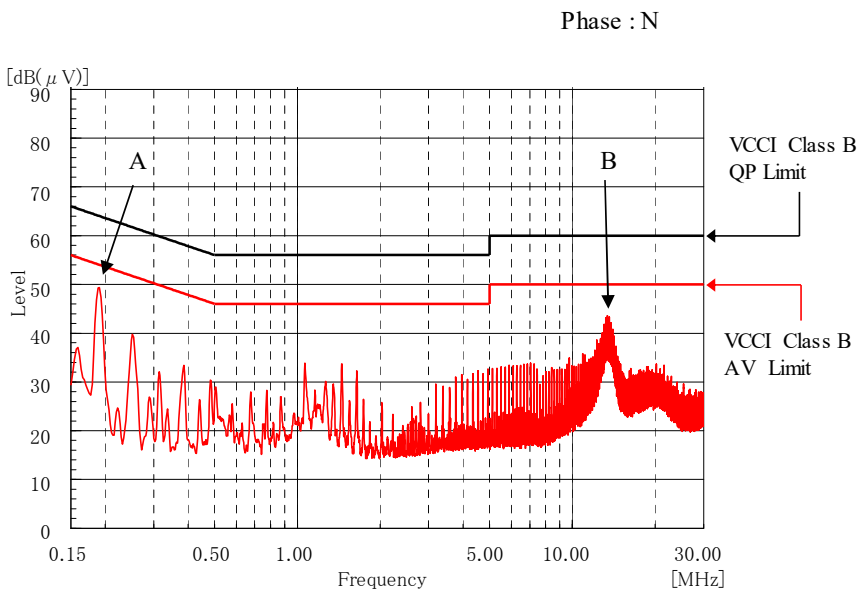
Conditions Vin : 230 VAC  
 Iout : 100 %  
 Istb : 100 %  
 Ta : 25 °C

雑音端子電圧  
 Conducted Emission

24V

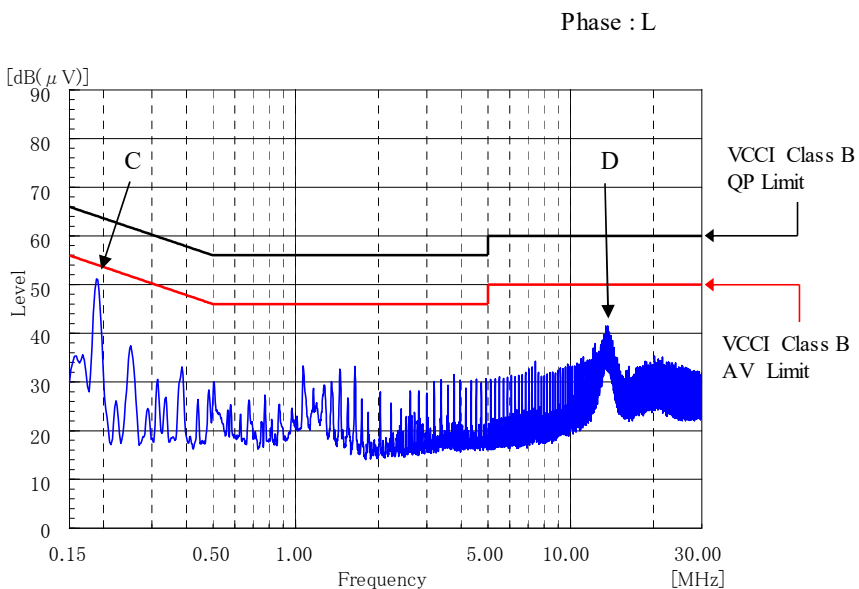
Point A (191kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.0	47.0
AV	54.0	40.8

Point B (13.4MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	60.0	42.0
AV	50.0	39.4



Point C (188kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	64.1	49.0
AV	54.1	41.4

Point D (13.6MHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	60.0	39.0
AV	50.0	36.3



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.

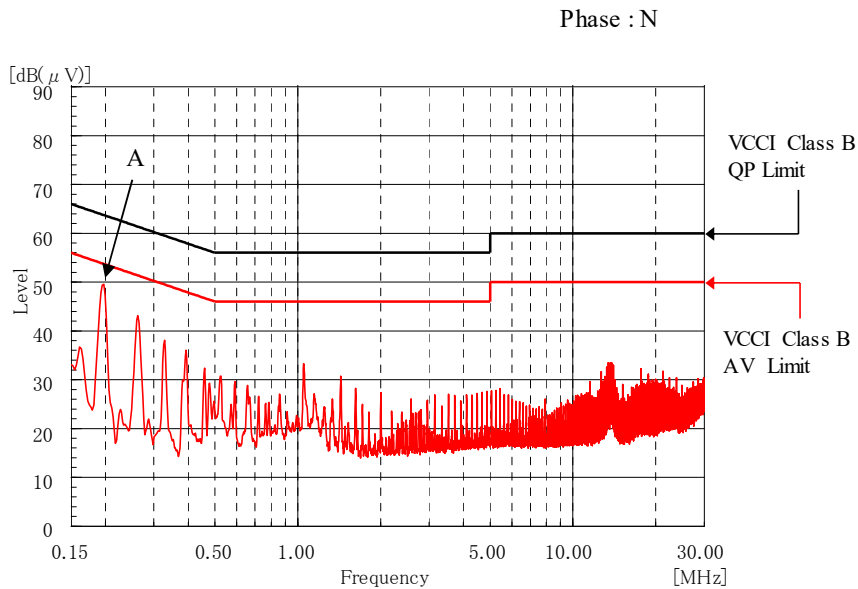
MODEL : RWS1000B/S

Conditions Vin : 230 VAC  
 Iout : 100 %  
 Istb : 100 %  
 Ta : 25 °C

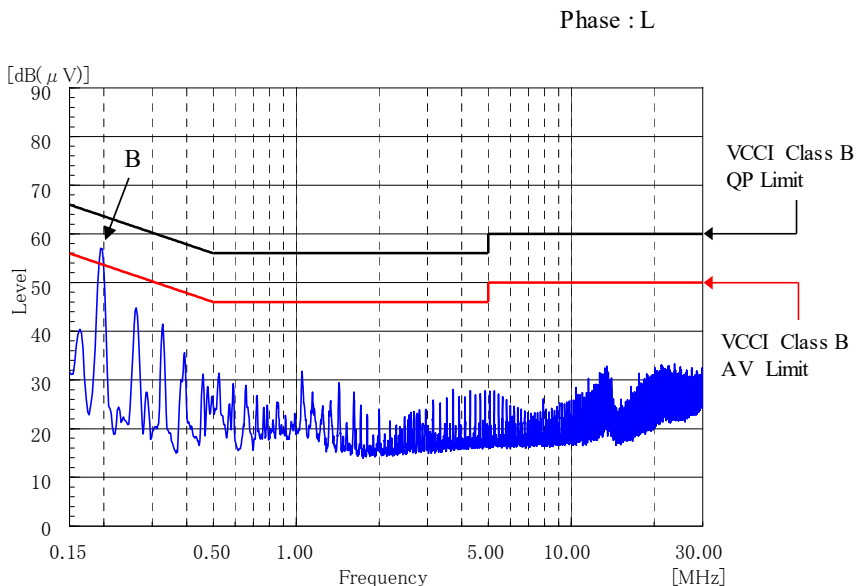
雑音端子電圧  
 Conducted Emission

48V

Point A (195kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.8	48.0
AV	53.8	40.7



Point B (195kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	63.8	56.0
AV	53.8	47.1



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.

MODEL : RWS1000B/S

Conditions

Vin : 230 VAC

Iout : 100 %

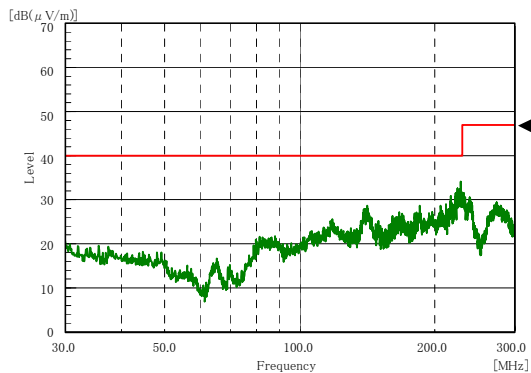
Istb : 100 %

Ta : 25 °C

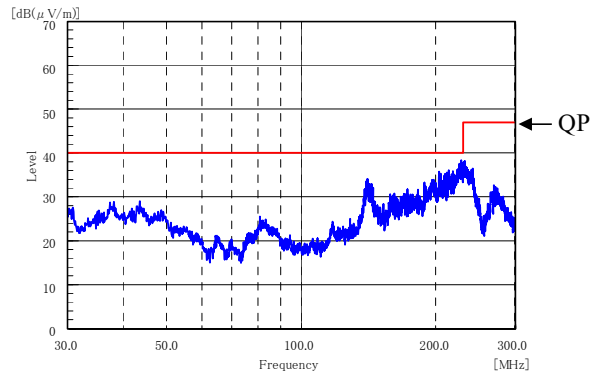
雑音電界強度  
Radiated Emission

12V

HORIZONTAL

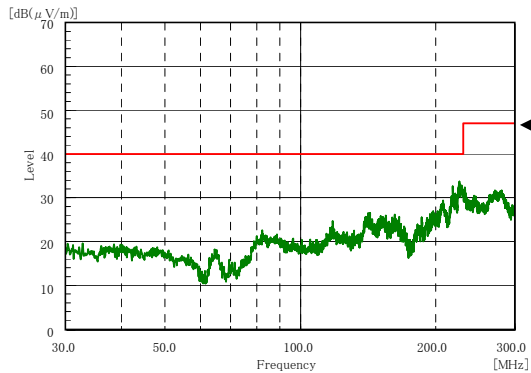


VERTICAL

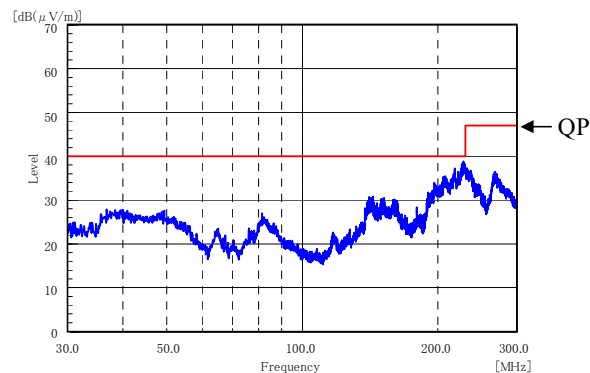


24V

HORIZONTAL

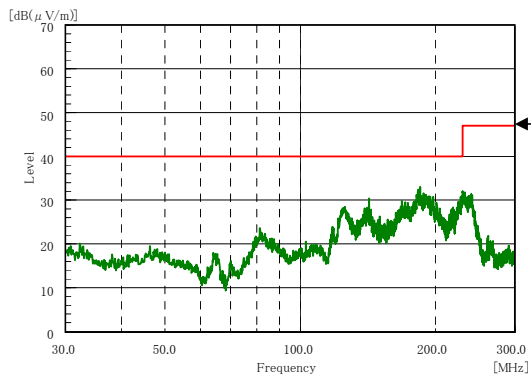


VERTICAL

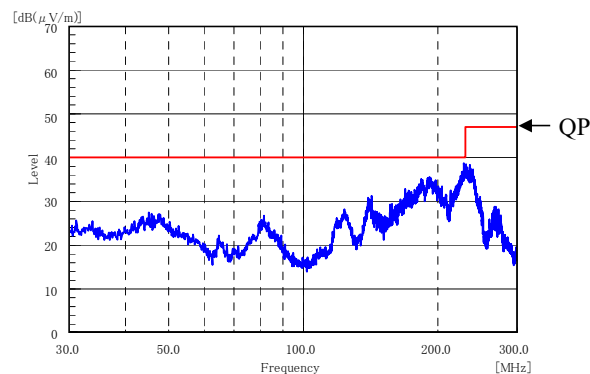


48V

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.