

ZBM-AC

EVALUATION DATA

型式データ

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■使用記号 Terminology used

	定義	Definition
Ta	周囲温度	Ambient temperature
f	ZWS300RC/BM 入力周波数	ZWS300RC/BM Input Frequency
Vin	ZWS300RC/BM 入力電圧	ZWS300RC/BM Input voltage
Iin	ZWS300RC/BM 入力電流	ZWS300RC/BM Input current
Vout	ZWS300RC/BM 出力電圧	ZWS300RC/BM Output voltage
Iout	ZWS300RC/BM 出力電流	ZWS300RC/BM Output current
Vstb	ZBM-AC162/S 出力電圧	ZBM-AC162/S Output voltage
Istb	ZBM-AC162/S 出力電流	ZBM-AC162/S Output current

■試験結果は、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。

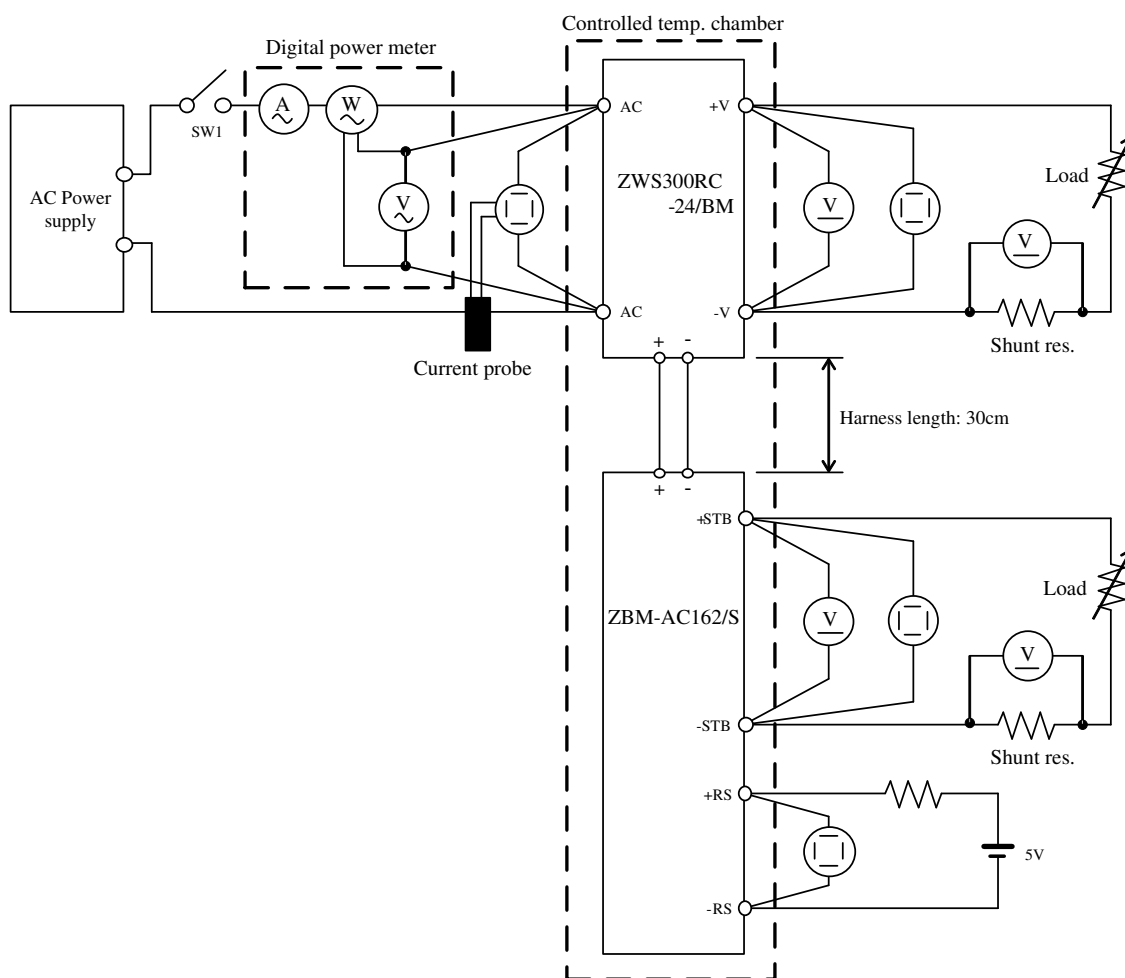
Test results are reference data based on our measurement condition.

1. 測定方法 Evaluation Method

1-1. 測定回路 Circuit used for determination

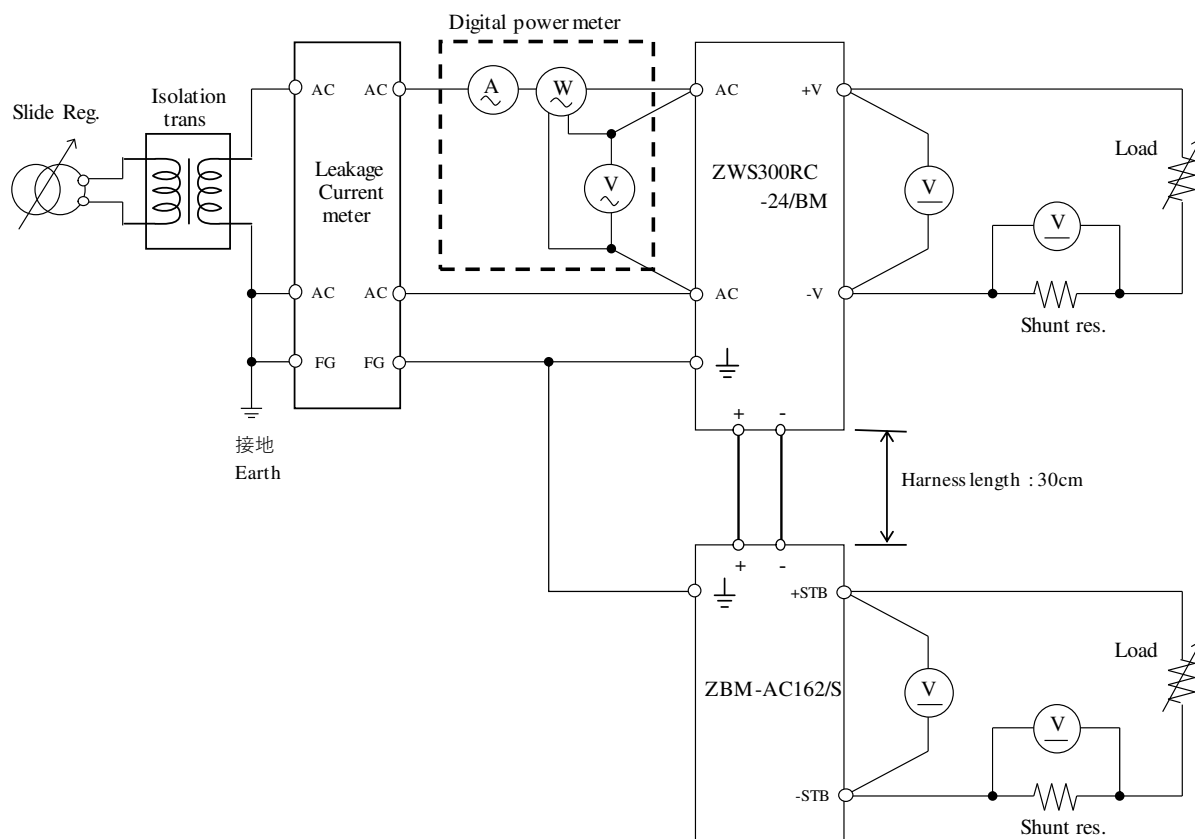
測定回路1 Circuit 1 used for determination

- 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
- RS信号特性 RS signal characteristics



測定回路2 Circuit 2 used for determination

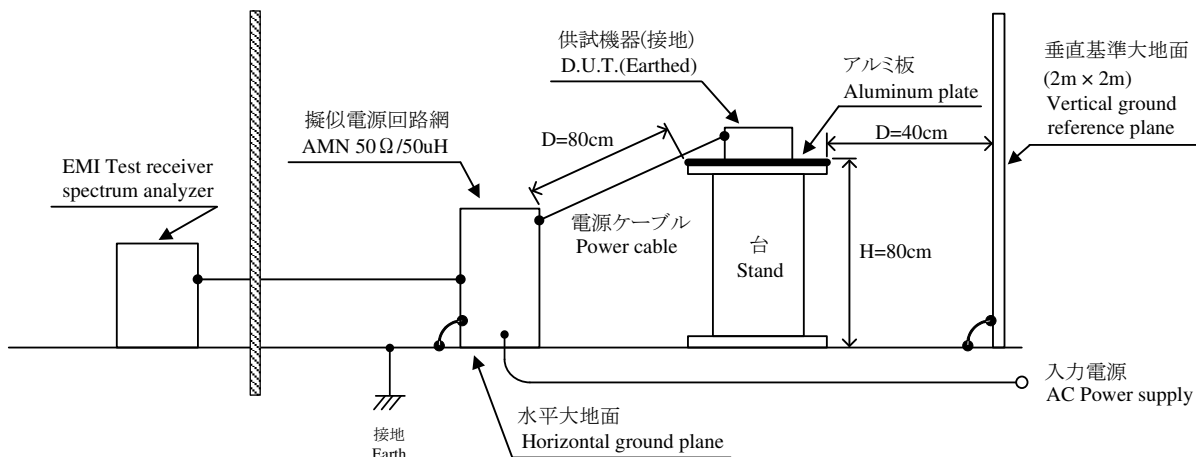
- リーク電流特性 Leakage current characteristics



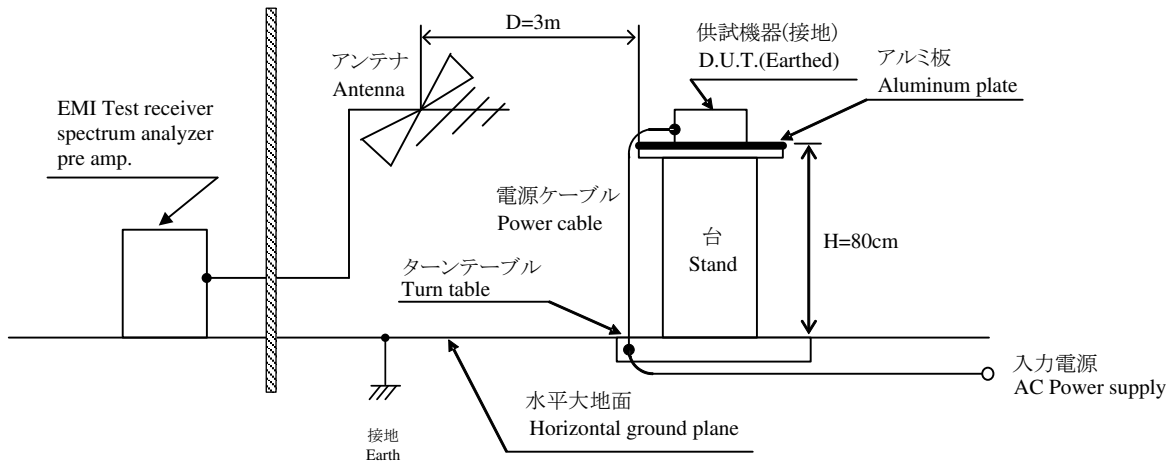
測定構成 Configuration used for determination

- 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.	DL9040L / DLM1740
2	DIGITAL MULTIMETER	AGILENT	34970A
3	DIGITAL POWER METER	YOKOGAWA ELECT.	WT210
4	CURRENT PROBE	YOKOGAWA ELECT.	701928
5	DYNAMIC DUMMY LOAD	TAKASAGO	FK-400L / FK-1000L
6	DYNAMIC DUMMY LOAD	KIKUSUI	PLZ164WL / PLZ405W
7	DUMMY LOAD	PCN	PHF250 SERIES
8	ISOLATION TRANS	NOISE KEN	TF-2302P
9	SLIDE REGULATOR	MATSUNAGA	SD-2650
10	CVCF	TAKASAGO	AA2000XG / AA2000XG2
11	CVCF	NF	ES10000S
12	LEAKAGE CURRENT METER	HIOKI	ST5540
13	DYNAMIC DIP SIMULATOR	TAKAMISAWA	PSA-210
14	CONTROLLED TEMP. CHAMBER	ESPEC	SU-240
15	EMI TEST RECEIVER / SPECTRUM ANALYZER	ROHDE & SCHWARZ	ESCI
16	PRE AMP.	SONOMA	310N
17	AMN	SCHWARZBECK	NNLK8121
18	ANTENNA	TESEQ	CBL6111D
19	HARMONIC / FLICKER ANALYZER	KIKUSUI	KHA1000
20	SINGLE-PHASE MASTER	NF	4420
21	REFERENCE IMPEDANCE NETWORK 20A	NF	4150
22	MULTI OUTLET UNIT	KIKUSUI	OT01-KHA

1-3. 評価負荷条件 Load conditions

評価データはZWS300RC/BM接続時のデータになります。

ZBM-AC162接続時は下記のとおりZWS300RCの出力デレーティングが必要です。

出力デレーティングについての詳細は、ZWS300RC/BMのA284-01-60/BMをご参照ください。

Evaluation data is connected to ZWS300RC/BM.

When connecting to ZBM-AC162, the output derating of ZWS300RC/BM is required as shown below.

For more information about Output derating, please refer to A284-01-50/BM of ZWS300RC/BM.

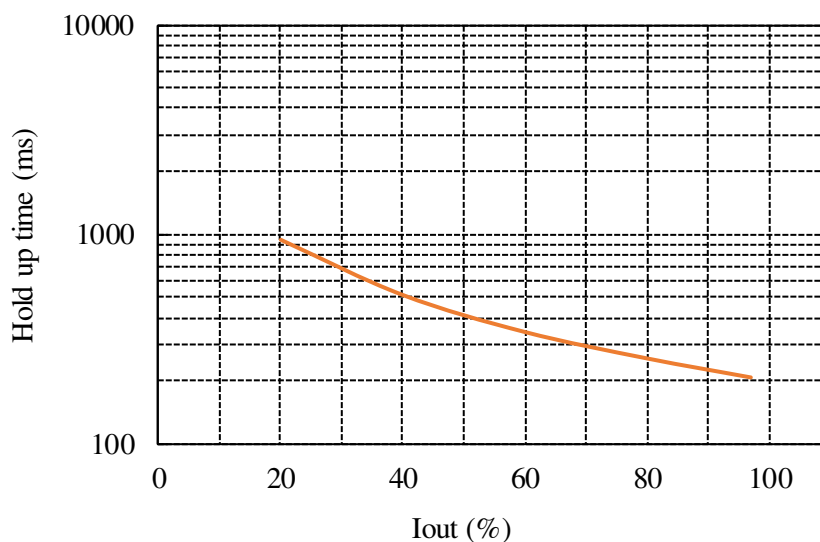
ZWS300RC Output derating (connected to ZBM-AC162 1 unit)

Vin	Iout
90 - 265VAC	97%
85VAC	77%

2-1. 出力保持時間特性 Hold up time characteristics

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

24V

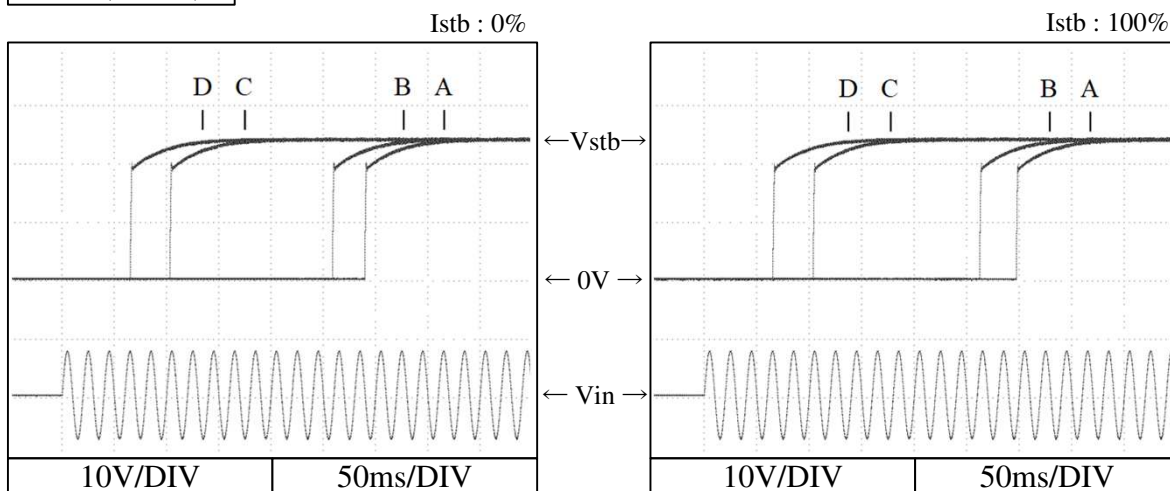


上記データはZBM-AC162/Sを接続したZWS300RC-24/BMの出力保持時間特性です。
 Hold up time characteristics of ZWS300RC-24/BM connected to ZBM-AC162/S.

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

Conditions Vin : 90VAC (A)
 : 100VAC (B)
 : 200VAC (C)
 : 265VAC (D)
 Iout : 97%
 Ta : 25°C

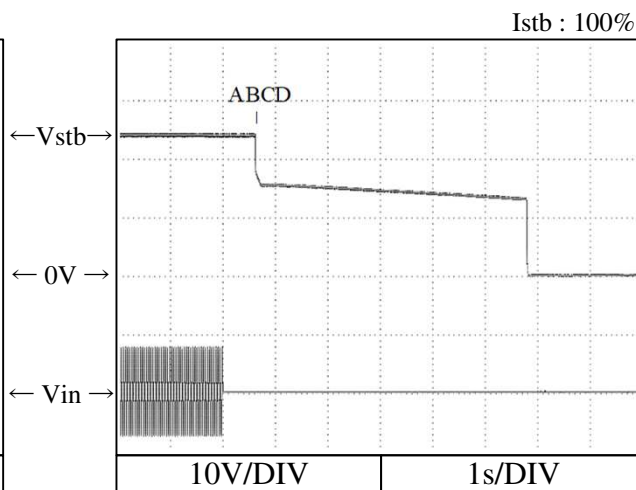
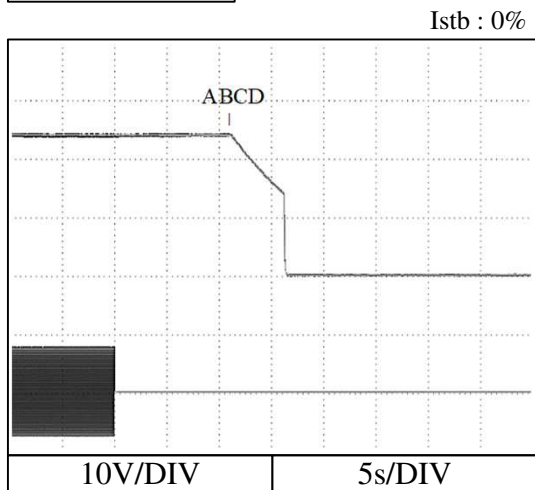
24V (STBY)



2-3. 出力立ち下がり特性 Output fall characteristics

Conditions Vin : 90VAC (A)
 : 100VAC (B)
 : 200VAC (C)
 : 265VAC (D)
 Iout : 97%
 Ta : 25°C

24V (STBY)



2-4. RS 信号特性

RS signal characteristics

標準品 ZBM-AC162/S にて対応

For option model ZBM-AC162/S

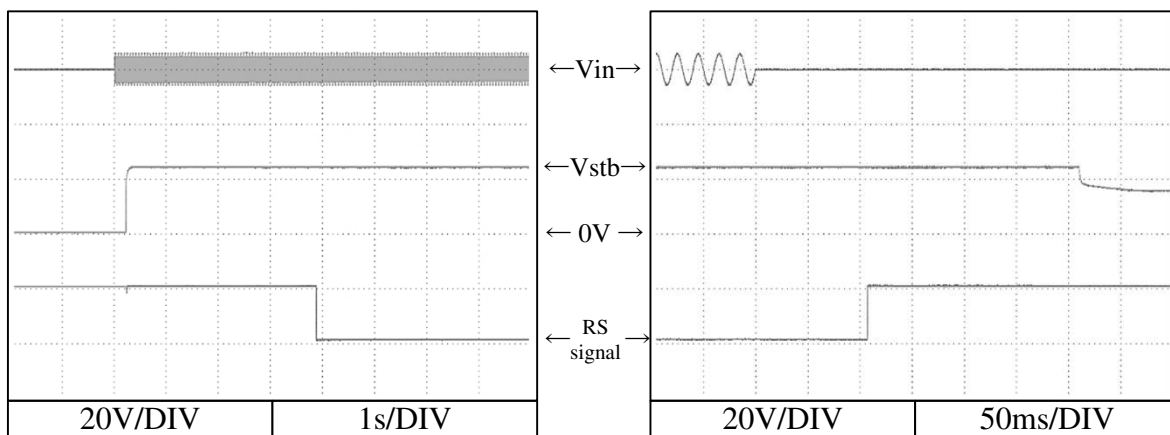
Conditions Ta : 25°C

Iout : 97%

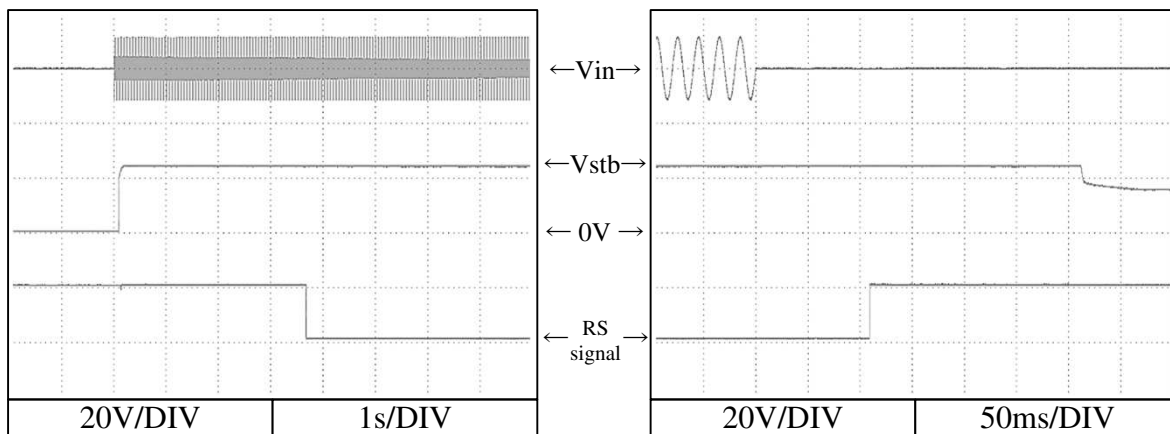
Istb : 100%

24V (STBY)

Vin : 100VAC



Vin : 200VAC

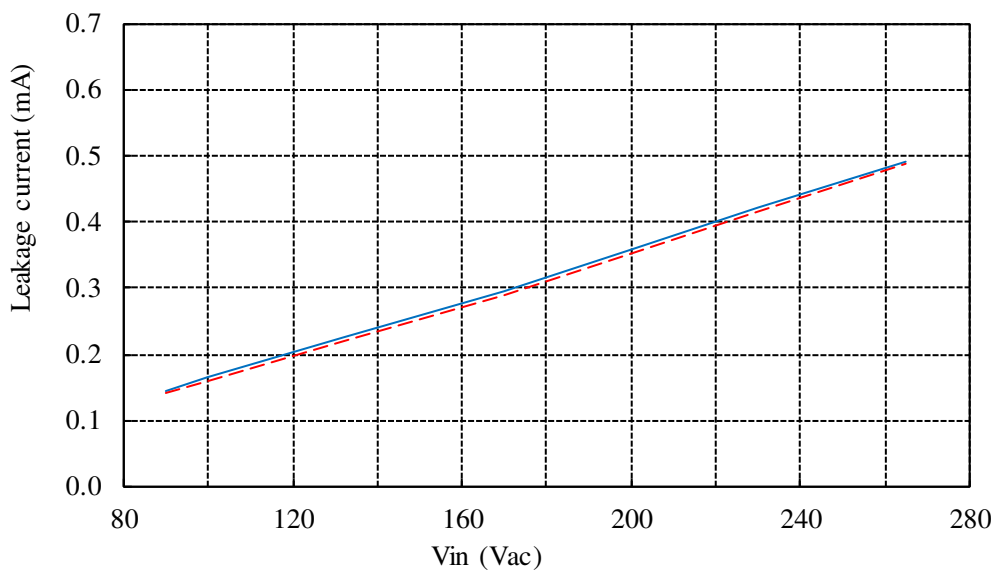


2-5. リーク電流特性 Leakage current characteristics

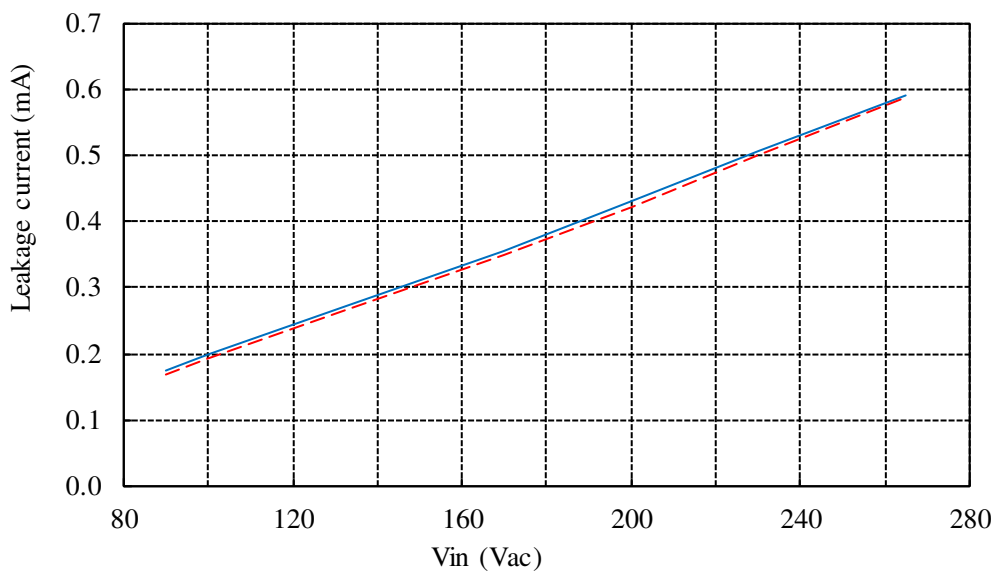
Conditions Iout : 0% ———
 97% - - - - -
 Istb : 100%
 Ta : 25°C
 Equipment used : 3156 (HIOKI)

24V

f : 50Hz



f : 60Hz



上記データはZWS300RCのリーク電流を含みます。
 Includes ZWS300RC Leakage current.

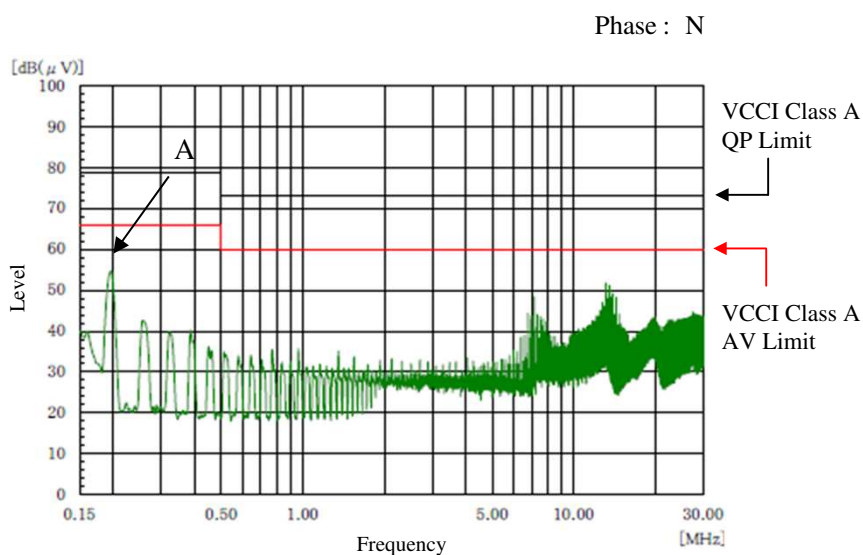
2-6. EMI特性 Electro-Magnetic Interference characteristics

Conditions Vin : 230VAC
 Iout : 97%
 Istb : 100%
 Ta : 25°C

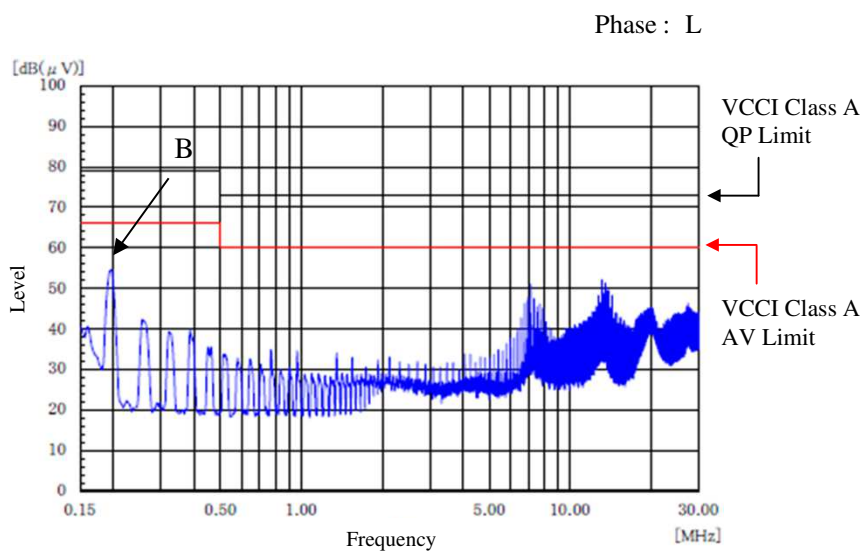
雑音端子電圧 Conducted Emission

24V

Point A (197kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	79.0	52.5
AV	66.0	44.9



Point B (196kHz)		
Ref. Data	Limit (dB)	Measure (dB)
QP	79.0	52.1
AV	66.0	44.6



上記データはZWS300RCの雑音端子電圧を含みます。
 Includes ZWS300RC Conducted Emission.

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.

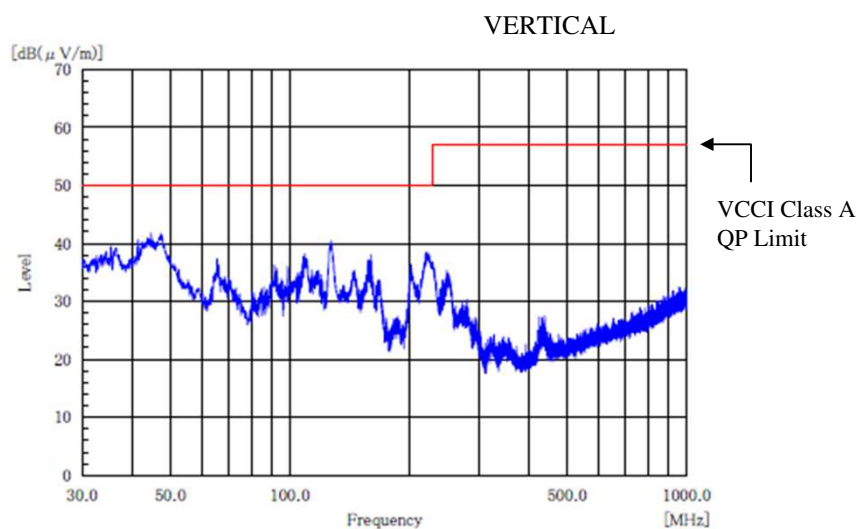
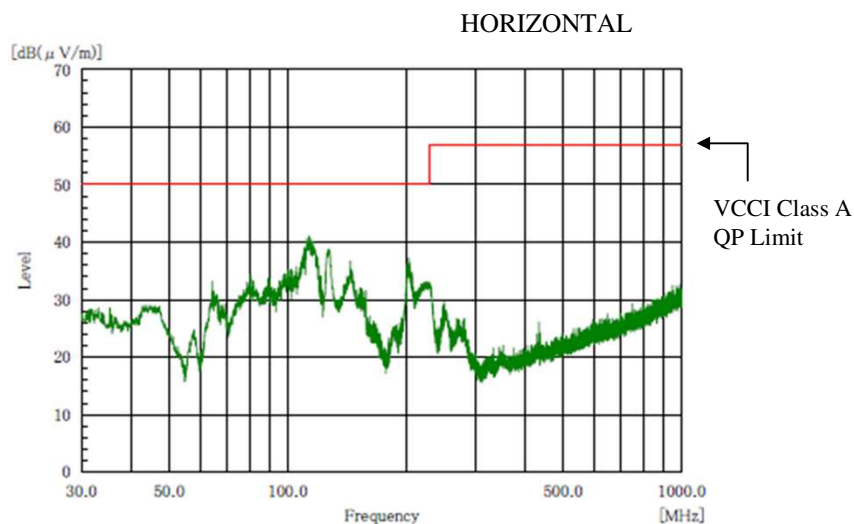
表示はピーク値
 Indication is peak values.

2-6. EMI特性 Electro-Magnetic Interference characteristics

Conditions Vin : 230VAC
 Iout : 97%
 Istb : 100%
 Ta : 25°C

雑音電界強度 Radiated Emission

24V



上記データはZWS300RCの雑音電界強度を含みます。

Includes ZWS300RC Radiated Emission.

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.