

**CUS60M**

**EVALUATION DATA**

**型式データ**

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## 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

## 1. 測定方法

## Evaluation Method

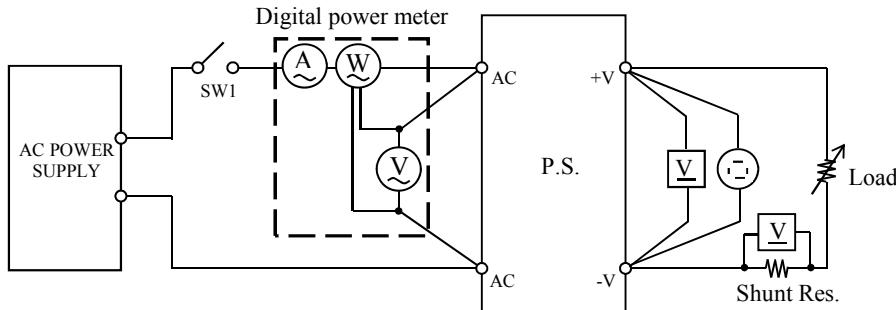
## 1. 1 測定回路

## Circuit used for determination

CUS60M

測定回路1 Circuit 1 used for determination

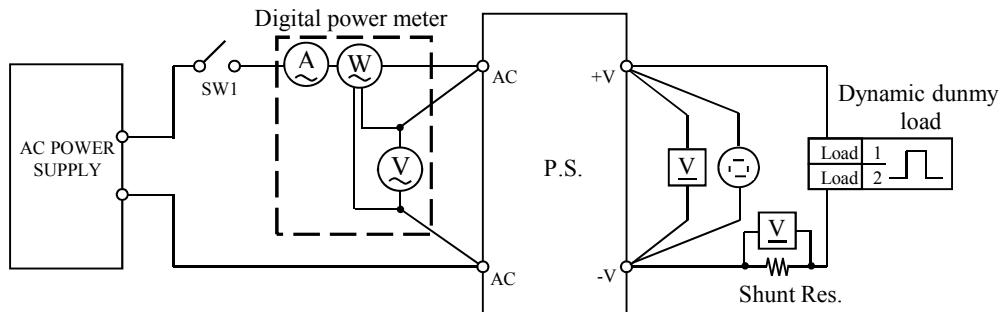
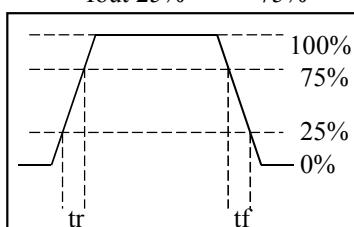
- ・静特性 Steady state data
- ・過電流保護特性 Over current protection (OCP) characteristics
- ・過電圧保護特性 Over voltage protection (OVP) characteristics
- ・出力立ち上がり特性 Output rise characteristics
- ・出力立ち下がり特性 Output fall characteristics
- ・出力保持時間特性 Hold up time characteristics



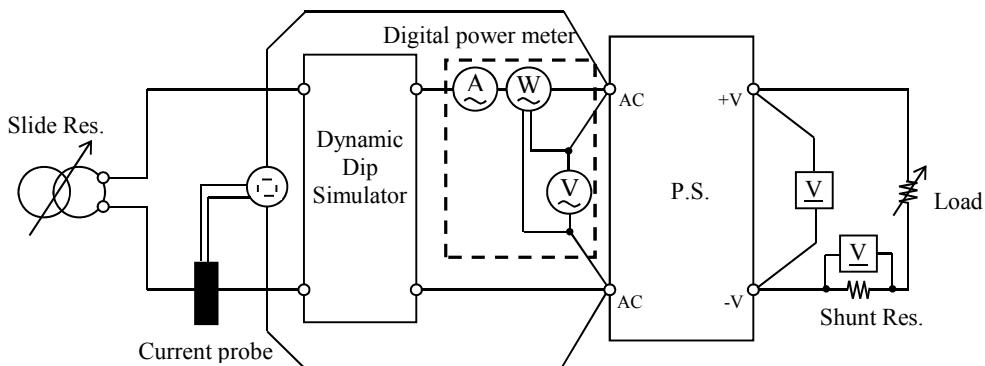
Controlled Temp. Chanmber

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 25% <==> 75%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

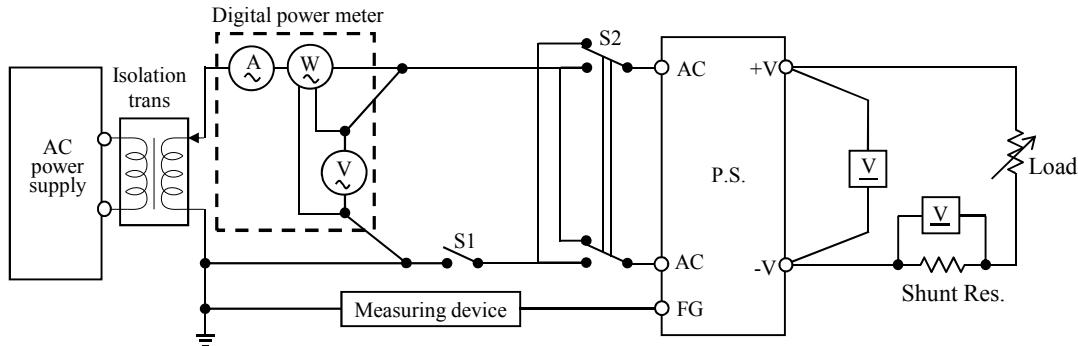


## 測定回路4 Circuit 4 used for determination

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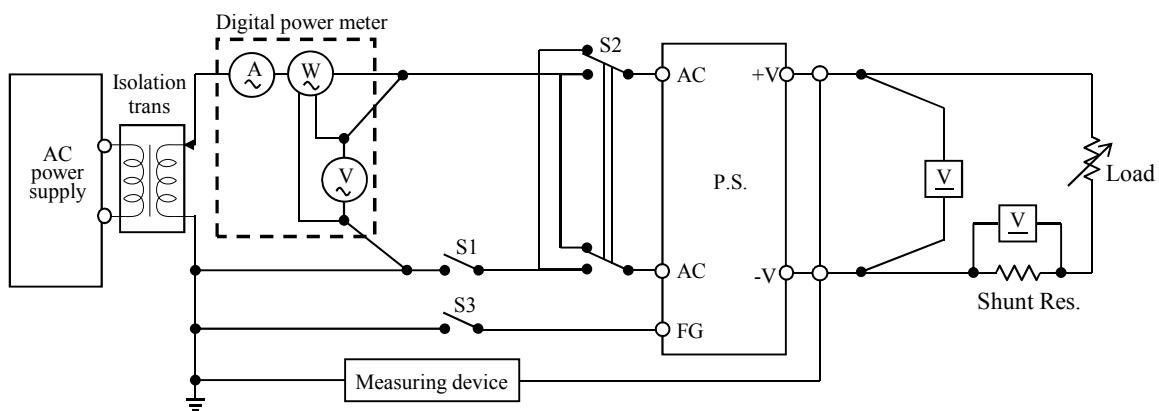
- リーケ電流特性 Leakage current characteristics

### (a) Earth leakage current of CLASS I equipment



Measure in all possible combination of position of S2 with : S1 closed (NORMAL CONDITION), and S1 open (Single fault condition).

### (b) Patient leakage current



CLASS I equipment:

S1, S3 closed, measure under all possible position of S2.

Single fault condition: S1 open with S3 close or S1 close with S3 open.

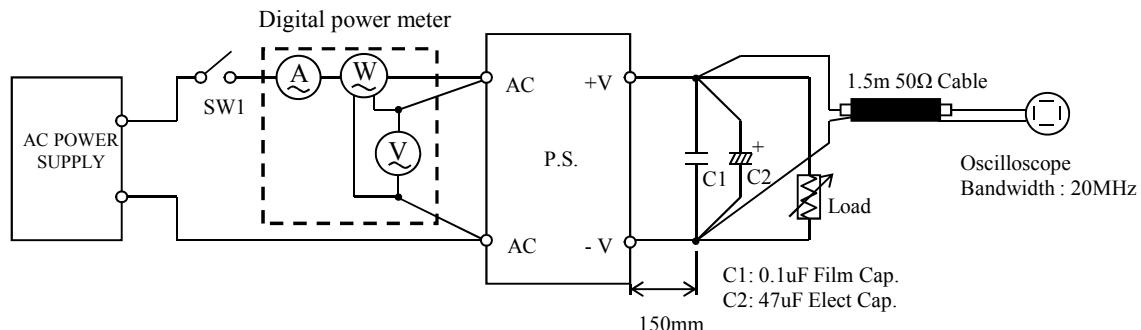
CLASS II equipment:

S3 open, Protection Earth not connected, measure under all combination of position of S1 and S2.

Single fault condition: S1 open.

## 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

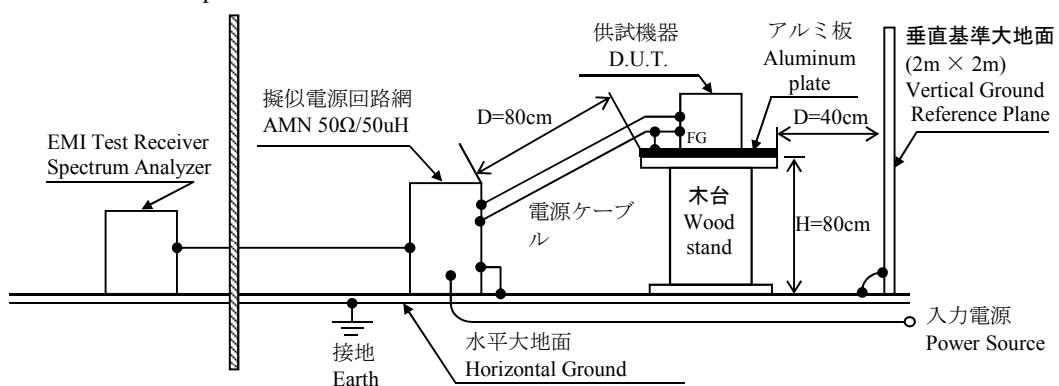


測定構成 Configuration used for determination

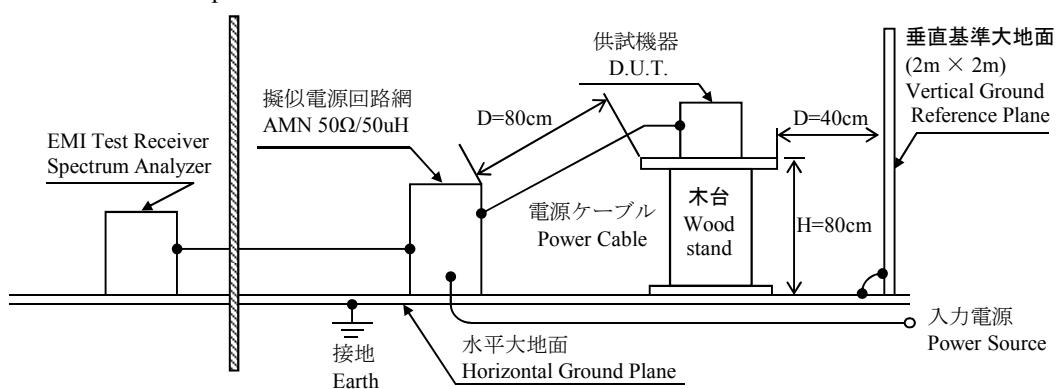
CUS60M

- E M I 特性      Electro-Magnetic Interference characteristics
- (a) 雜音端子電圧 (帰還ノイズ)      Conducted Emission

CLASS I setup:

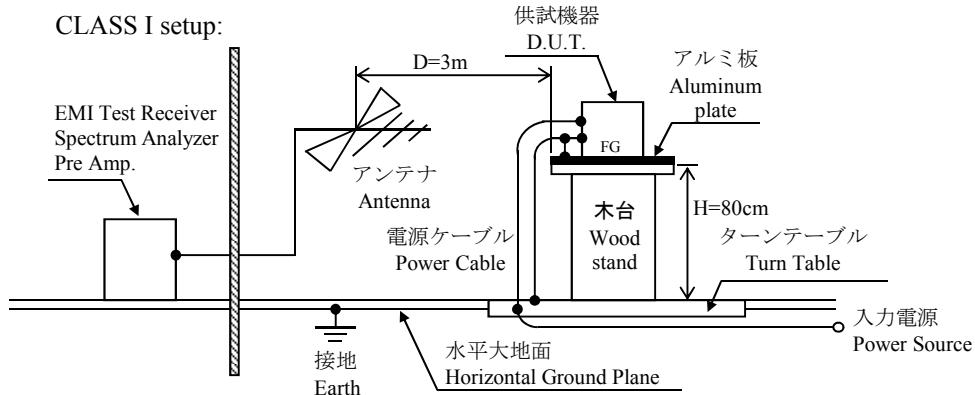


CLASS II setup:

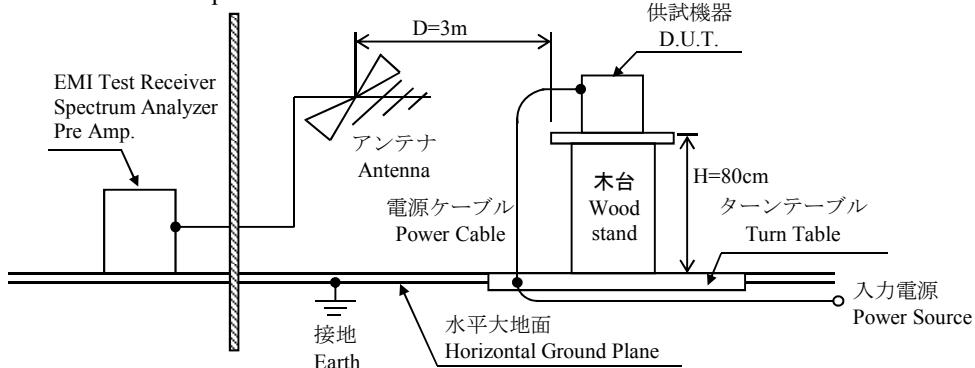


(b) 雜音電界強度 (放射ノイズ)      Radiated Emission

CLASS I setup:



CLASS II setup:



## 1.2 使用測定機器 List of equipment used

	EQUIPMENT USED	MANUFACTURER	MODEL NO.
1	DIGITAL STORAGE OSCILLOSCOPE	YOKOGAWA ELECT.	DL2054/DL9040
2	DIGITAL MULTIMETER	AGILENT	34970A
3	DIGITAL POWER METER	YOKOGAWA ELECT.	WT210
4	CURRENT PROBE	TEKTRONIX	63202
5	DC AMPERE METER	TEKTRONIX	P5100
6	DYNAMIC DUMMY LOAD	CHROMA	63030/63610/63640
7	AC SOURCE	KIKUSUI	PCR2000L
8	AC SOURCE	TAKAMISAWA	PSA-210
9	EARTH LEAKAGE CURRENT METER	SIMPSON	228
10	PATIENT LEAKAGE CURRENT METER	SIQ	SIQ16042
11	CONTROLLED TEMP. CHAMBER	TABAII-ESPEC	63203
12	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESCI-03
13	LISN	ROHDE & SCHWARZ	ENV216
14	BICONICAL ANTENNA	EMCO	63208

## 2. 特性データ

## Characteristics

CUS60M

### 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**  
(CUS60M-12)

#### 1. Regulation - line and load

Condition Ta : 25 °C

Iout \ Vin	85VAC	115VAC	230VAC	265VAC	line regulation	
0%	12.081V	12.082V	12.082V	12.082V	1mV	0.008%
50%	12.059V	12.059V	12.059V	12.058V	1mV	0.008%
100%	12.031V	12.033V	12.035V	12.034V	4mV	0.033%
load regulation	50mV	49mV	47mV	48mV		
	0.417%	0.408%	0.392%	0.400%		

#### 2. Temperature drift

Conditions Vin : 115 VAC  
Iout : 100 %

Ta	-20°C	+25°C	+50°C	temperature stability
Vout	12.002V	12.033V	12.030V	31mV 0.004%

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

Conditions Ta : 25 °C  
Iout : 100 %

Start up voltage (Vin)	57.0Vac
Drop out voltage (Vin)	71.0Vac

**24V**  
(CUS60M-24)

#### 1. Regulation - line and load

Condition Ta : 25 °C

Iout \ Vin	85VAC	115VAC	230VAC	265VAC	line regulation	
0%	24.040V	24.041V	24.041V	24.042V	2mV	0.008%
50%	24.031V	24.032V	24.031V	24.032V	1mV	0.004%
100%	24.021V	24.021V	24.022V	24.023V	2mV	0.008%
load regulation	19mV	20mV	19mV	19mV		
	0.079%	0.083%	0.079%	0.079%		

#### 2. Temperature drift

Conditions Vin : 115 VAC  
Iout : 100 %

Ta	-20°C	+25°C	+50°C	temperature stability
Vout	23.993V	24.022V	24.033V	40mV 0.002%

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

Conditions Ta : 25 °C  
Iout : 100 %

Start up voltage (Vin)	68.6Vac
Drop out voltage (Vin)	71.7Vac

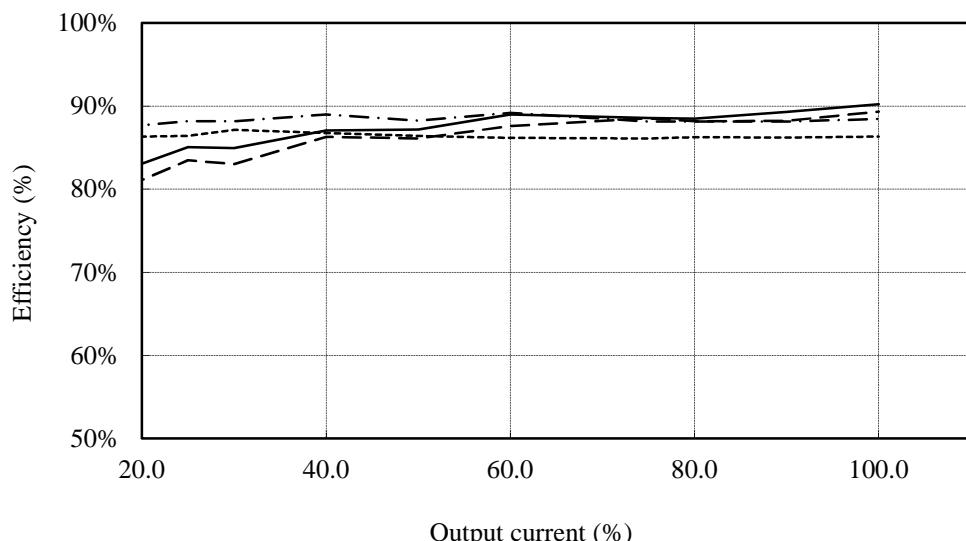
## (2) 効率対出力電流

Efficiency vs. Output current

Conditions   Vin : 85 VAC -----  
              : 115 VAC - - - -  
              : 230 VAC ——————  
              : 265 VAC - - - -  
Ta : 25 °C

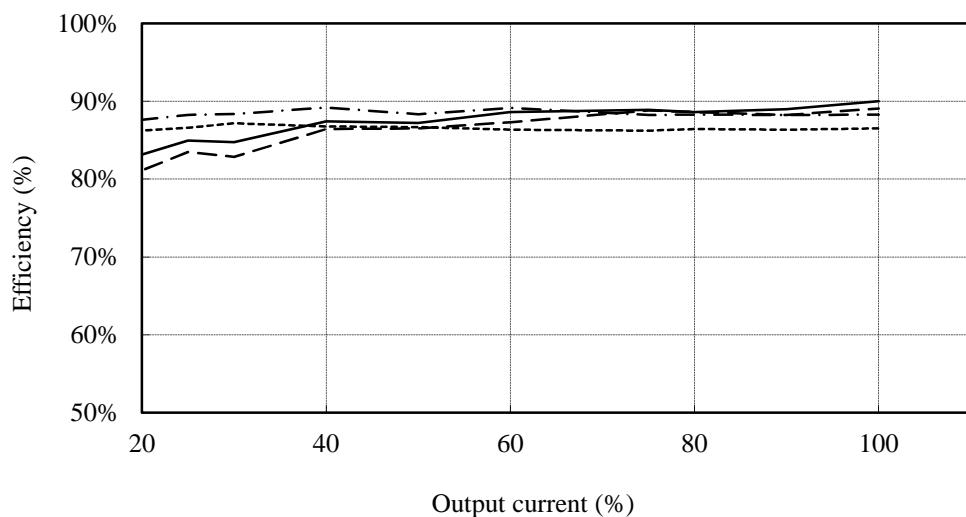
12V

(CUS60M-12)



24V

(CUS60M-24)



## (3) 入力電流対出力電流

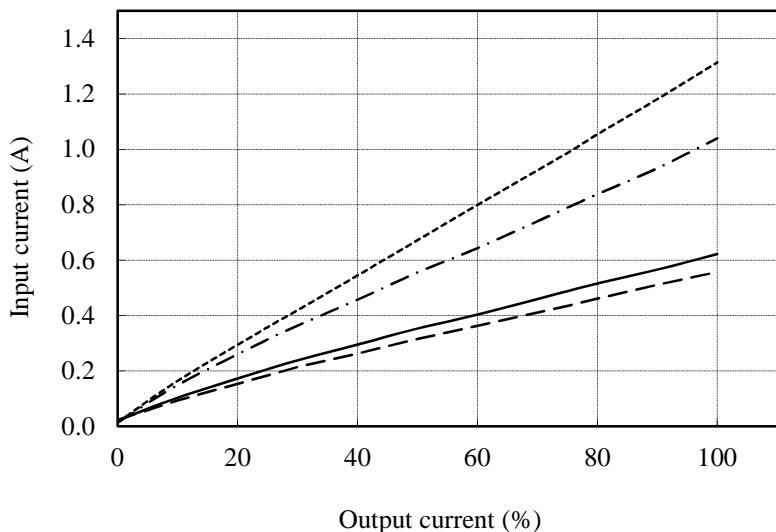
Input current vs. Output current

Conditions Vin : 85 VAC -----  
                  : 115 VAC - - - -  
                  : 230 VAC ——————  
                  : 265 VAC - - - -  
                  Ta : 25 °C

12V

(CUS60M-12)

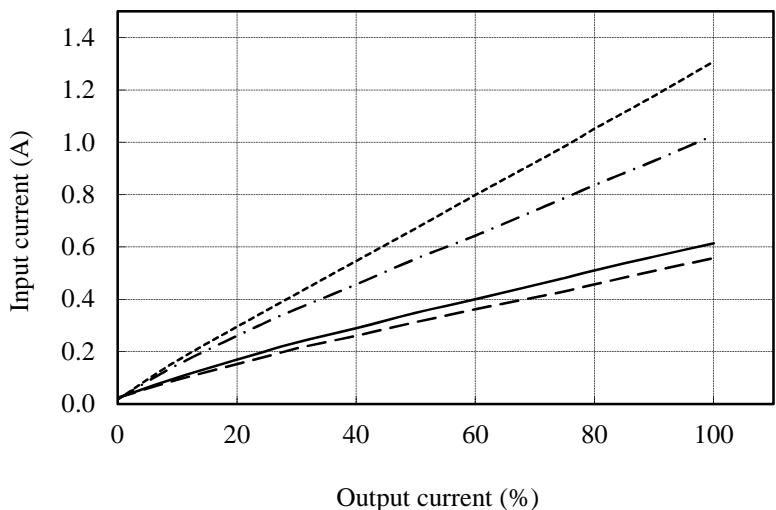
Io: 100%	
Vin	Input current
85Vac	1.314A
115Vac	1.040A
230Vac	0.622A
265Vac	0.558A



24V

(CUS60M-24)

Io: 100%	
Vin	Input current
85Vac	1.309A
115Vac	1.027A
230Vac	0.614A
265Vac	0.557A



## (4) 入力電力対出力電流

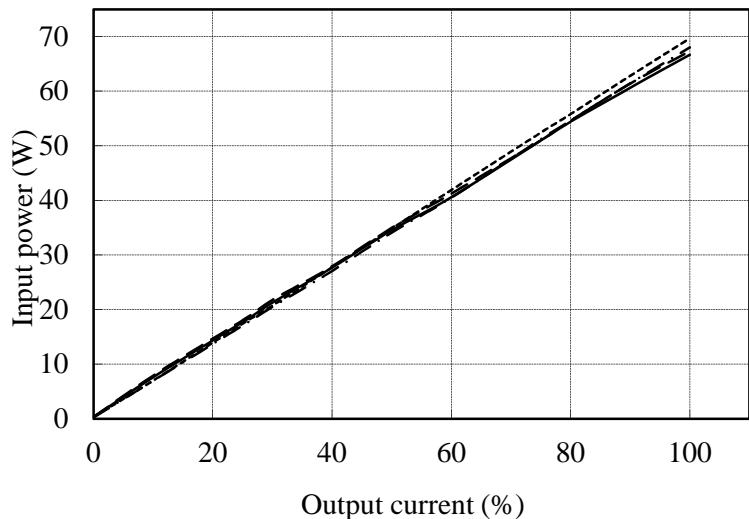
Input power vs. Output current

Conditions Vin : 85 VAC -----  
                  : 115 VAC - - -  
                  : 230 VAC —————  
                  : 265 VAC - - - -  
                  Ta : 25 °C

**12V**  
 (CUS60M-12)

Io: 100%

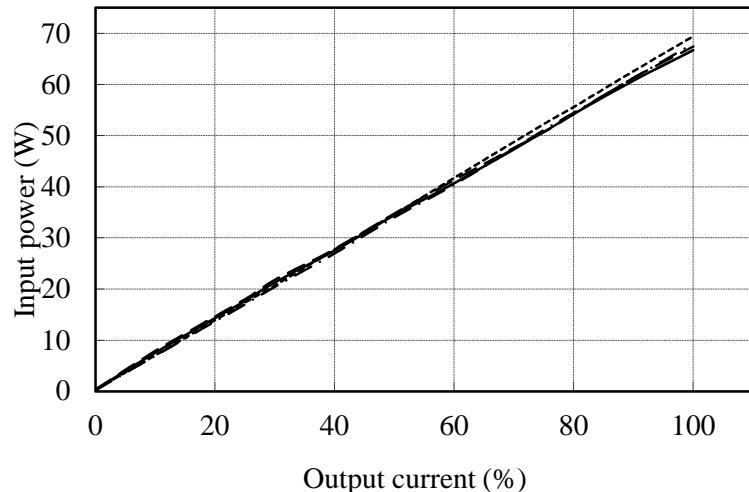
Vin	Input power
85Vac	69.69W
115Vac	68.01W
230Vac	66.68W
265Vac	67.35W



**24V**  
 (CUS60M-24)

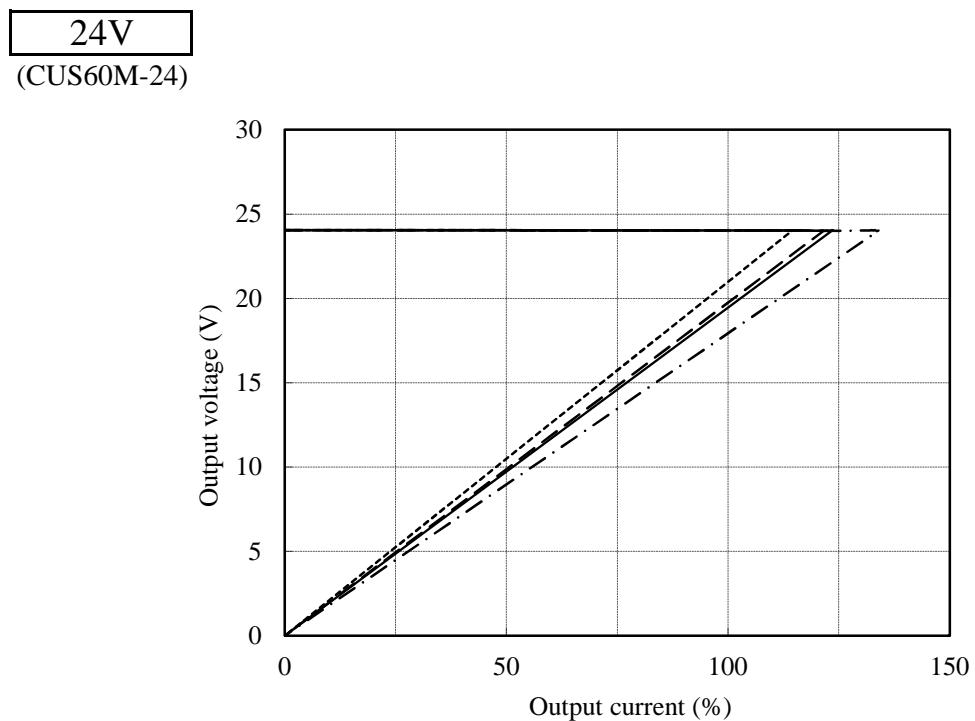
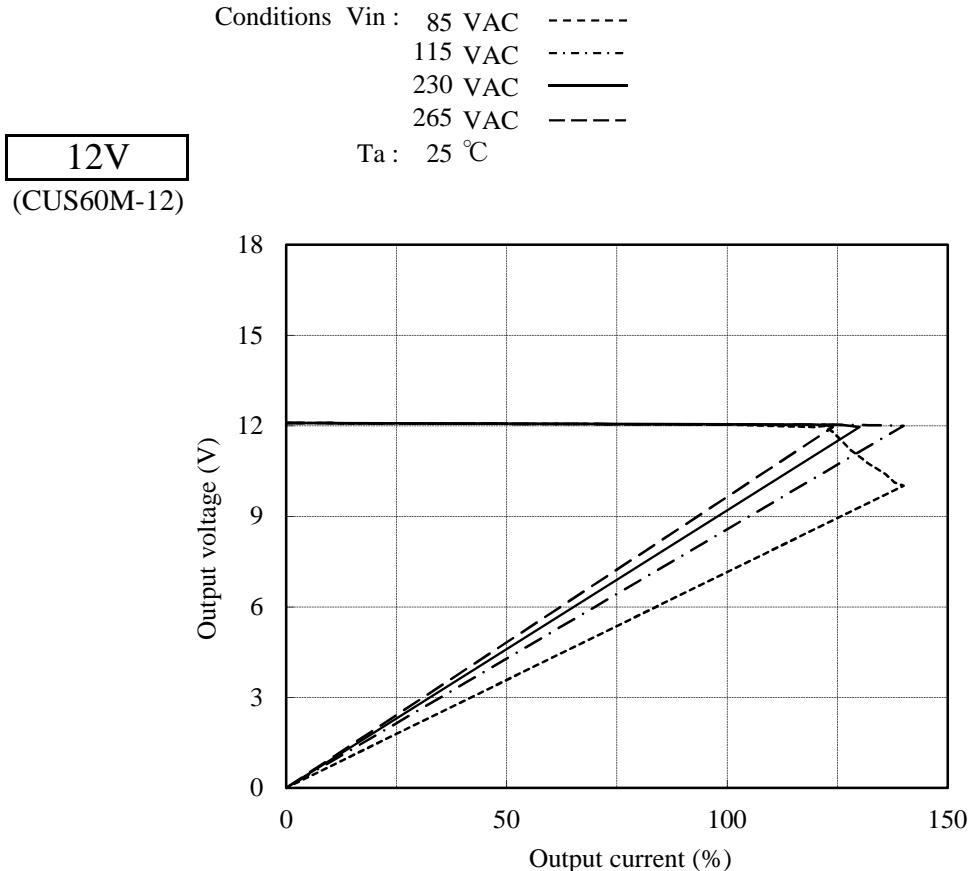
Io: 100%

Vin	Input power
85Vac	69.40W
115Vac	67.99W
230Vac	66.70W
265Vac	67.43W



## 2.2 過電流保護特性

Over current protection (OCP) characteristics

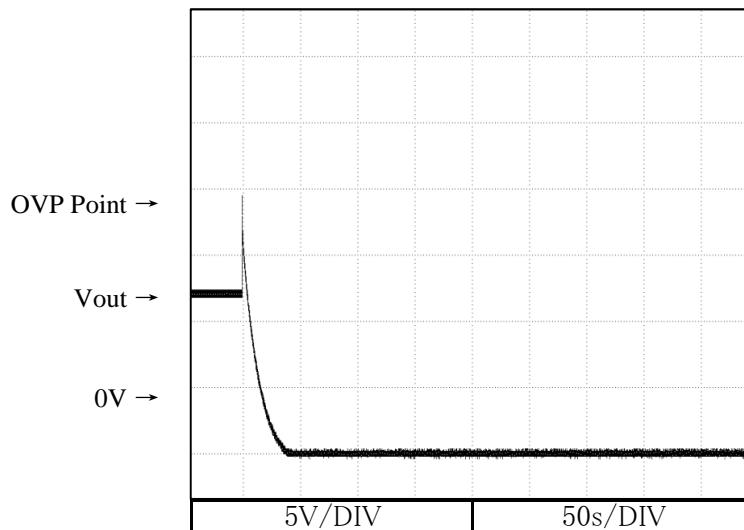


## 2.3 過電圧保護特性

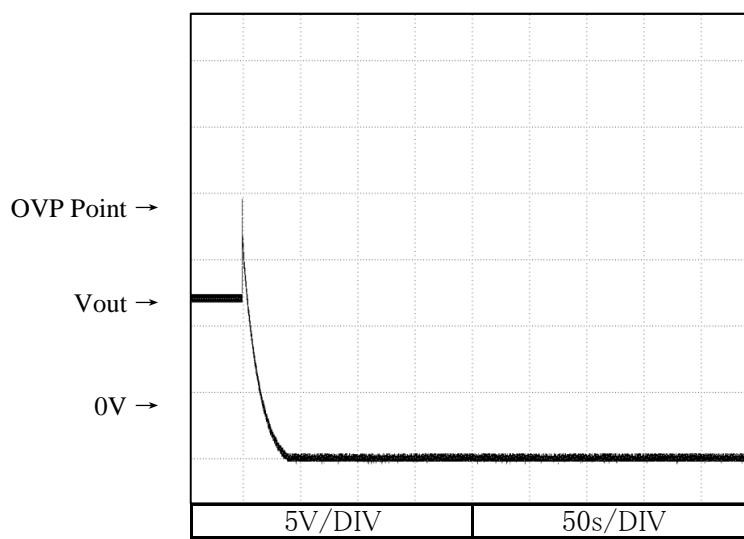
Over voltage protection (OVP) characteristics

12V  
(CUS60M-12)

Conditions    Vin :    115 VAC  
               Iout :    0 %  
               Ta :    25 °C



Conditions    Vin :    230 VAC  
               Iout :    0 %  
               Ta :    25 °C



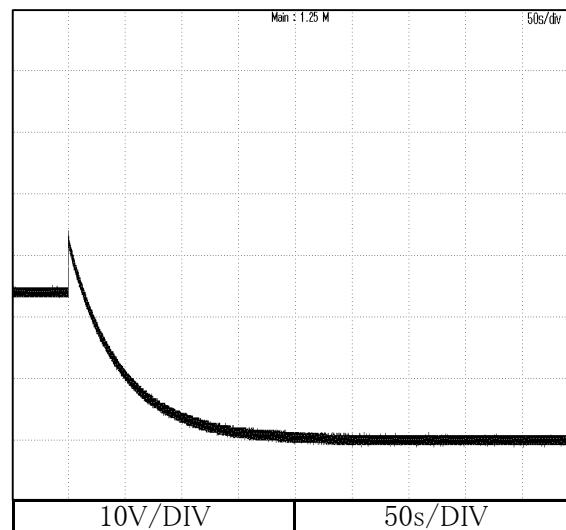
## 2.3 過電圧保護特性

Over voltage protection (OVP) characteristics

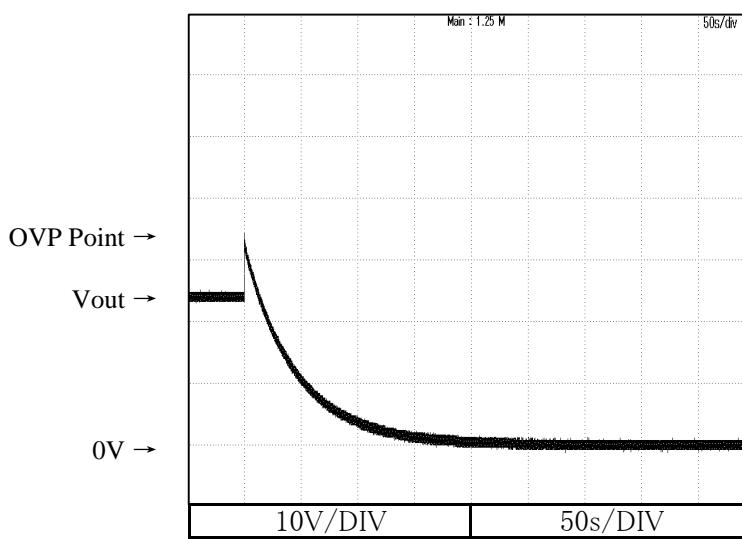
24V

(CUS60M-24)

Conditions    Vin :    115 VAC  
               Iout :    0 %  
               Ta :    25 °C



Conditions    Vin :    230 VAC  
               Iout :    0 %  
               Ta :    25 °C



## 2.4 出力立ち上がり特性

Output rise characteristics

CUS60M

Conditions Vin : 85 VAC (A)

115 VAC (B)

230 VAC (C)

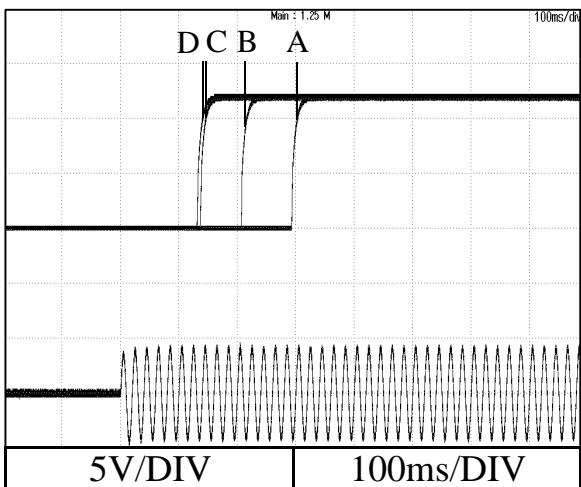
265 VAC (D)

Ta : 25 °C

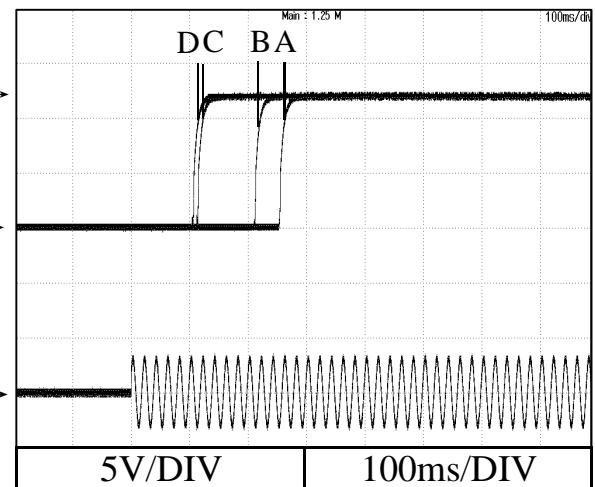
12V

(CUS60M-12)

Iout : 0%



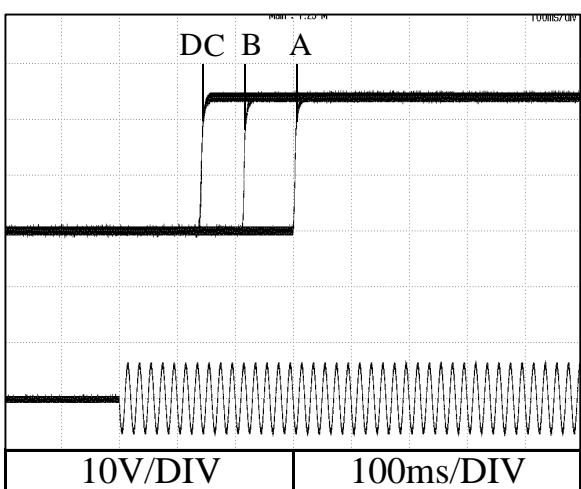
Iout : 100%



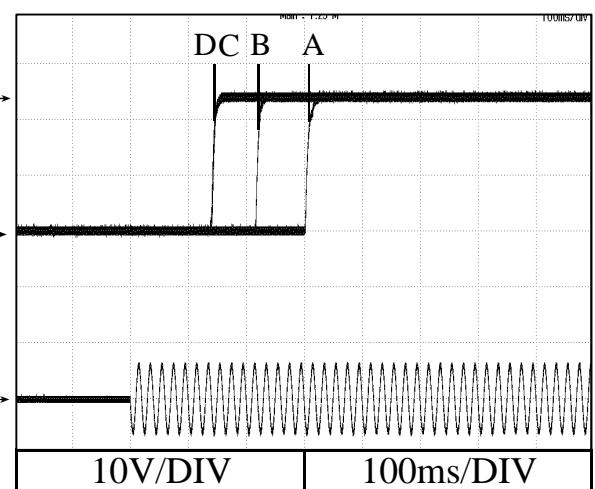
24V

(CUS60M-24)

Iout : 0%



Iout : 100%



## 2.6 出力立ち下がり特性

Output fall characteristics

CUS60M

Conditions Vin : 85 VAC (A)

115 VAC (B)

230 VAC (C)

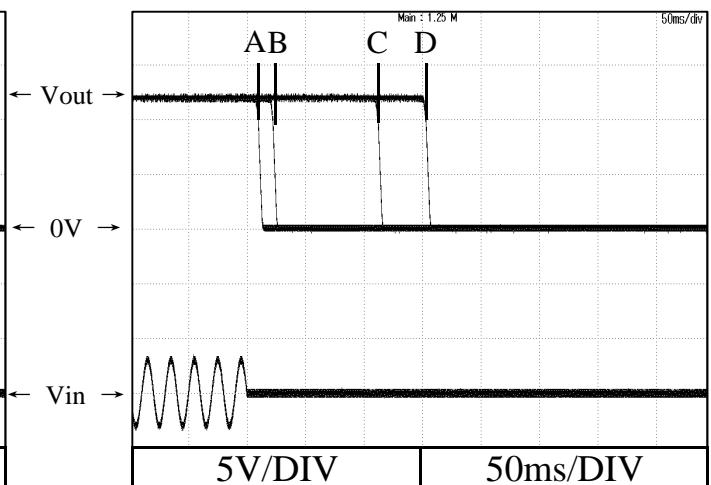
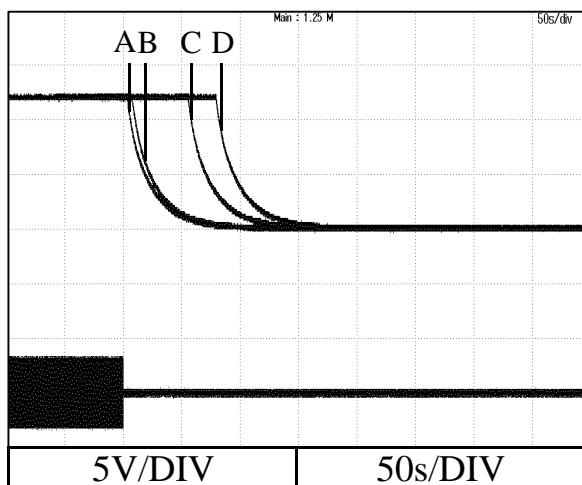
265 VAC (D)

Ta : 25 °C

**12V**  
(CUS60M-12)

Iout : 0%

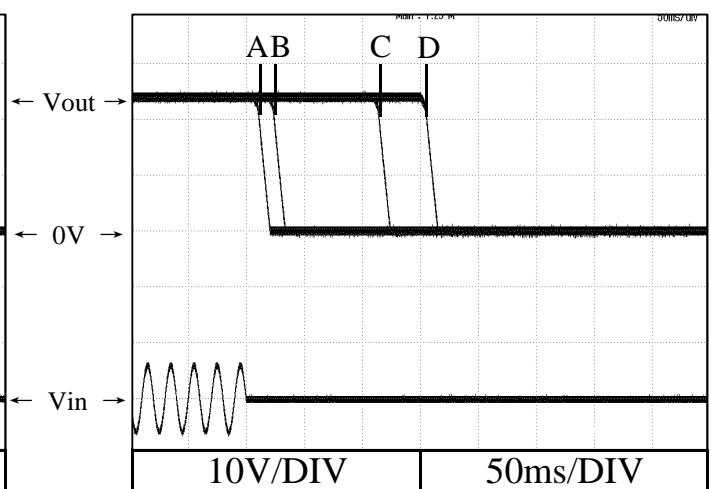
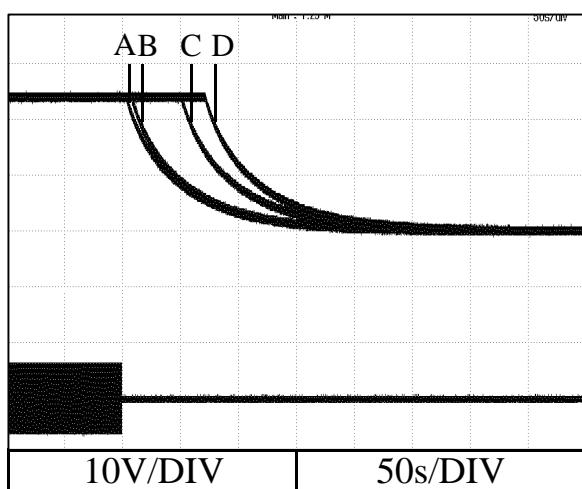
Iout : 100%



**24V**  
(CUS60M-24)

Iout : 0%

Iout : 100%

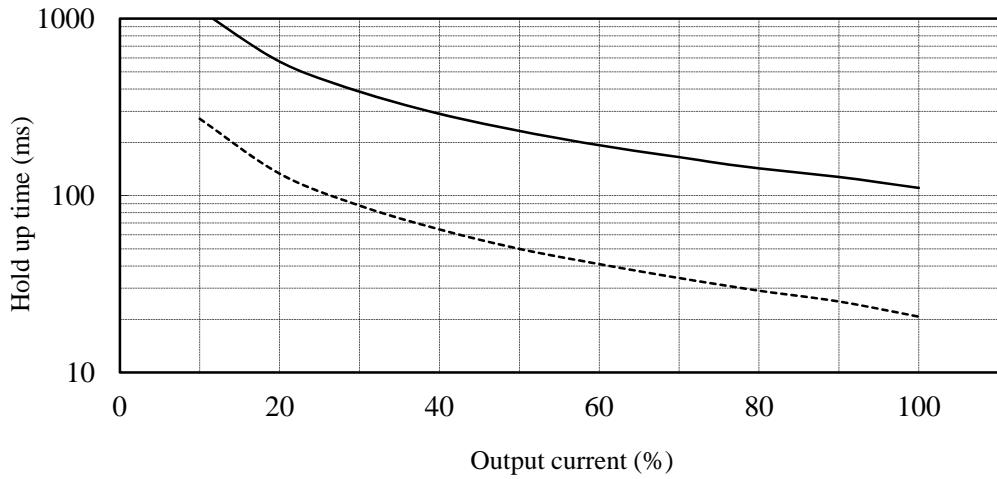


## 2.6 出力保持時間特性

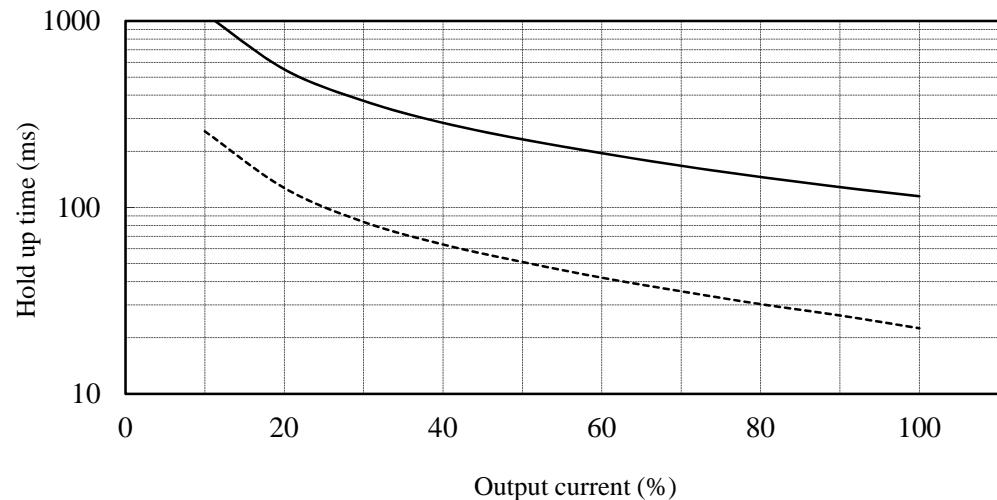
Hold up time characteristics

Conditions    Vin : 115 VAC -----  
                  230 VAC ——  
                  Ta : 25 °C

12V  
(CUS60M-12)



24V  
(CUS60M-24)



## 2.7 過渡応答（負荷急変）特性

Dynamic load response characteristics

Conditions

Vin : 115 VAC

Iout : 25 %  $\leftrightarrow$  75 %

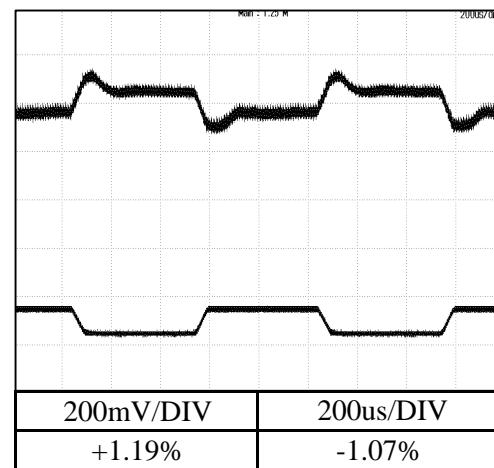
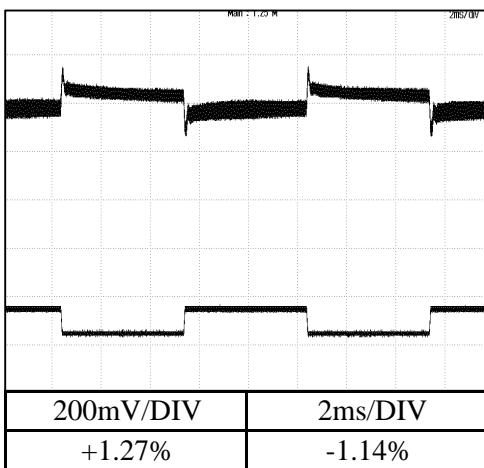
(tr = tf = 75us)

Ta : 25 °C

12V

(CUS60M-12)

f = 100Hz

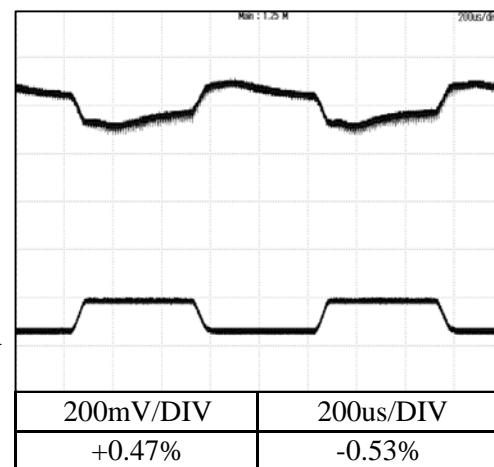
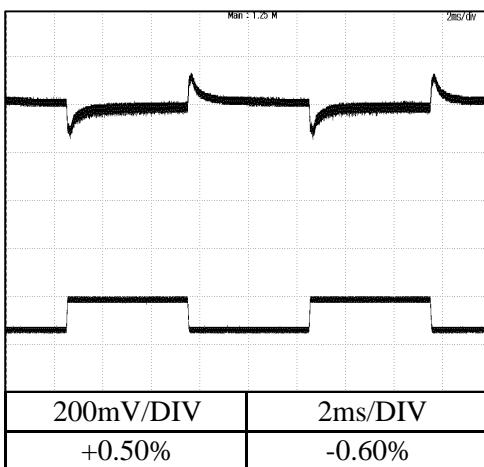


24V

(CUS60M-24)

f = 100Hz

f = 1kHz



## 2.7 過渡応答（負荷急変）特性

Dynamic load response characteristics

Conditions

Vin : 230 VAC

Iout : 25 %  $\leftrightarrow$  75 %

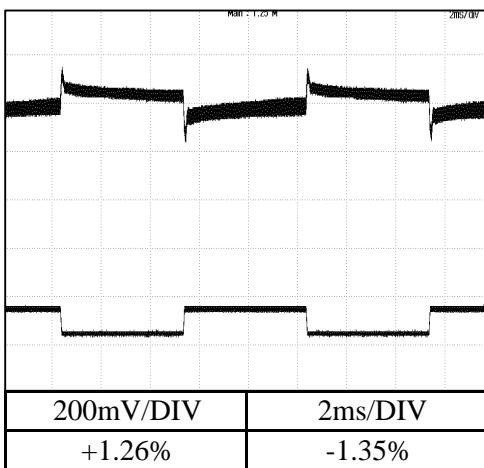
(tr = tf = 75us)

Ta : 25 °C

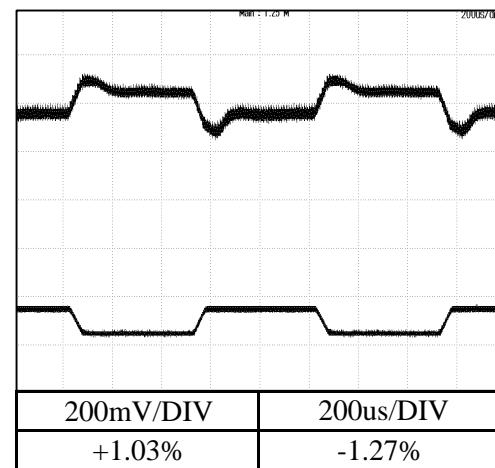
12V

(CUS60M-12)

f = 100Hz



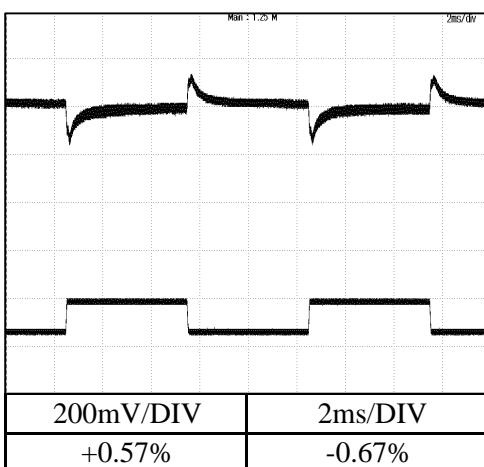
f = 1kHz



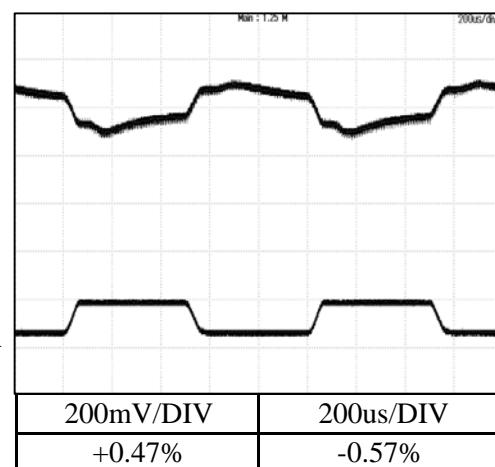
24V

(CUS60M-24)

f = 100Hz



f = 1kHz



## 2.8 入力電圧瞬停特性

Response to brown out characteristics

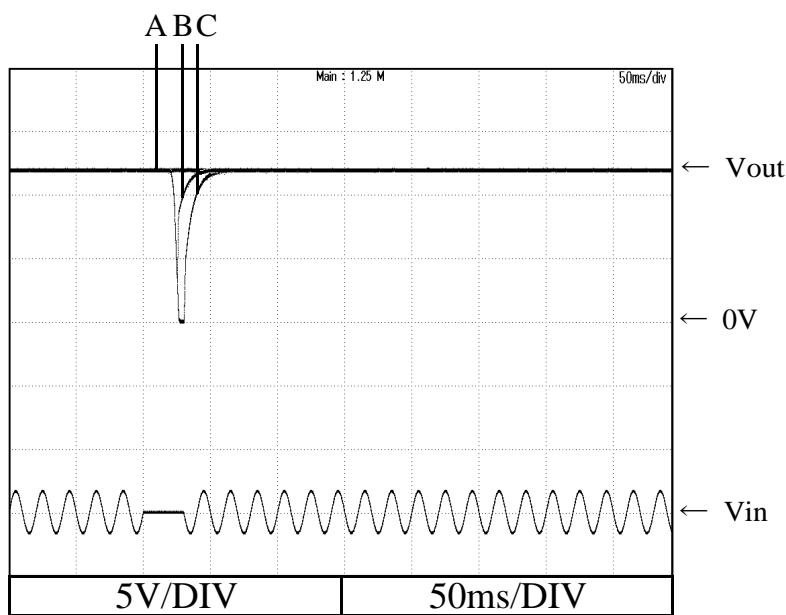
Conditions  
 Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

**12V**  
(CUS60M-12)

A = 18ms

B = 24ms

C = 30ms

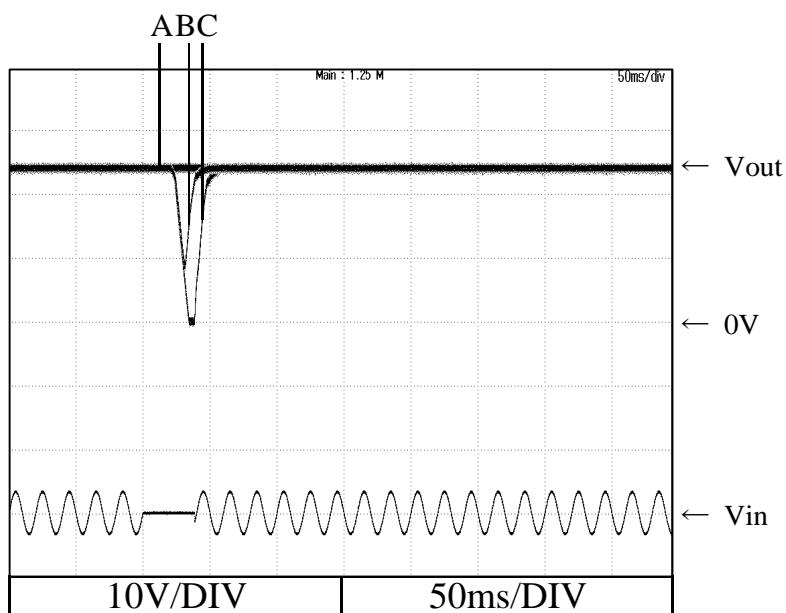


**24V**  
(CUS60M-24)

A=19.1ms

B=29.5ms

C=38.5ms

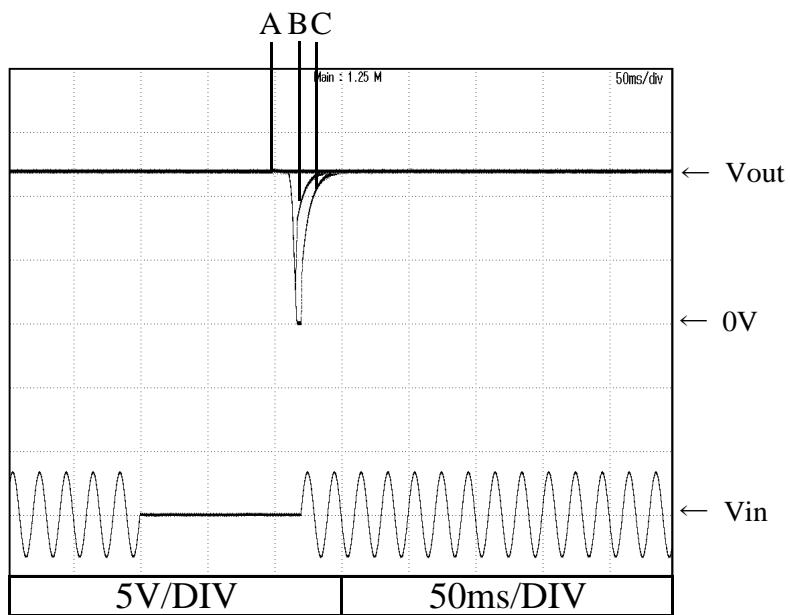


## 2.8 入力電圧瞬停特性

Response to brown out characteristics

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

**12V**  
(CUS60M-12)

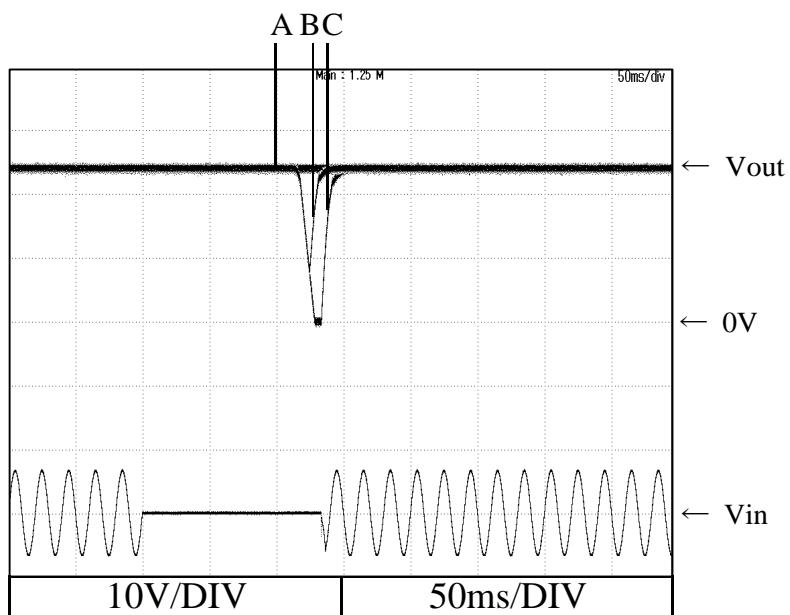


A = 109ms

B = 117ms

C = 122ms

**24V**  
(CUS60M-24)



A=112.3ms

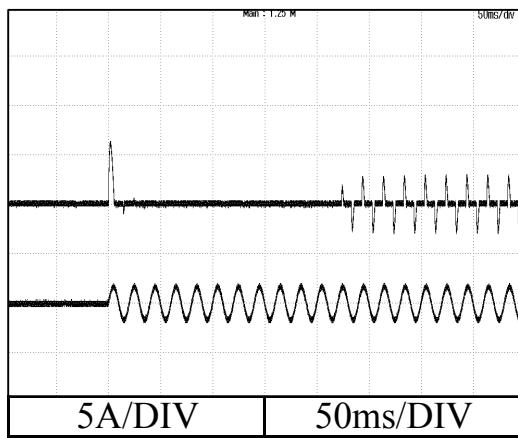
B=125.0ms

C=134.5ms

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

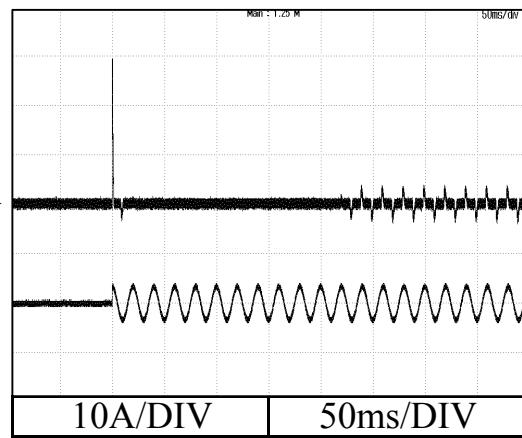
12V  
(CUS60M-12)

Switch on phase angle of input AC voltage  
 $\Phi=0^\circ$

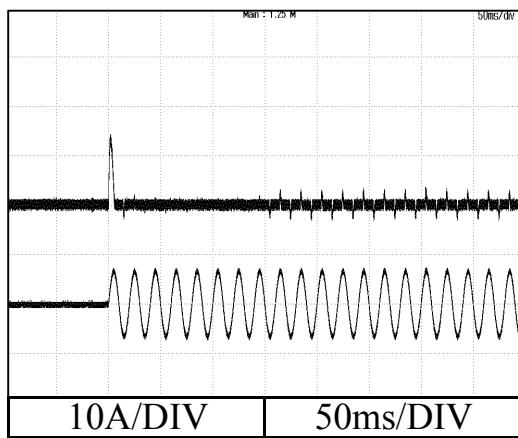


Conditions    Vin : 115 VAC  
Iout : 100 %  
Ta : 25 °C  
Cold start

Switch on phase angle of input AC voltage  
 $\Phi=90^\circ$

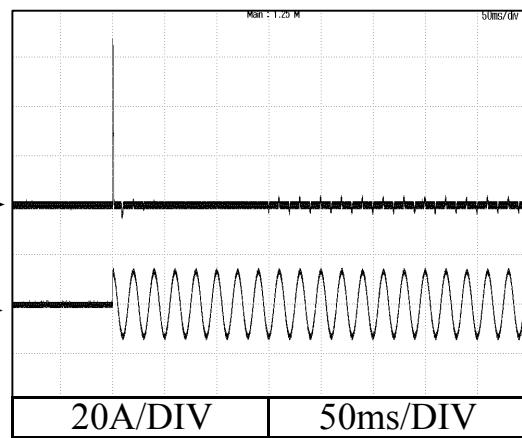


Switch on phase angle of input AC voltage  
 $\Phi=0^\circ$



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

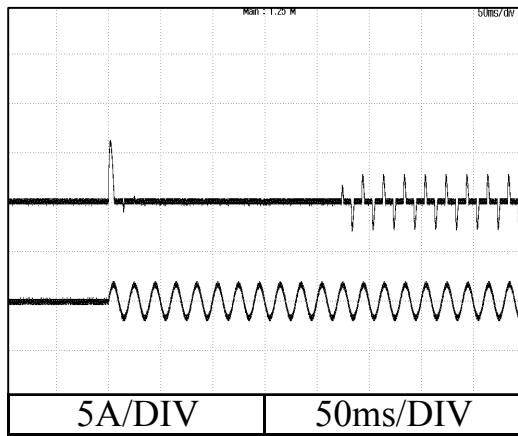
Switch on phase angle of input AC voltage  
 $\Phi=90^\circ$



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

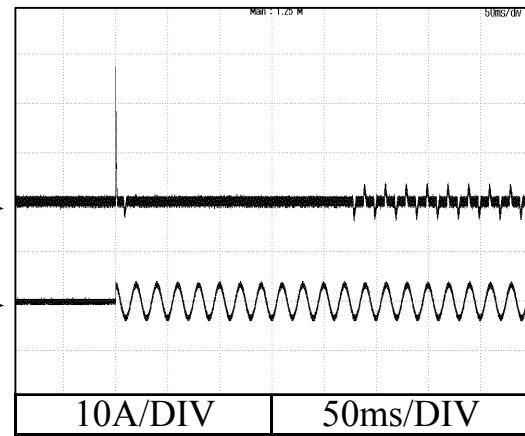
**24V**  
(CUS60M-24)

Switch on phase angle of input AC voltage  
 $\Phi=0^\circ$

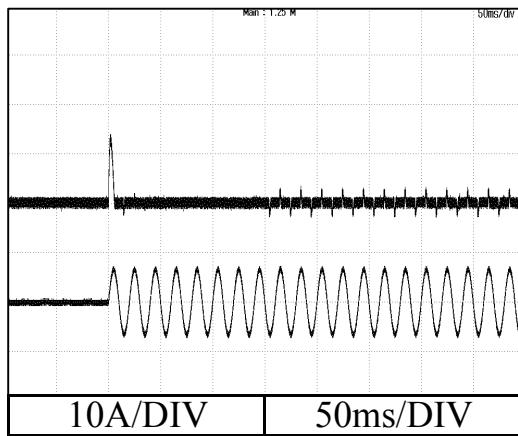


Conditions    Vin : 115 VAC  
Iout : 100 %  
Ta : 25 °C  
Cold start

Switch on phase angle of input AC voltage  
 $\Phi=90^\circ$

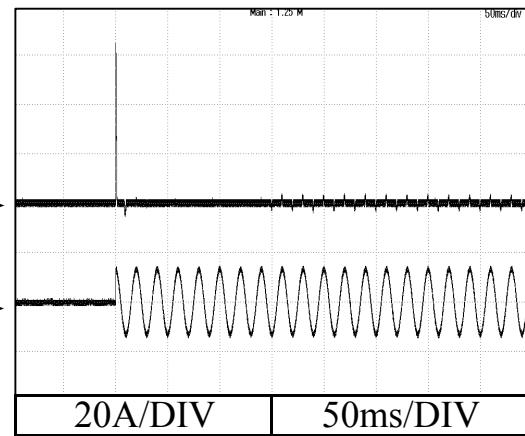


Switch on phase angle of input AC voltage  
 $\Phi=0^\circ$



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

Switch on phase angle of input AC voltage  
 $\Phi=90^\circ$



## 2.10 リーク電流特性

## Leakage current characteristics

CUS60M

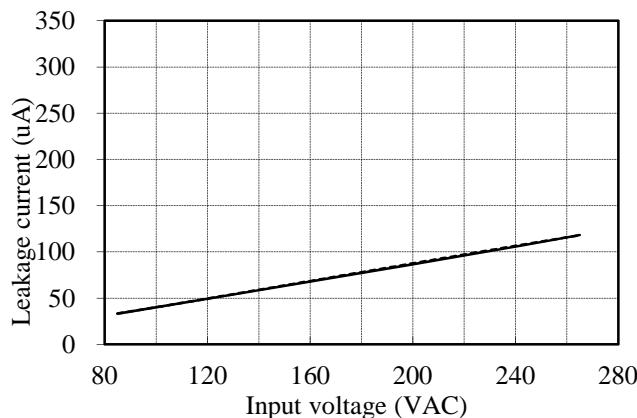
Conditions     $I_{out}$  : 0 % -----  
                     100 % ———  
                     Ta : 25 °C  
                     Equipment used : SIMPSON228

**12V**  
(CUS60M-12)

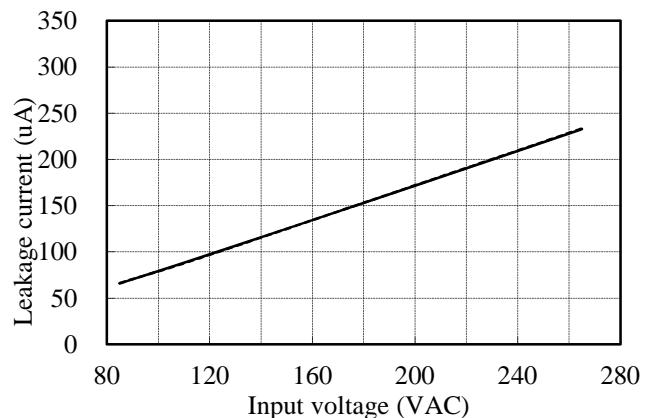
Earth leakage current of CLASS I equipment

f : 50 Hz

Normal condition

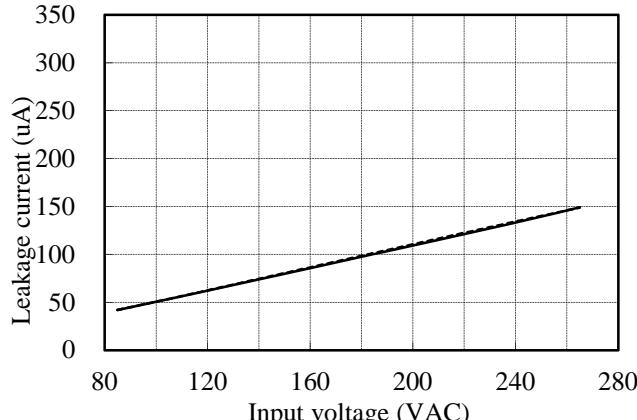


Single fault condition(Open L or N)

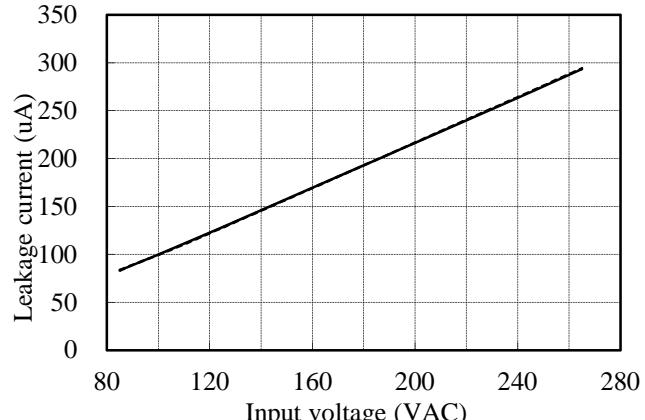


f : 60 Hz

Normal condition



Single fault condition(Open L or N)



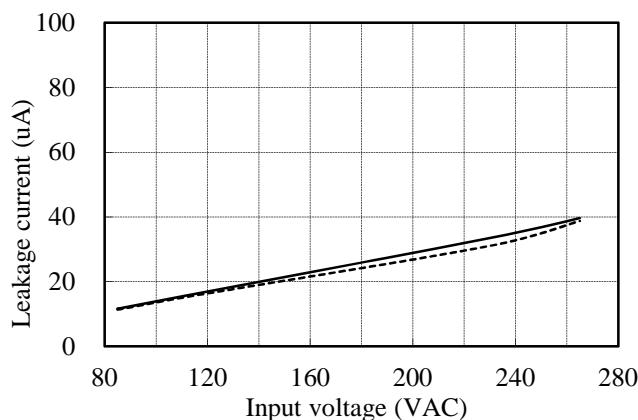
Conditions Iout : 0 % -----  
                   100 % ———  
                   Ta : 25 °C  
                   Equipment used : SIQ16042

12V  
(CUS60M-12)

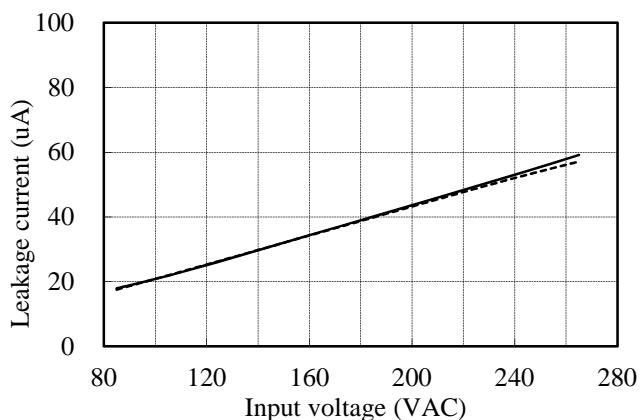
Patient leakage current of CLASS I equipment

f : 50 Hz

Normal condition

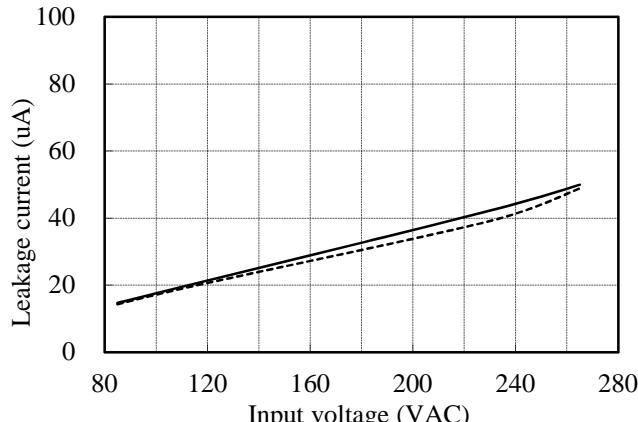


Single fault condition(Open L or N)

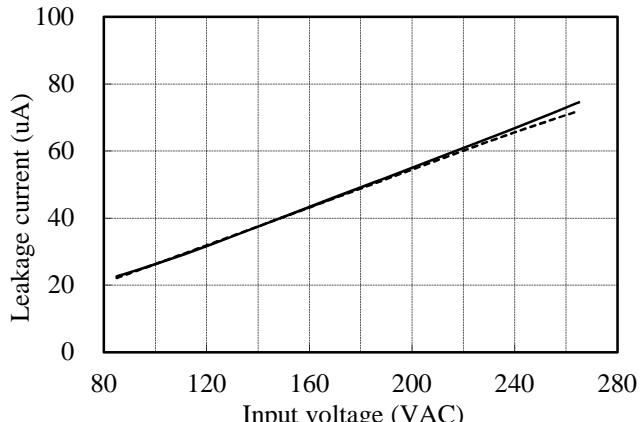


f : 60 Hz

Normal condition



Single fault condition(Open L or N)



## 2.10 リーク電流特性

## Leakage current characteristics

CUS60M

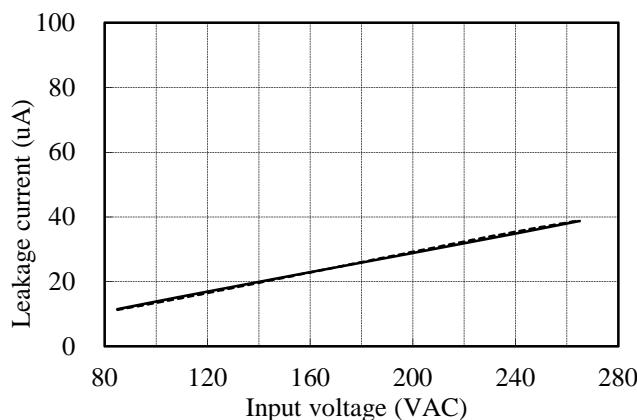
Conditions     $I_{out}$  : 0 % -----  
                     100 % ———  
                     Ta : 25 °C  
                     Equipment used : SIQ16042

12V  
(CUS60M-12)

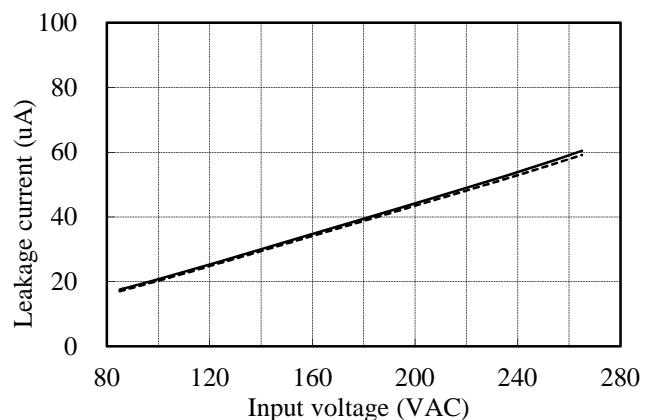
Patient leakage current of CLASS II equipment

 $f$  : 50 Hz

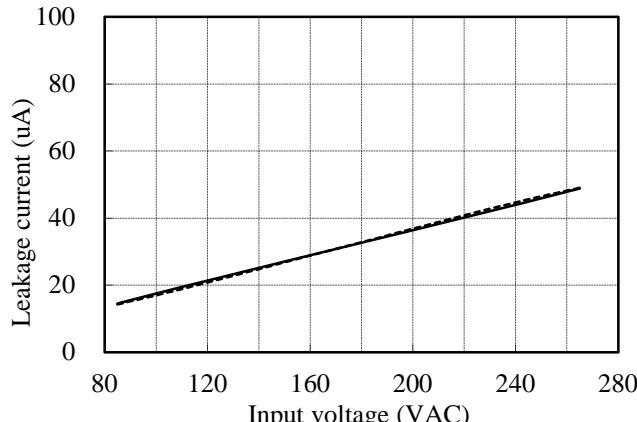
Normal condition



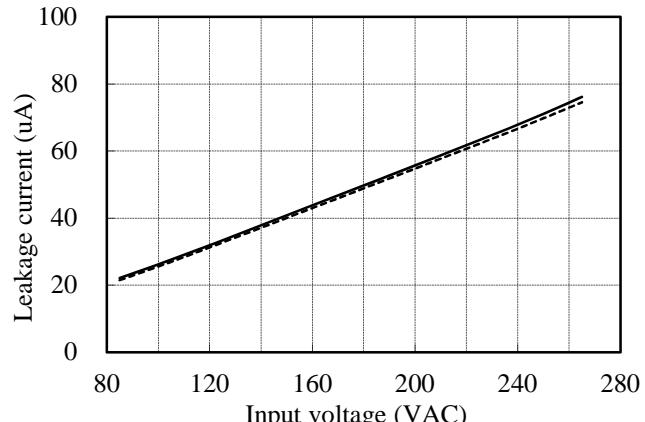
Single fault condition(Open L or N)

 $f$  : 60 Hz

Normal condition



Single fault condition(Open L or N)



2.10 リーク電流特性

Leakage current characteristics

CUS60M

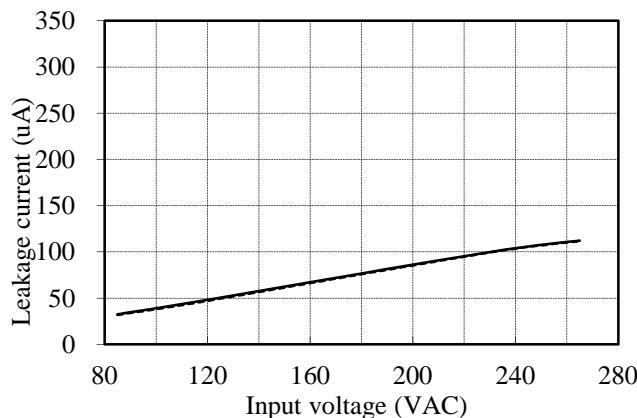
Conditions    Iout :    0 %    -----  
                                         100 %    ———  
     Ta : 25 °C  
     Equipment used : SIMPSON228

24V  
(CUS60M-24)

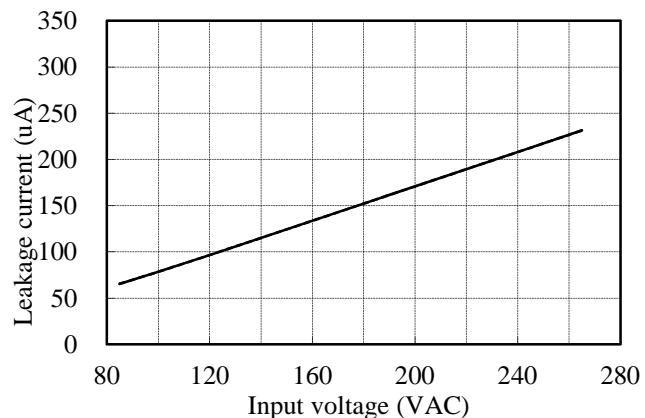
Earth leakage current of CLASS I equipment

f : 50 Hz

Normal condition

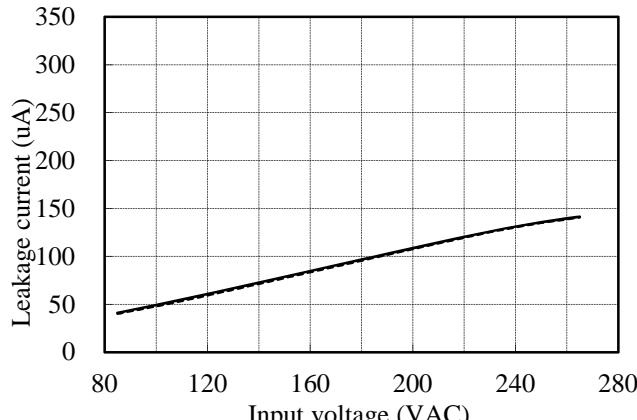


Single fault condition(Open L or N)

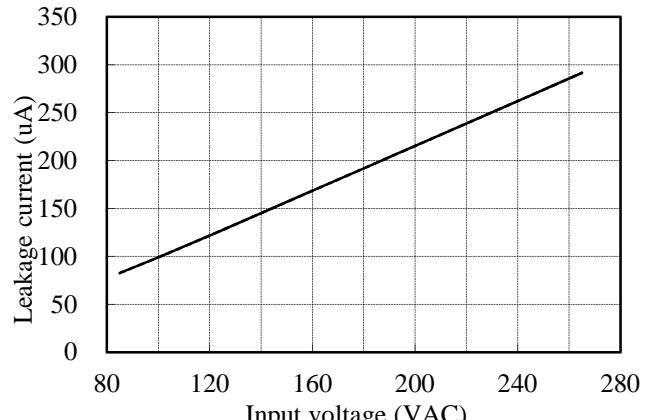


f : 60 Hz

Normal condition



Single fault condition(Open L or N)



2.10 リーク電流特性

Leakage current characteristics

CUS60M

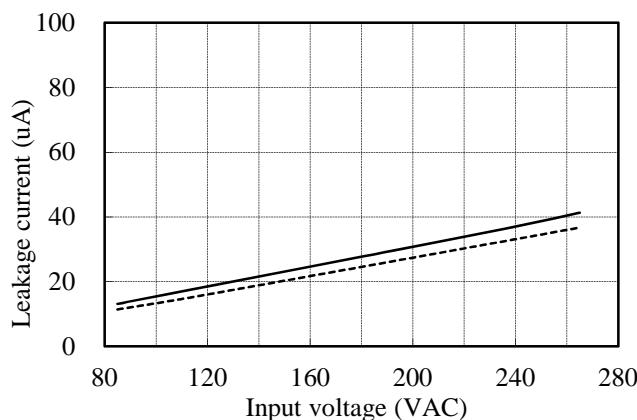
Conditions    Iout :    0 % -----  
                                         100 % ———  
     Ta : 25 °C  
     Equipment used : SIQ16042

24V  
(CUS60M-24)

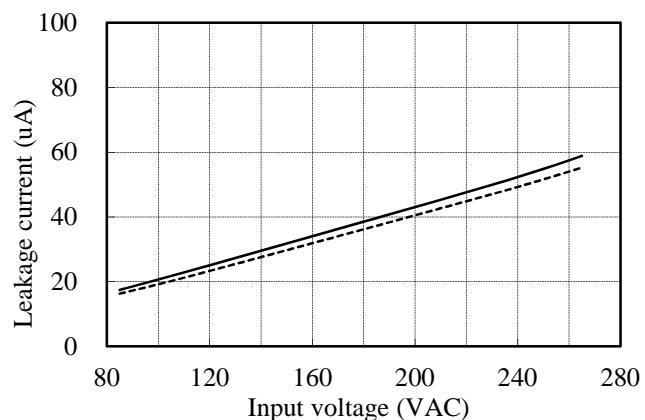
Patient leakage current of CLASS I equipment

f : 50 Hz

Normal condition

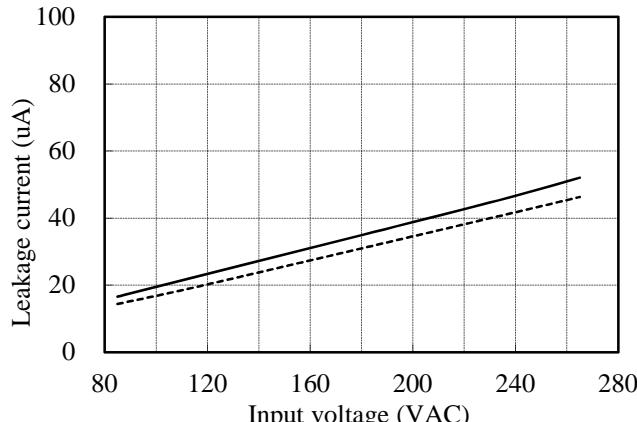


Single fault condition(Open L or N)

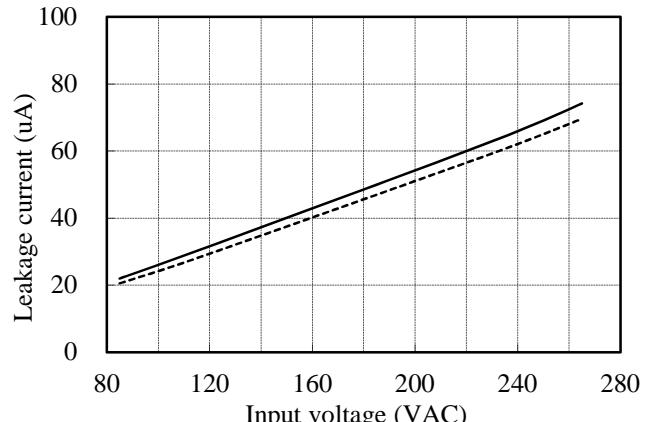


f : 60 Hz

Normal condition



Single fault condition(Open L or N)



2.10 リーク電流特性

Leakage current characteristics

CUS60M

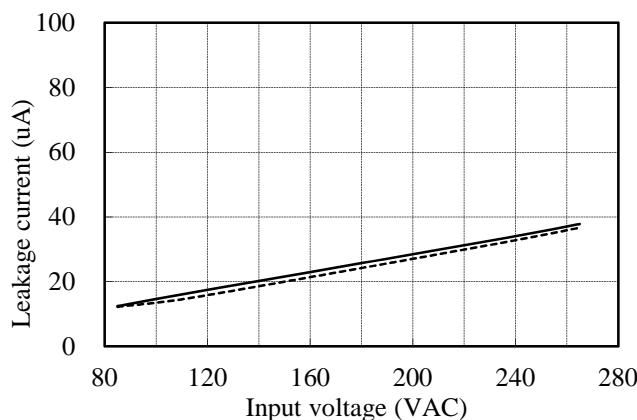
Conditions    Iout :    0 %    -----  
                                         100 %    ——  
     Ta : 25 °C  
     Equipment used : SIQ16042

24V  
(CUS60M-24)

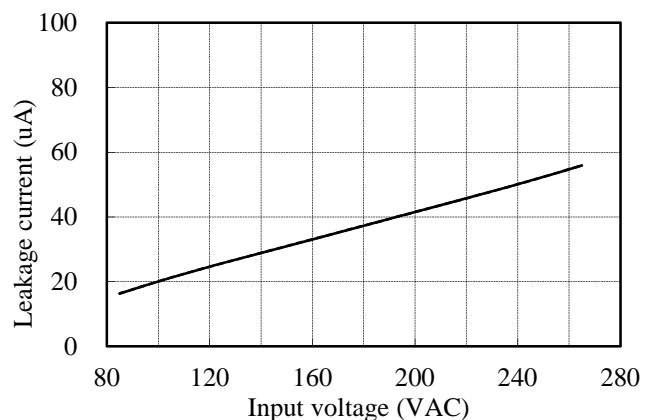
Patient leakage current of CLASS II equipment

f : 50 Hz

Normal condition

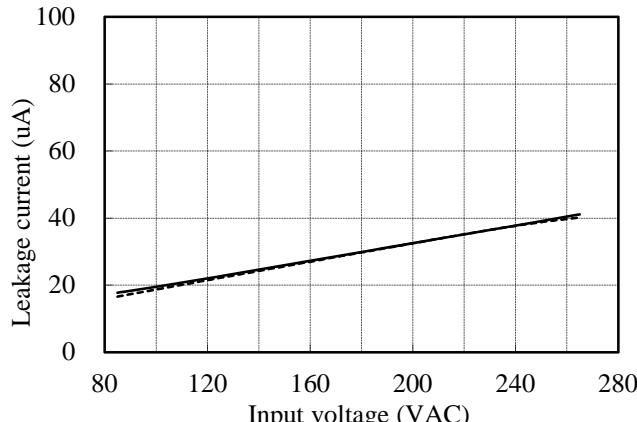


Single fault condition(Open L or N)

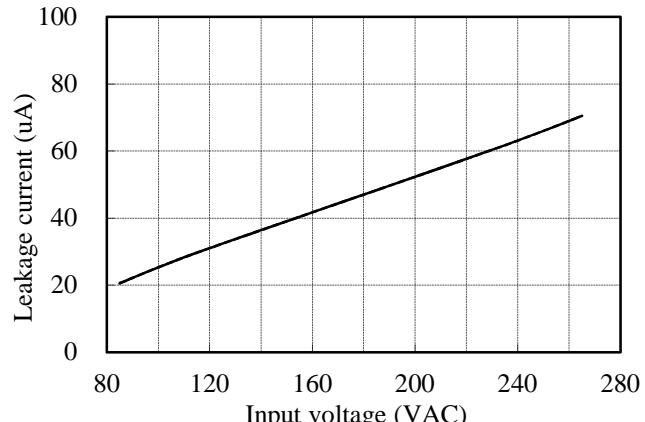


f : 60 Hz

Normal condition



Single fault condition(Open L or N)



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

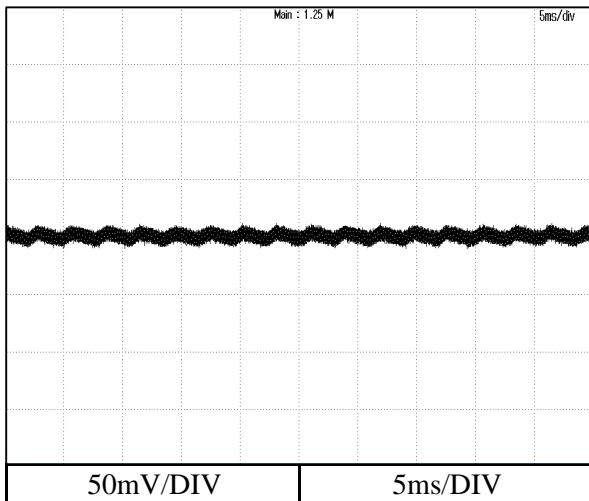
Conditions

Vin : 115 VAC  
Ta : 25 °C

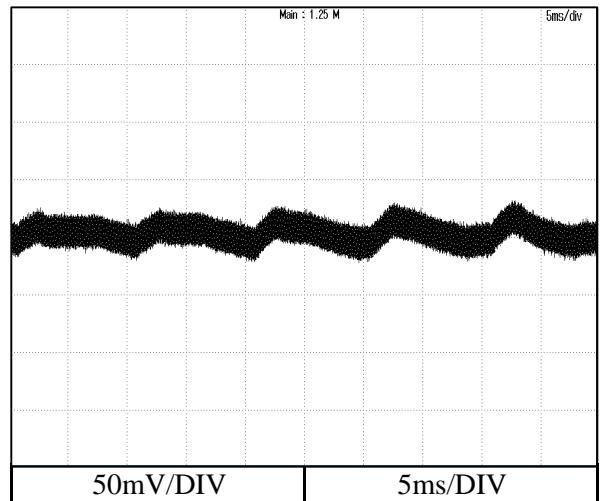
12V

(CUS60M-12)

Iout : 0%



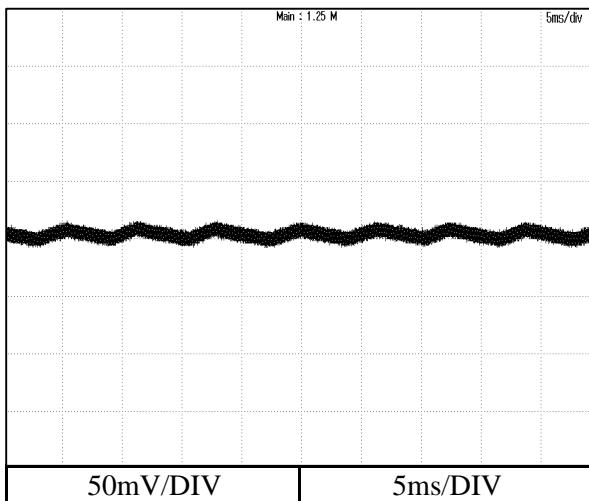
Iout : 100%



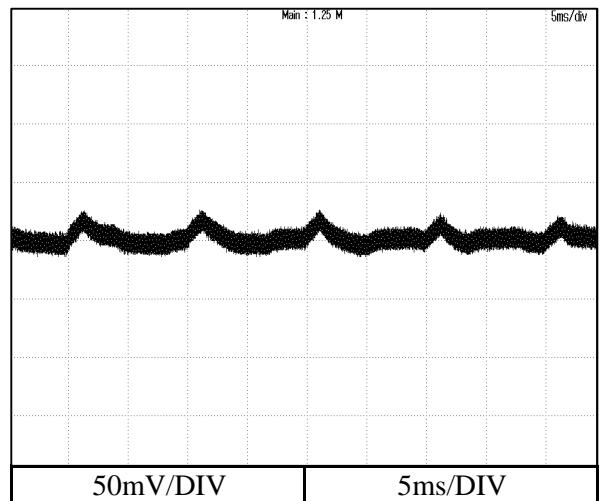
24V

(CUS60M-24)

Iout : 0%



Iout : 100%



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

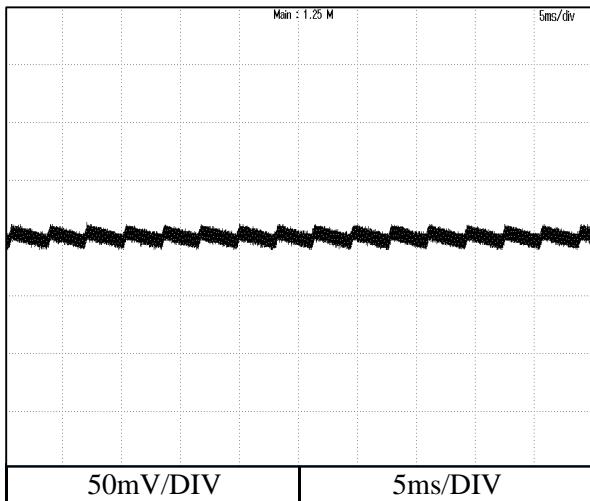
Conditions

Vin : 230 VAC  
Ta : 25 °C

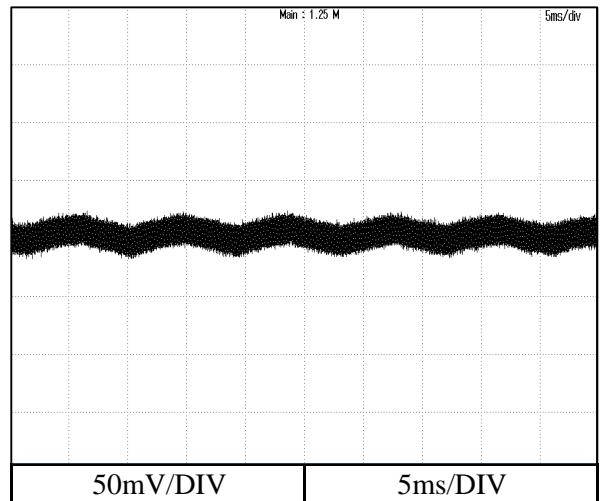
12V

(CUS60M-12)

Iout : 0%



Iout : 100%

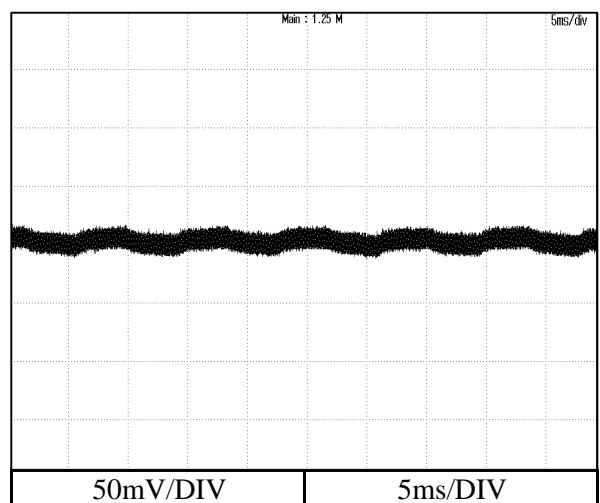
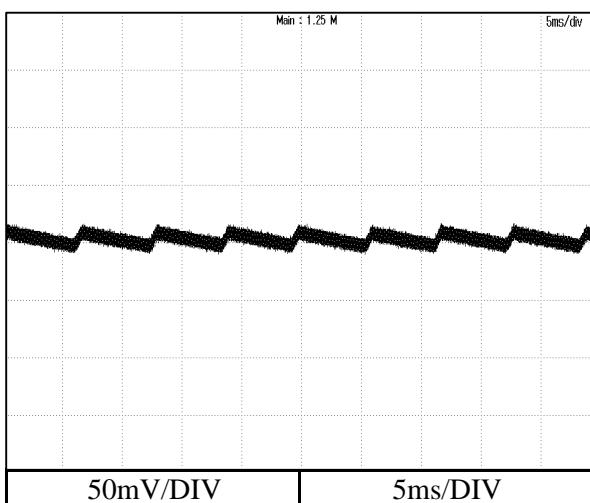


24V

(CUS60M-24)

Iout : 0%

Iout : 100%



## 2.12 EMI 特性

Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

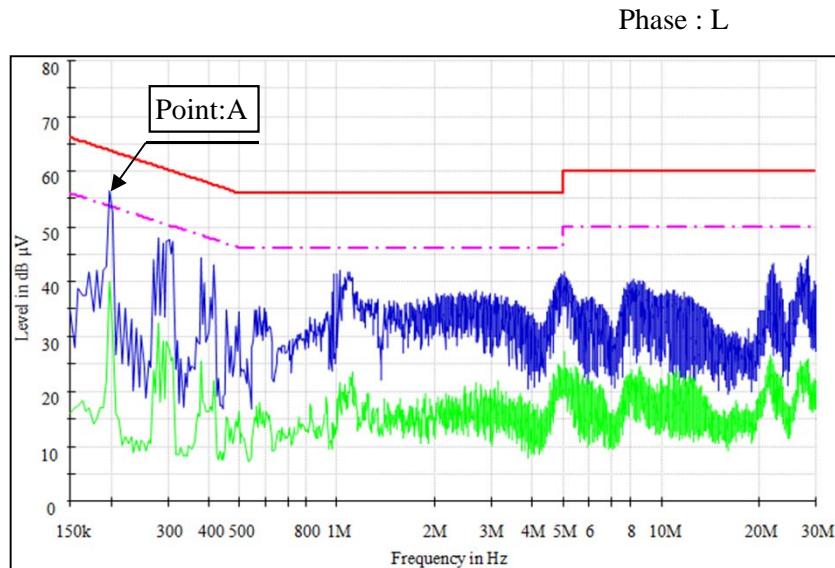
雜音端子電圧

Conducted Emission (CLASS I)

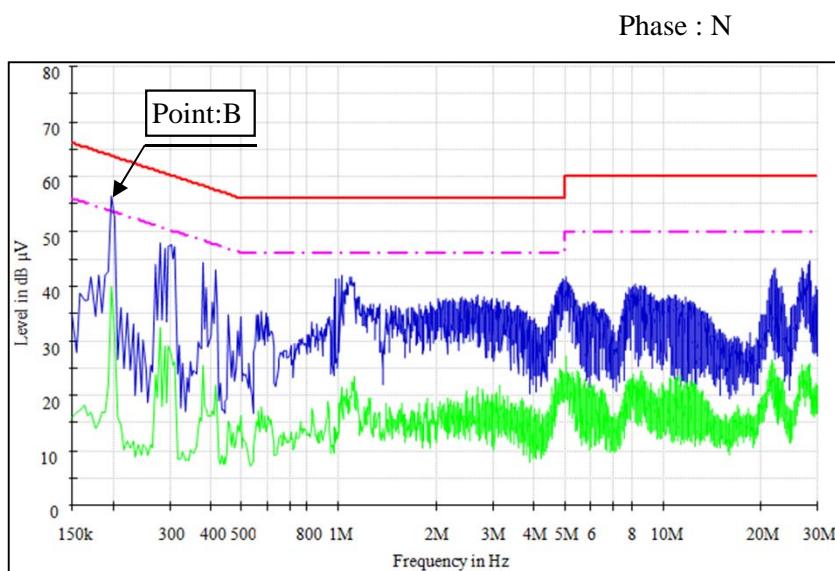
12V

(CUS60M-12)

Point A (0.19MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	64.2	52.6
QP	54.2	33.3



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	63.8	53.1
AV	53.6	33.1



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

Electro-Magnetic Interference characteristics

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

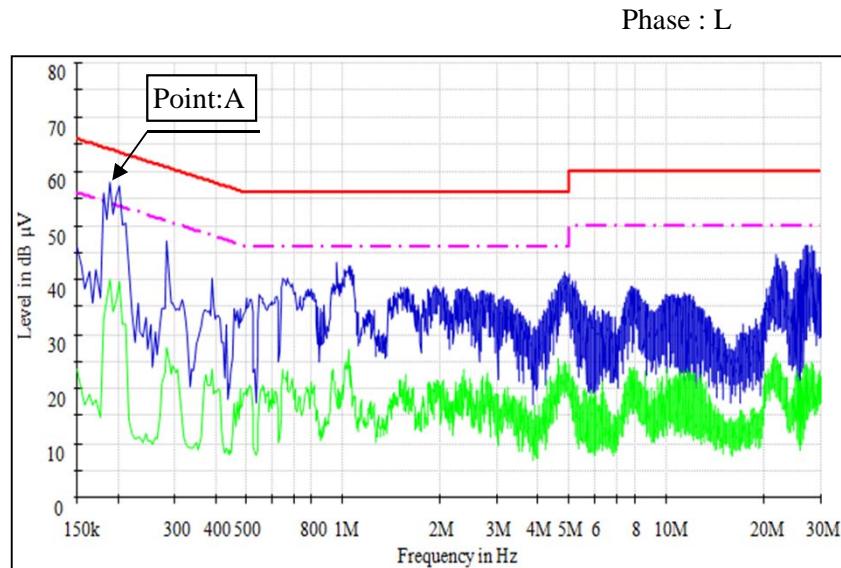
雜音端子電圧

Conducted Emission (CLASS I)

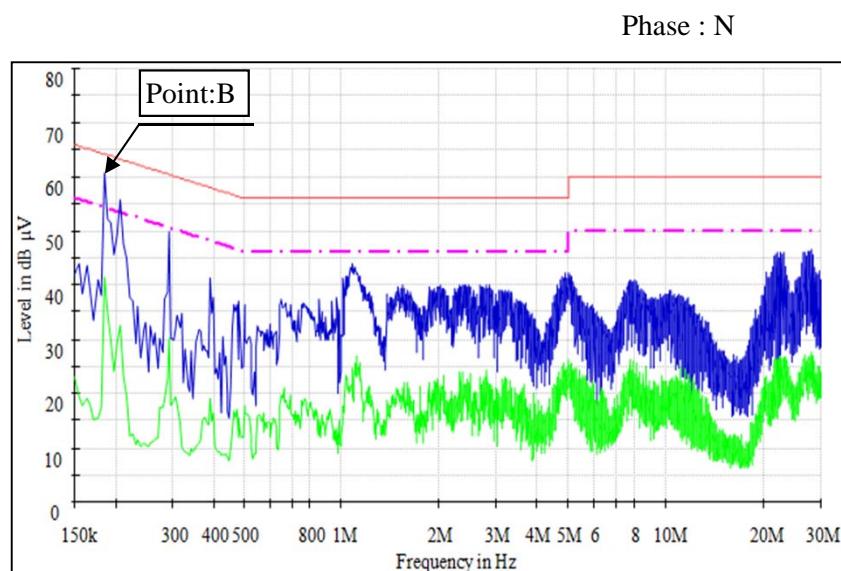
12V

(CUS60M-12)

Point A (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.4	53.8
AV	54.2	34.0



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.8	56.8
AV	53.6	35.2



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
                   Iout : 100 %  
                   Ta : 25 °C

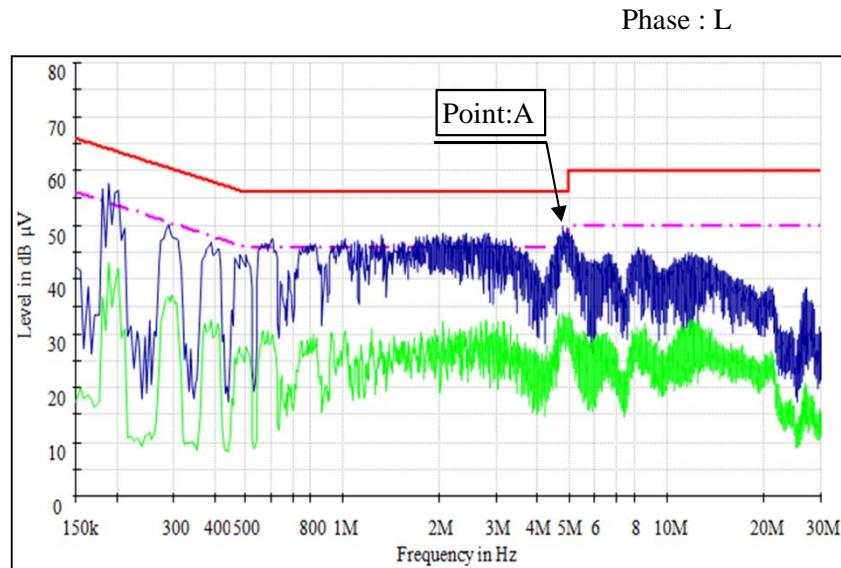
雜音端子電圧

Conducted Emission (CLASS II)

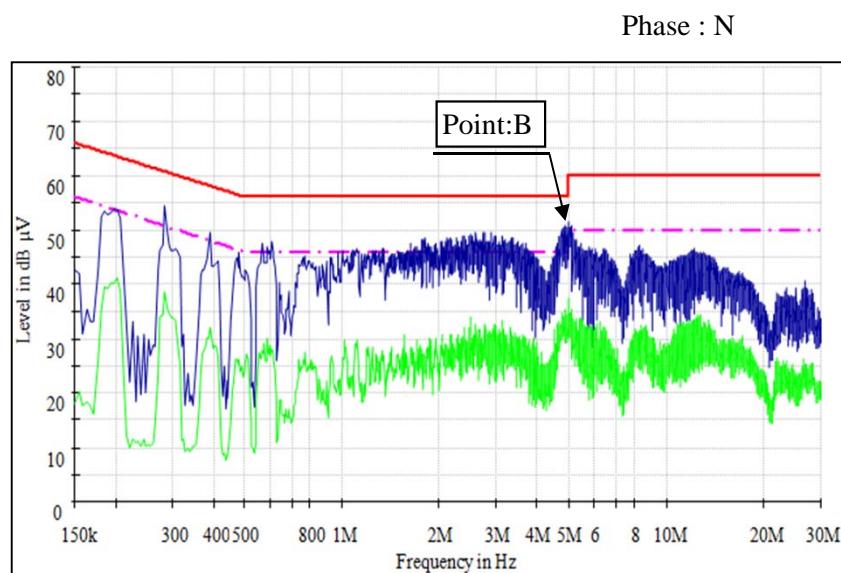
12V

(CUS60M-12)

Point A (4.95MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	56.0	46.9
AV	46.0	32.3



Point B (4.87MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	56.0	48.7
AV	46.0	36.1



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

Electro-Magnetic Interference characteristics

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

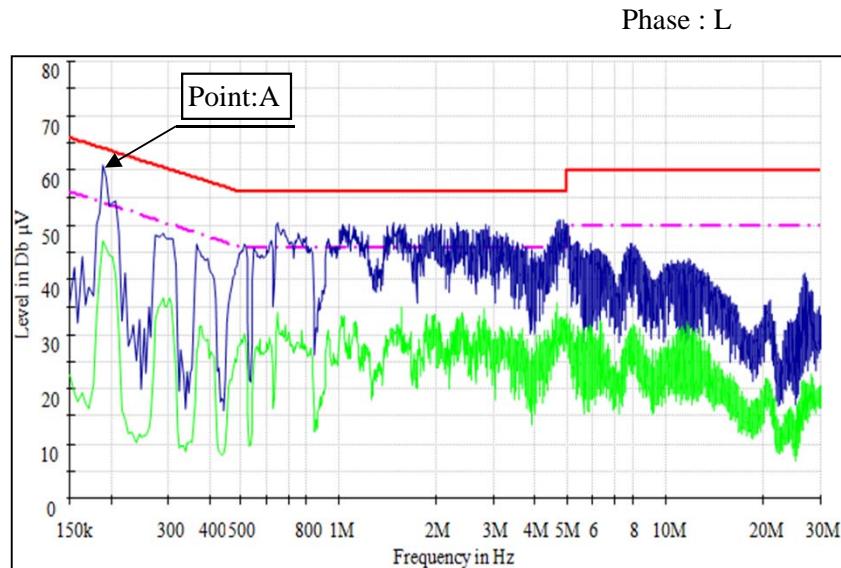
雜音端子電圧

Conducted Emission (CLASS II)

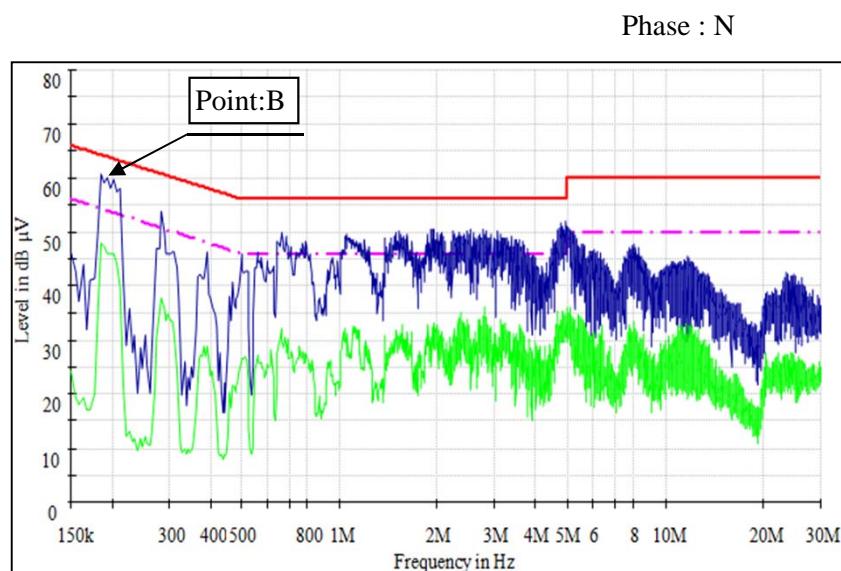
12V

(CUS60M-12)

Point A (0.19MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	64.2	57.6
QP	54.2	43.7



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	63.4	58.8
AV	53.8	46.8



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

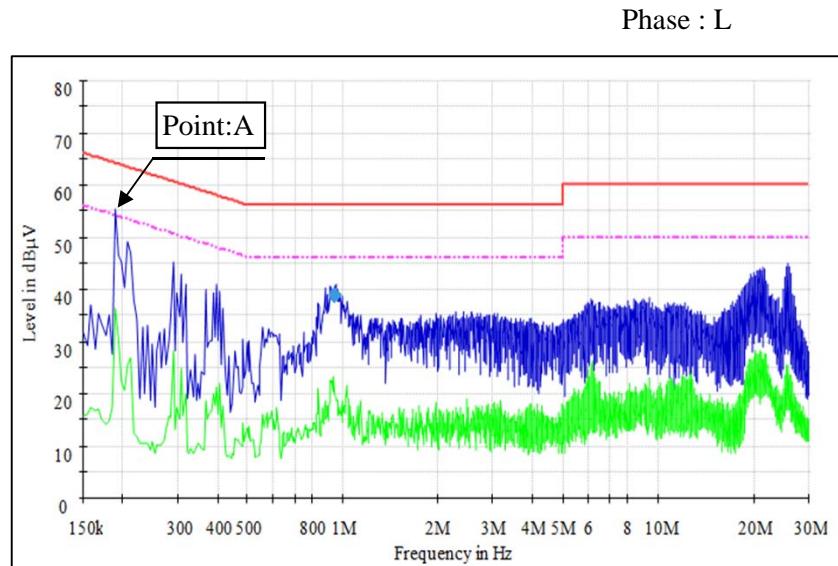
雜音端子電圧

Conducted Emission (CLASS I)

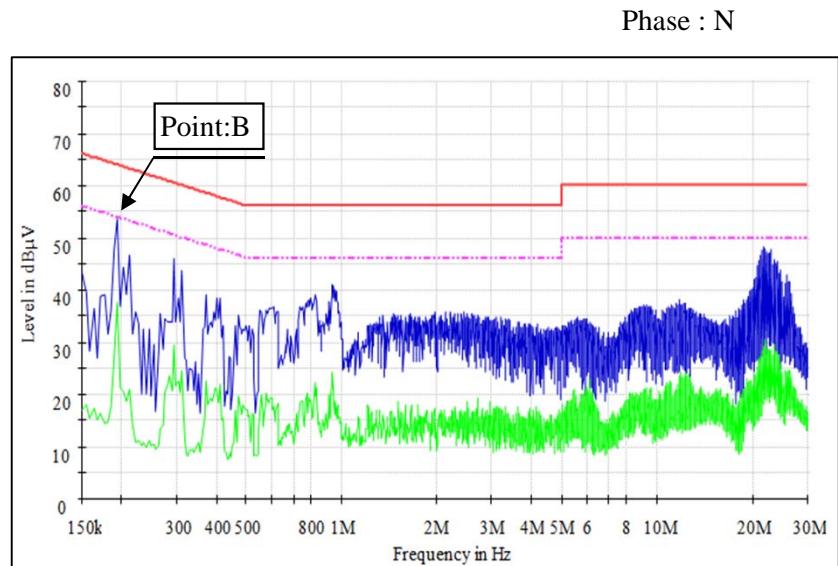
24V

(CUS60M-24)

Point A (0.19MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.8	51.7
AV	54.2	31.4



Point B (0.19MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	64.2	51.9
AV	53.8	32.6



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

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

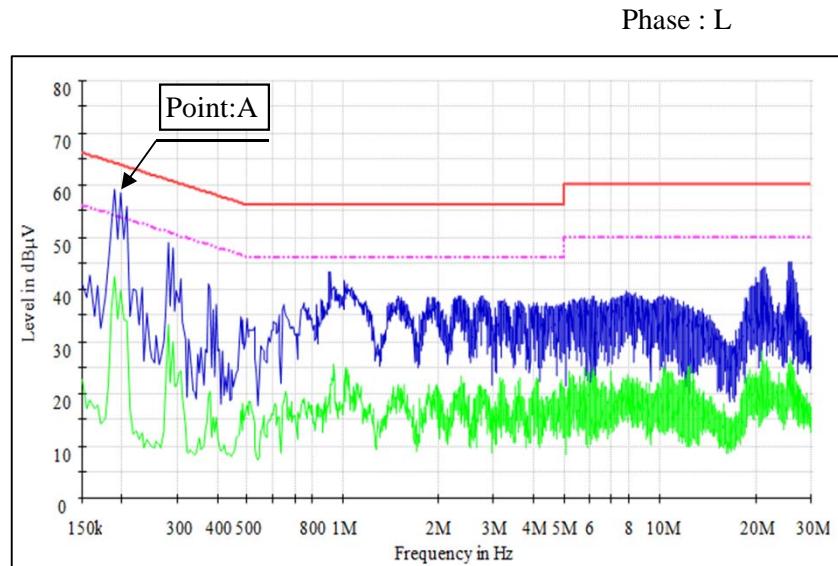
雜音端子電圧

Conducted Emission (CLASS I)

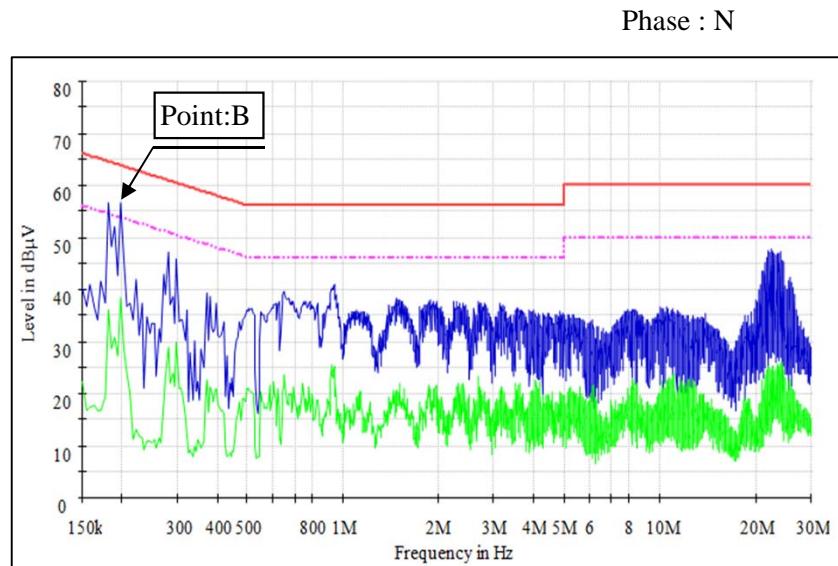
24V

(CUS60M-24)

Point A (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	64.2	55.7
AV	53.6	34.7



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.8	54.0
AV	53.6	34.3



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

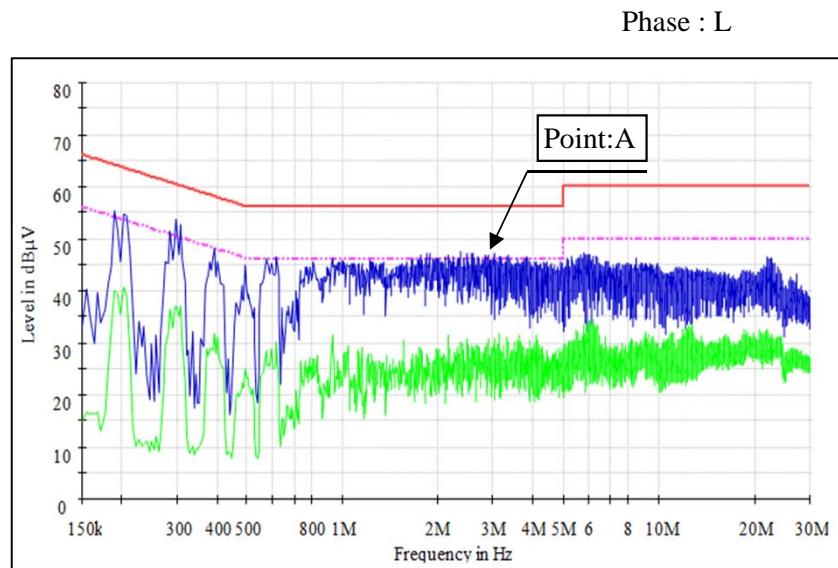
雜音端子電圧

Conducted Emission (CLASS II)

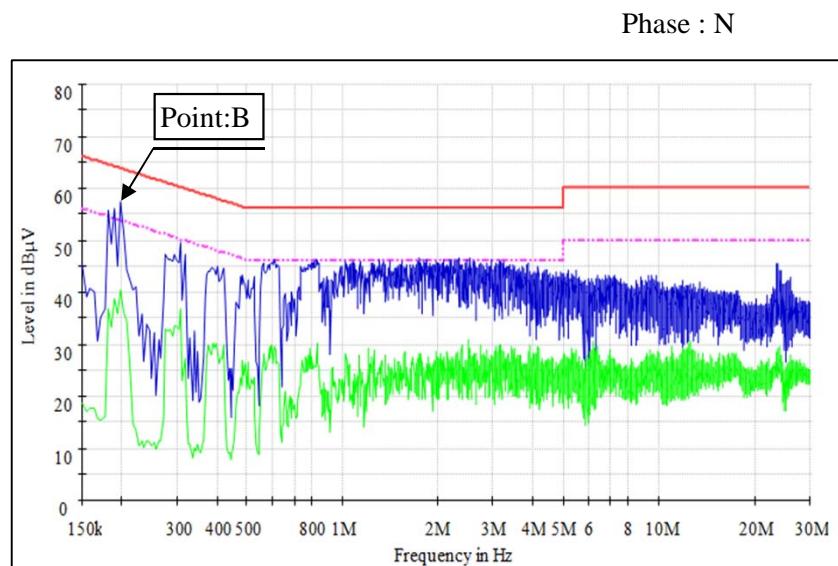
24V

(CUS60M-24)

Point A (2.48MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	56.0	44.8
AV	53.4	37.9



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.8	54.7
AV	53.6	38.5



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

Electro-Magnetic Interference characteristics

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

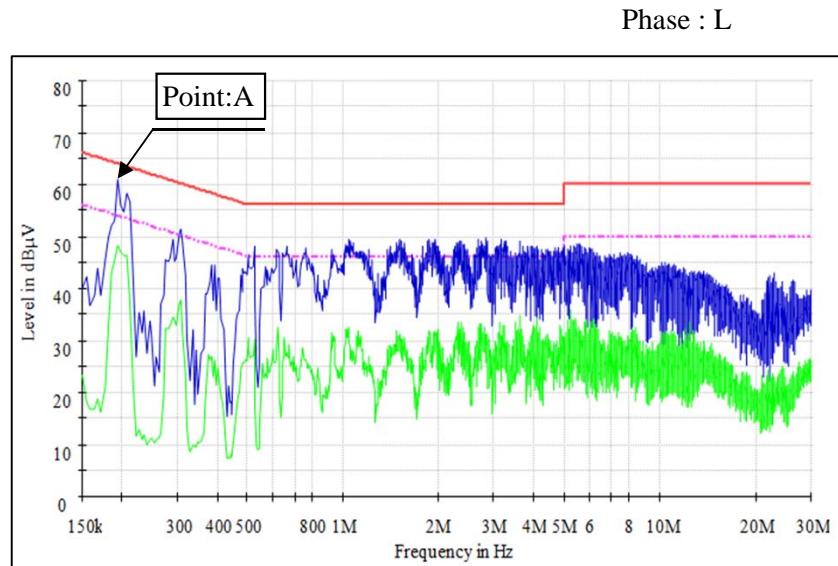
雜音端子電圧

Conducted Emission (CLASS II)

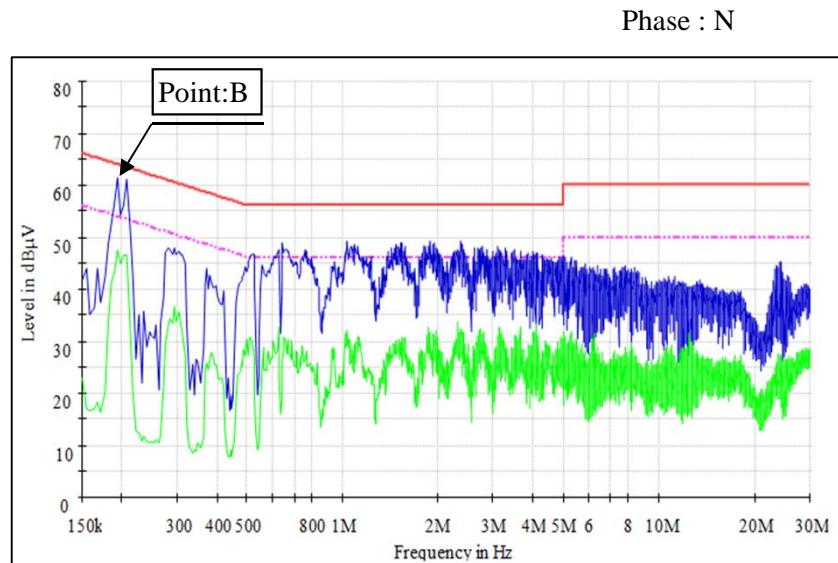
24V

(CUS60M-24)

Point A (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.6	58.9
AV	53.6	47.6



Point B (0.20MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data		
QP	63.8	58.2
AV	53.6	46.8



EN55011-B,VCCI-B,FCC-Bの限界値はEN55022 class Bの限界値と同じ

Limit of EN55011-B,VCCI-B,FCC-B are same as its EN55022 class B.

## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions

Vin : 115 VAC

Iout : 100 %

Ta : 25 °C

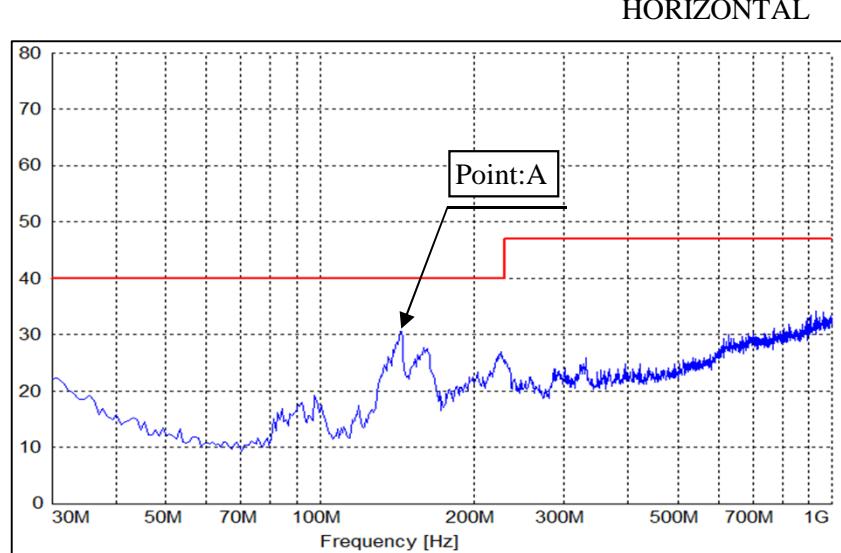
雜音電界強度

Radiated Emission (CLASS I)

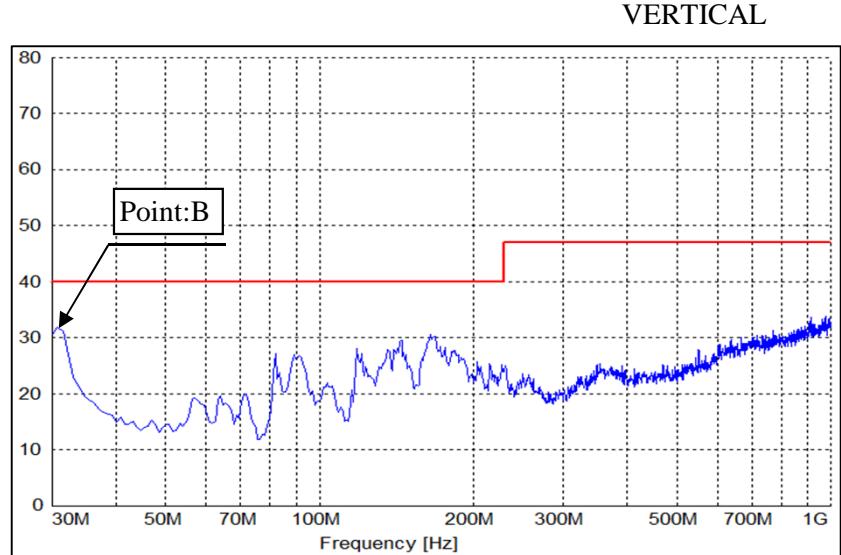
12V

(CUS60M-12)

Point A (150MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	30.8


 EN55022  
Class B  
QP Limit

Point B (31MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	31.3


 EN55022  
Class B  
QP Limit

## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions

Vin : 230 VAC

Iout : 100 %

Ta : 25 °C

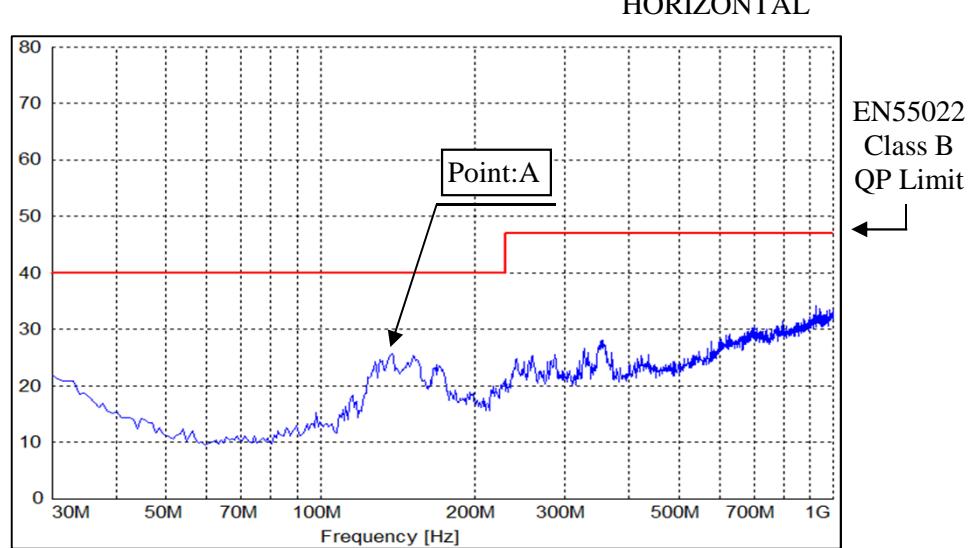
雜音電界強度

Radiated Emission (CLASS I)

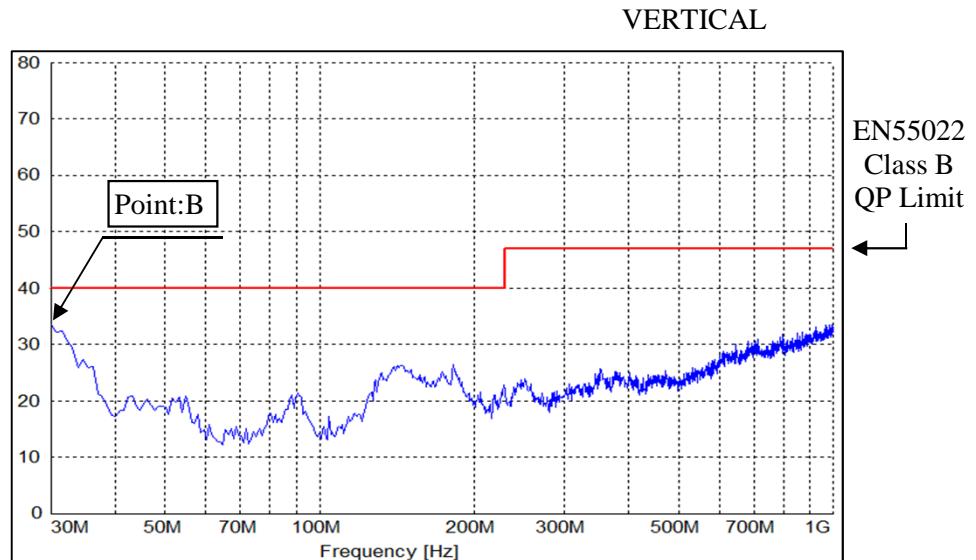
12V

(CUS60M-12)

Point A (141MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	25.0



Point B (30MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	33.5



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions

Vin : 115 VAC

Iout : 100 %

Ta : 25 °C

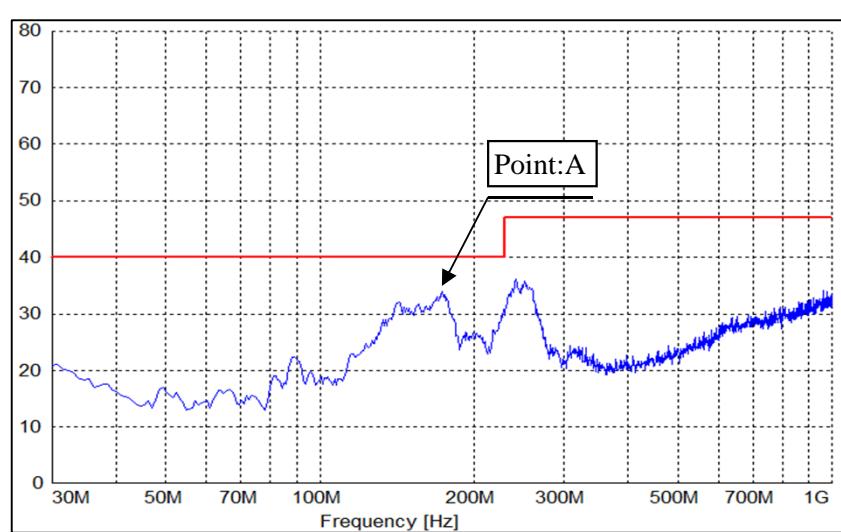
雜音電界強度

Radiated Emission (CLASS II)

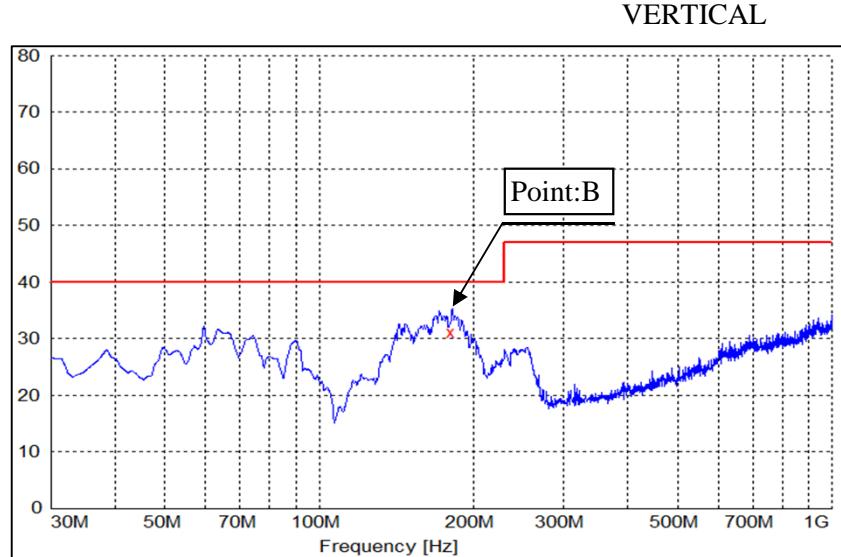
12V

(CUS60M-12)

Point A (174MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	34.2



Point B (181MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	31.1



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions

Vin : 230 VAC

Iout : 100 %

Ta : 25 °C

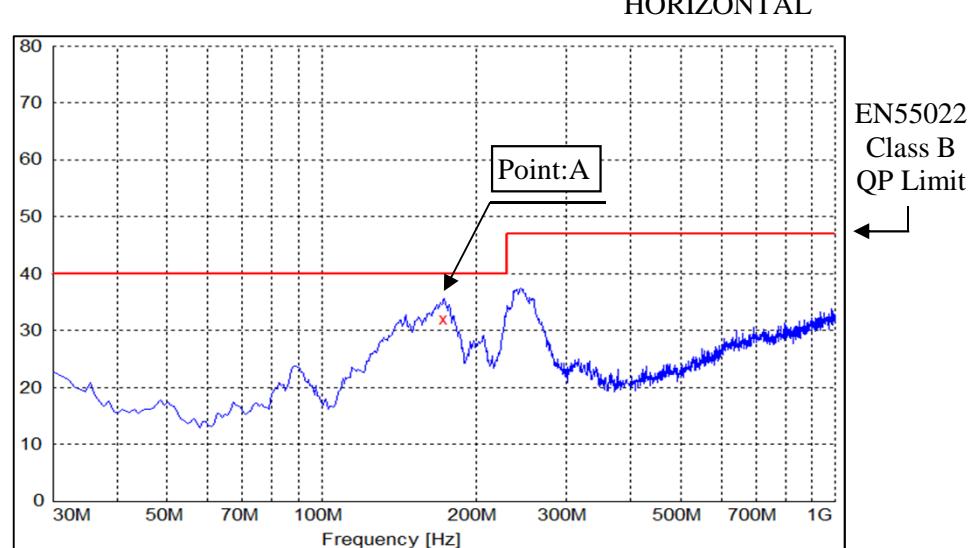
雜音電界強度

Radiated Emission (CLASS II)

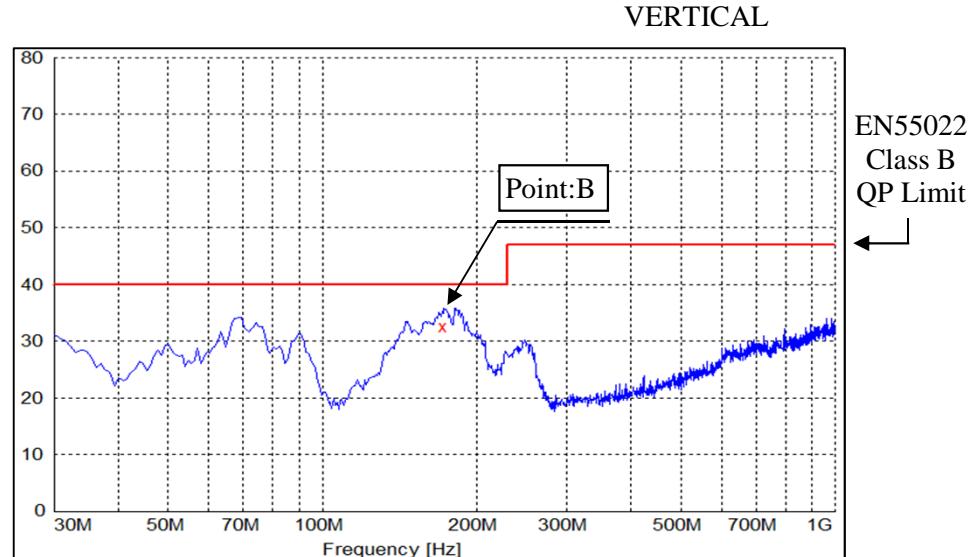
12V

(CUS60M-12)

Point A (173MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	32.1



Point B (173MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	32.5



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

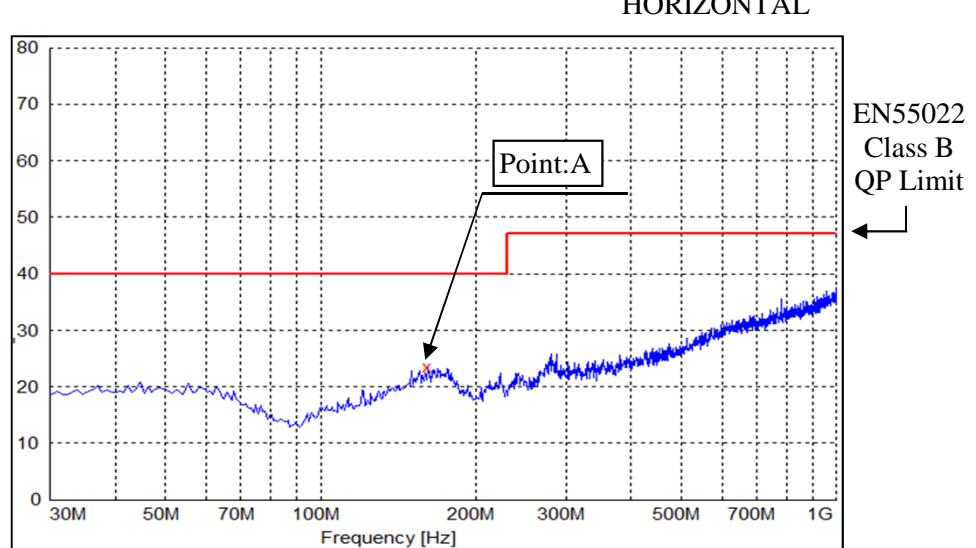
雜音電界強度

Radiated Emission (CLASS I)

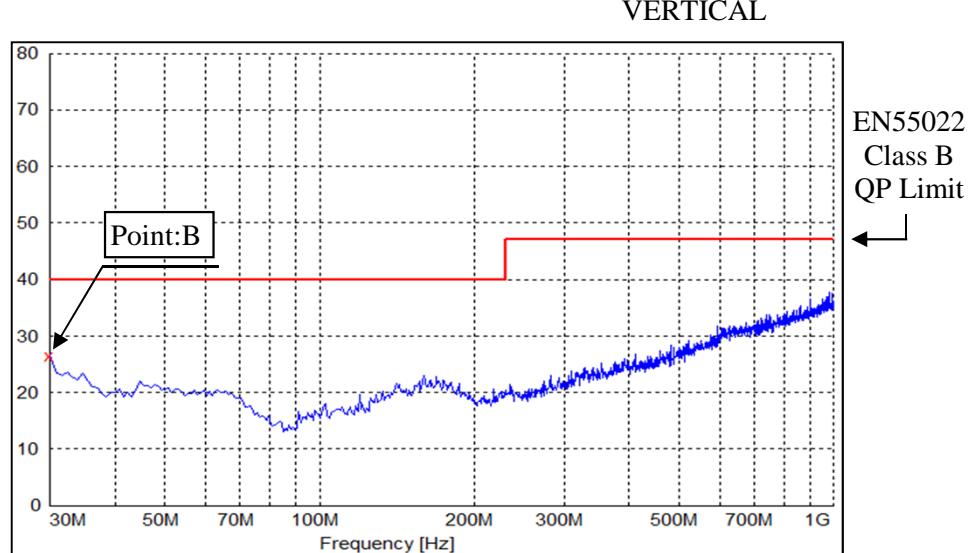
24V

(CUS60M-24)

Point A (162MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	23.5



Point B (30MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	26.6



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions

Vin : 230 VAC

Iout : 100 %

Ta : 25 °C

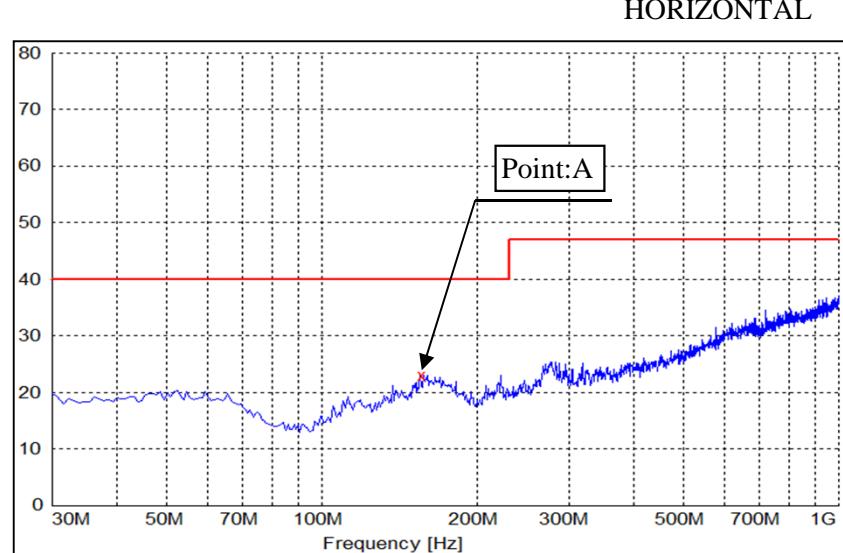
雜音電界強度

Radiated Emission (CLASS I)

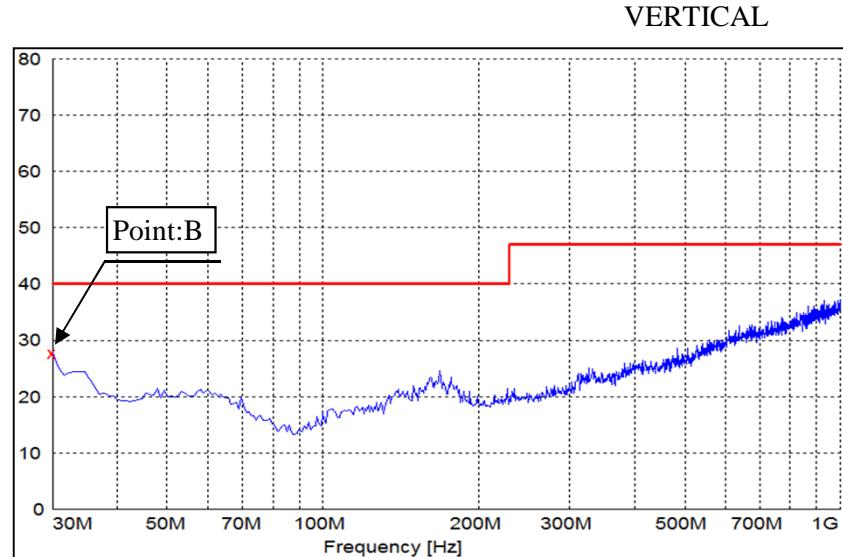
24V

(CUS60M-24)

Point A (157MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	23.0



Point B (30MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	27.7



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

Conditions      Vin : 115 VAC  
 Iout : 100 %  
 Ta : 25 °C

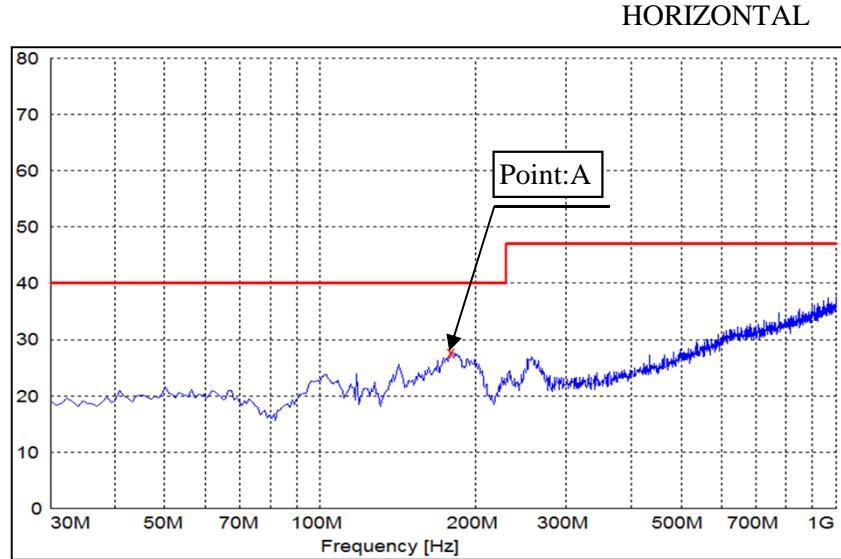
雜音電界強度

Radiated Emission (CLASS II)

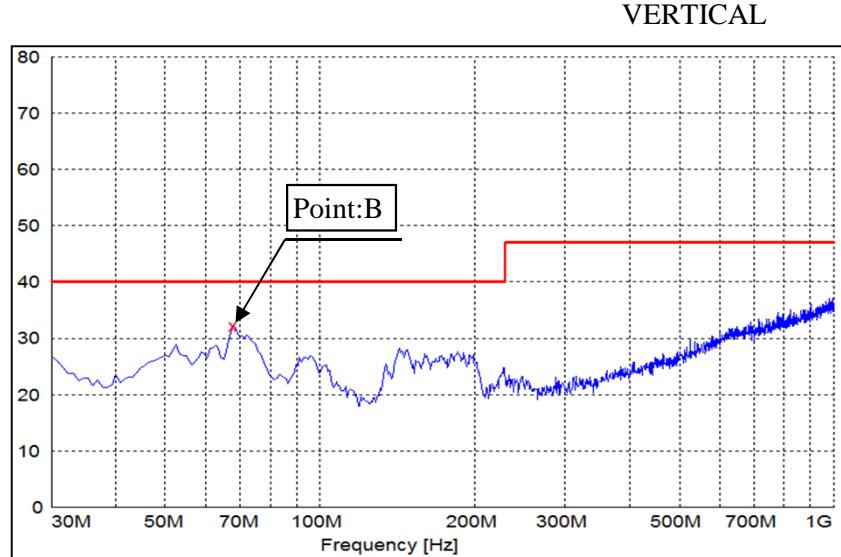
24V

(CUS60M-24)

Point A (181MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	40.0	27.4



Point B (67MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
Data	40.0	32.3



## 2.12 EMI 特性

## Electro-Magnetic Interference characteristics

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

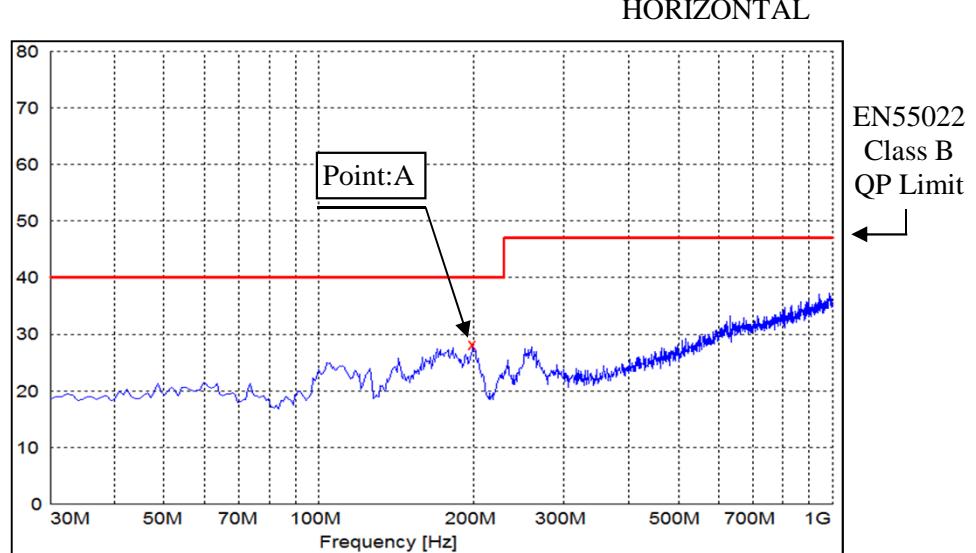
雜音電界強度

Radiated Emission (CLASS II)

24V

(CUS60M-24)

Point A (199MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	28.2



Point B (68MHz)		
Ref.	Limit (dBuV)	Measure (dBuV)
QP	40.0	33.0

