

HFE2500

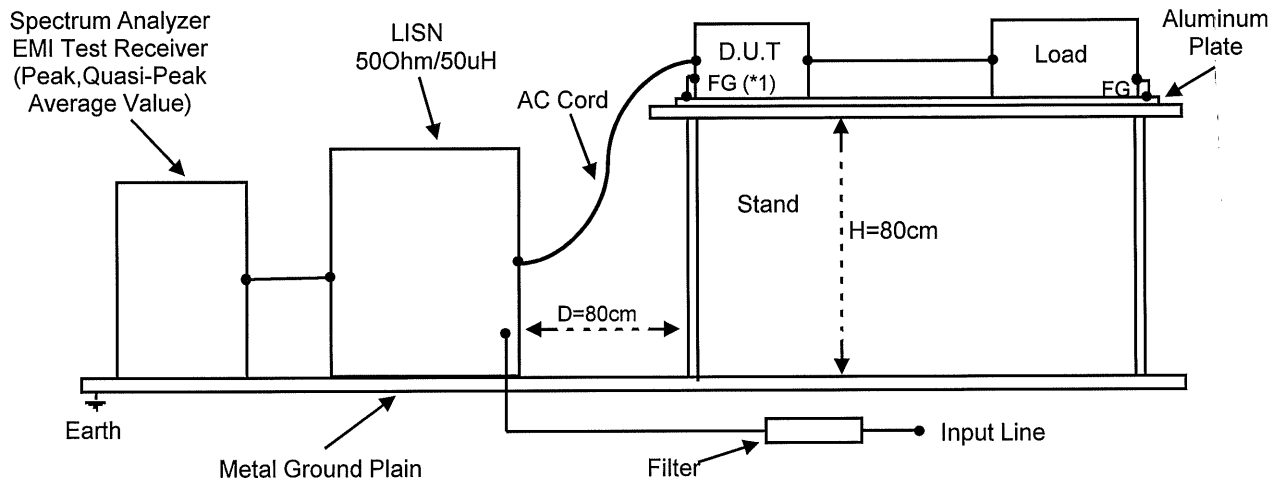
EMI TEST DATA

DWG: IA689-58-02		
APPD	CHK	DWG
Dorow P. Dec-18-11	<i>Ani P</i> 12-Dec-11	<i>MICHAEL G.</i> 26.10.2011

INDEX	PAGE
1.TEST METHOD	R-1
2.TEST DATA	
2-1.Conducted emission	R2~7
2-2.Radiated emission	R8~13

The above data is typical value data.
The values are considered to be actual capability data.

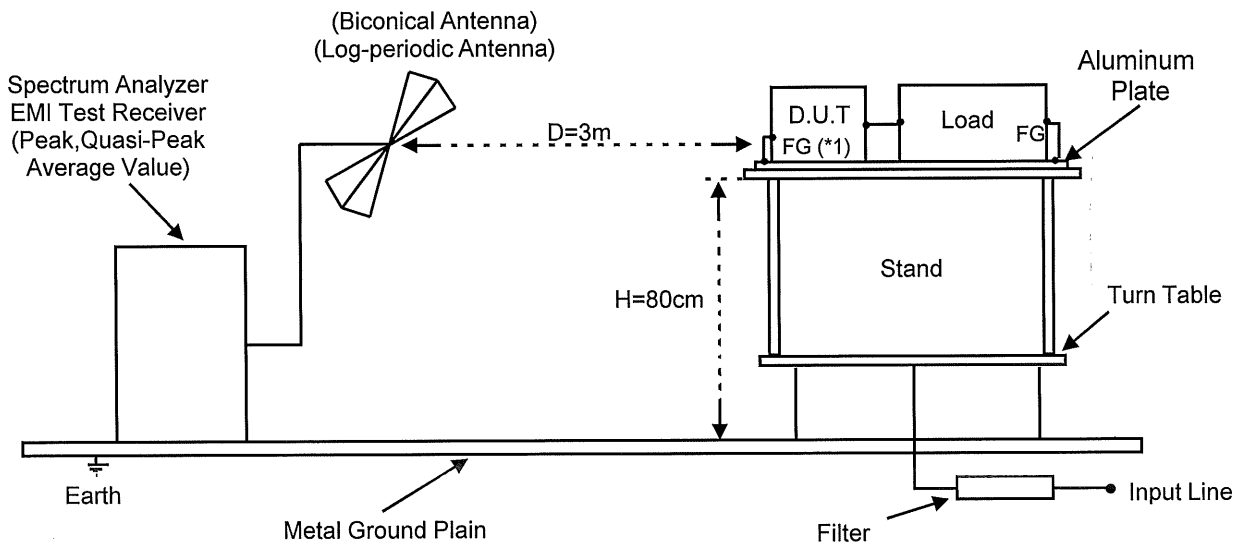
(1) Conducted Emission



TEST RECEIVER	ESPI	(ROHDE & SCHWARZ)
LISN	ENV4200	(ROHDE & SCHWARZ)

*1: D.U.T is installed inside HFE2500-S1U rack

(2) Radiated Emission



SPECTRUM ANALYZER	MS2601A	(ANRITSU)
EMI TEST RECEIVER	85462A	(HEWLETT. PACKARD)
BICONICAL ANTENNA	3110BA30/200	(EMCO)
LOG-PERIODIC ANTENNA	LP200000	(ELECTROMETRIX)
	LPA2530	(ELECTROMETRIX)

*1: D.U.T is installed inside HFE1600-S1U rack

2. Test Data

HFE2500

2.1 Conducted Emission

12V

(1) Test condition

Input voltage/frequency: 100VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

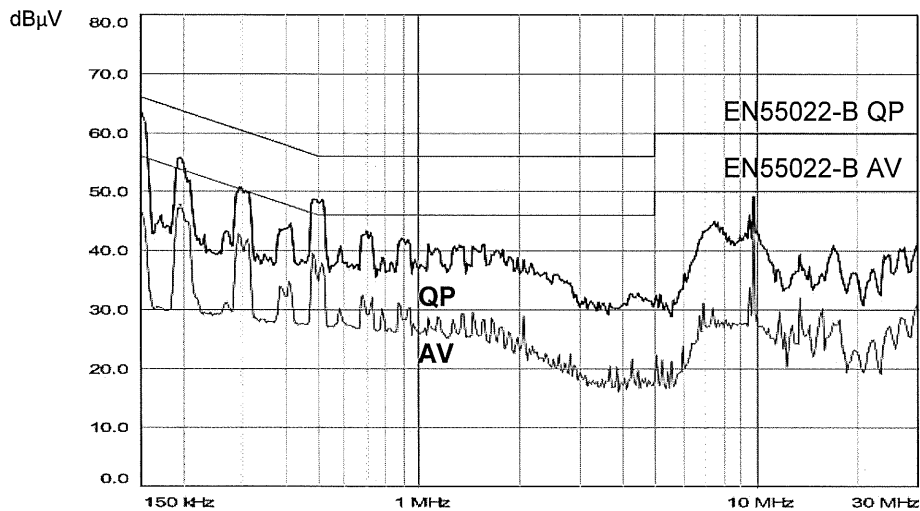
HFE 2500 installed in HFE-S1U Rack

(2) Test results

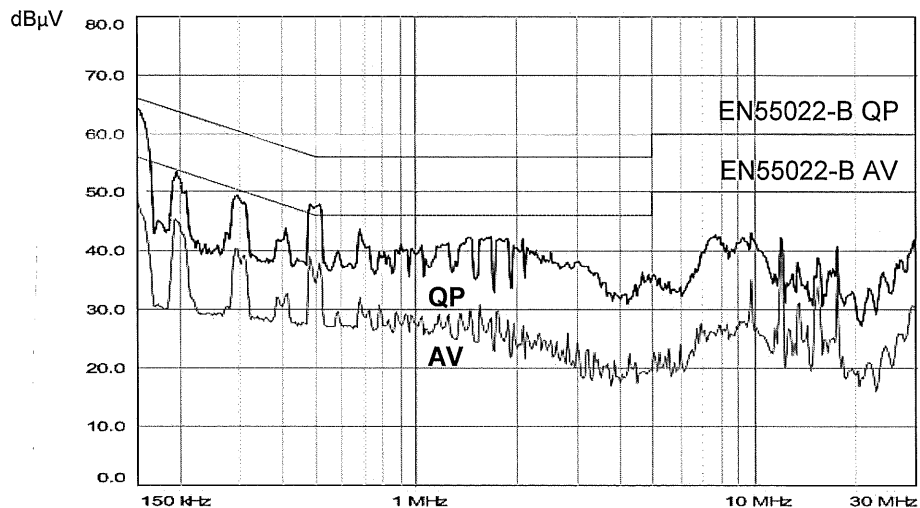
Interference wave list

PHASE	FREQ	EN55022-B					
		RESULT		LIMIT		MARGIN	
		QP	AV	QP	AV	QP	AV
	MHz	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V
L	0.150150	61.4	46.87	66.00	56.00	-4.60	-9.13
	0.195489	53.14	46.81	63.79	53.79	-10.65	-6.98
N	0.150000	61.84	48.71	66.00	56.00	-4.16	-7.29
	0.195880	50.91	44.73	63.80	53.80	-12.89	-9.07

Phase L



Phase N



2. Test Data

2.1 Conducted Emission

HFE2500

12V

(1) Test condition

Input voltage/frequency: 230VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

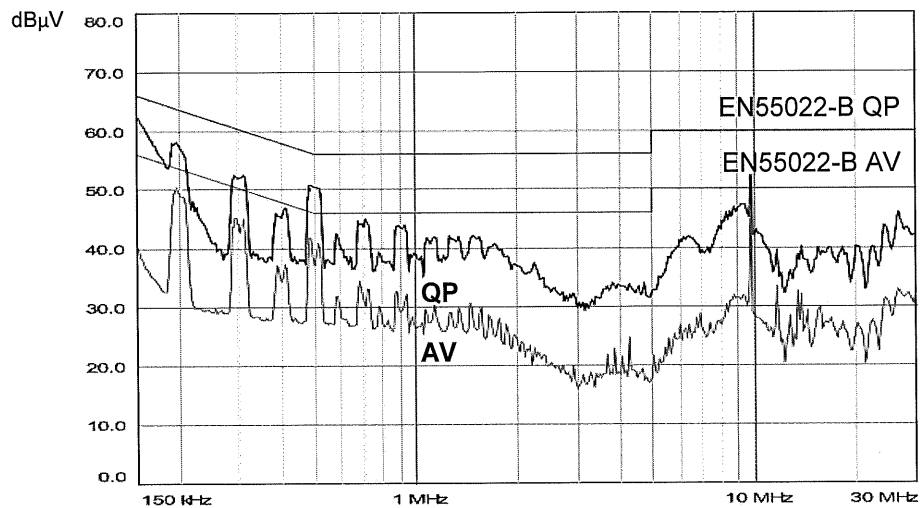
HFE 2500 installed in HFE-S1U Rack

(2) Test results

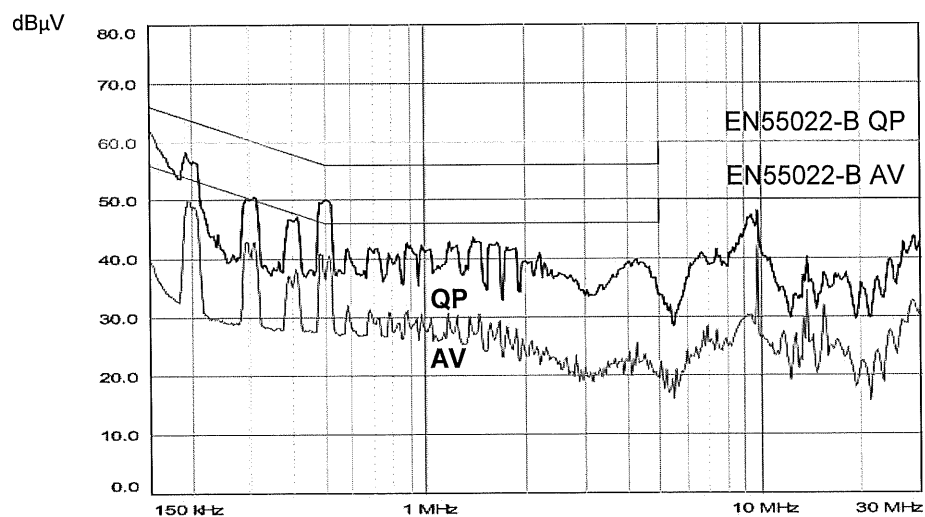
Interference wave list

PHASE	FREQ	EN55022-B					
		RESULT		LIMIT		MARGIN	
		QP	AV	QP	AV	QP	AV
	MHz	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V
L	0.196272	54.19	48.88	63.77	53.77	-9.58	-4.89
	0.484951	48.61	39.32	56.25	46.25	-7.64	-6.93
N	0.196665	54.09	48.69	63.75	53.75	-9.66	-5.06
	0.516470	47.51	38.37	56.00	46.00	-8.49	-7.63

Phase L



Phase N



2. Test Data

2.1 Conducted Emission

HFE2500

24V

(1) Test condition

Input voltage/frequency: 100VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

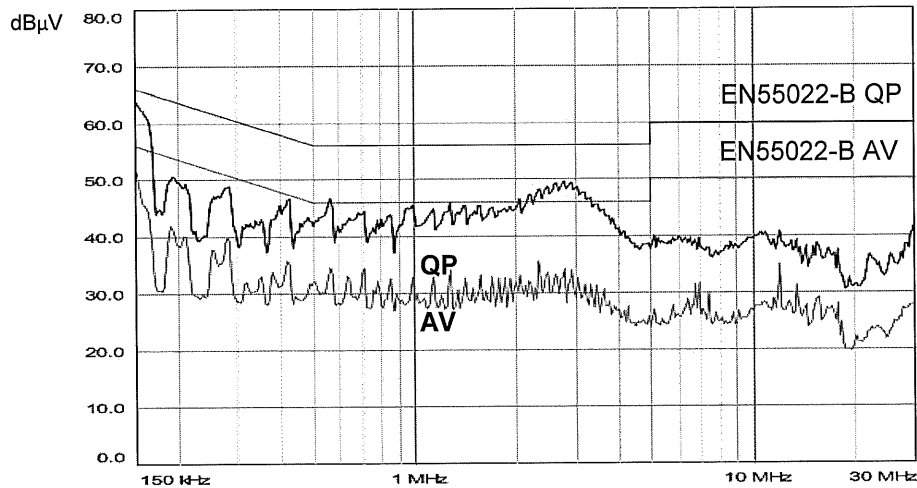
HFE 2500 installed in HFE-S1U Rack

(2) Test results

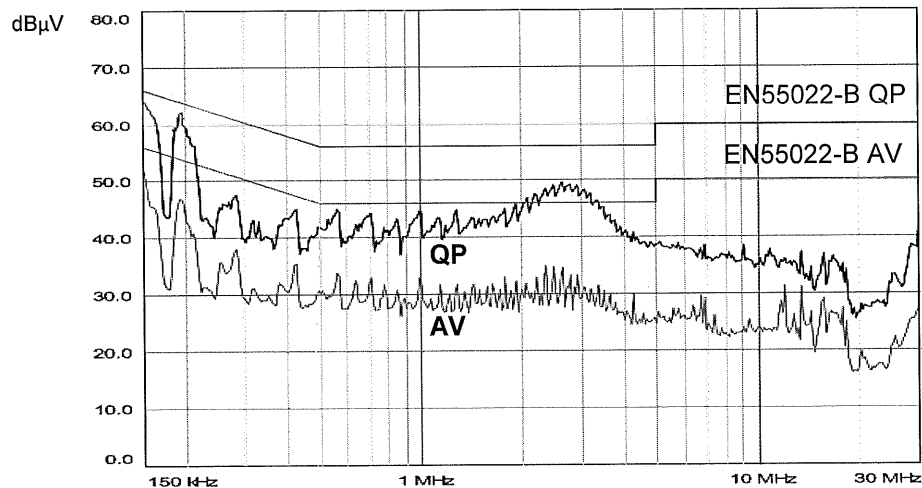
Interference wave list

PHASE	FREQ	EN55022-B					
		RESULT		LIMIT		MARGIN	
		QP	AV	QP	AV	QP	AV
	MHz	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V
L	0.150000	62.78	51.92	66.00	56.00	-3.22	-4.08
	0.192195	55.59	45.14	63.94	53.94	-8.35	-8.80
N	0.150150	63.04	52.33	65.99	55.99	-2.95	-3.66
	0.195684	59.6	47.06	63.79	53.79	-4.19	-6.73

Phase L



Phase N



2. Test Data

2.1 Conducted Emission

HFE2500

24V

(1) Test condition

Input voltage/frequency: 230VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

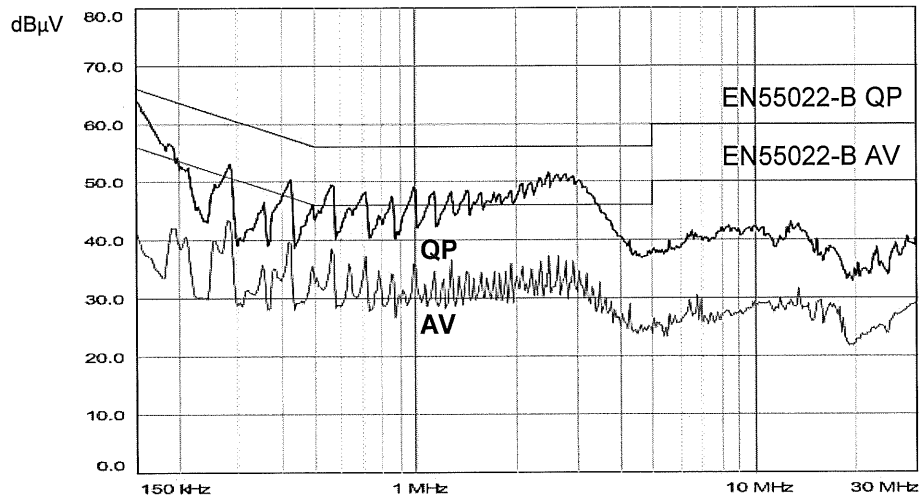
HFE 2500 installed in HFE-S1U Rack

(2) Test results

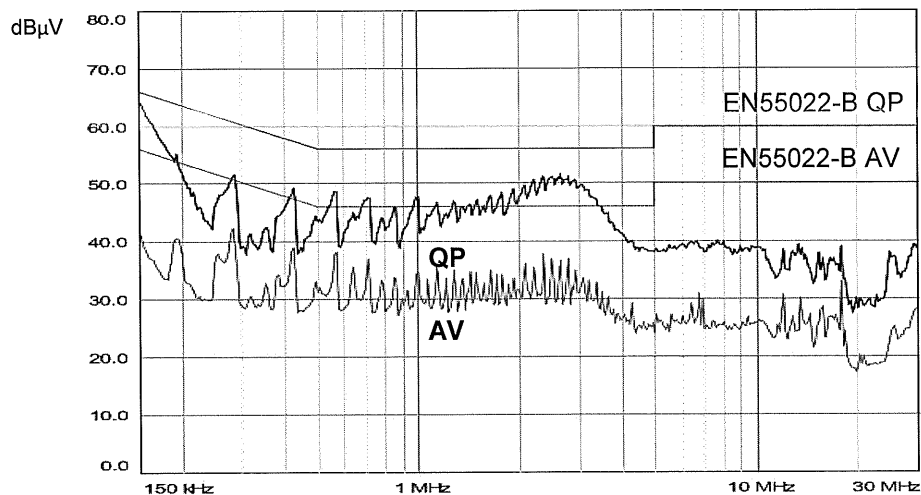
Interference wave list

PHASE	FREQ MHz	RESULT		LIMIT		MARGIN	
		QP dB μ V	AV dB μ V	QP dB μ V	AV dB μ V	QP dB μ V	AV dB μ V
		EN55022-B					
L	0.150150	60.99	42.01	65.99	55.99	-5.00	-13.98
	2.478065	48.34	33.83	56.00	46.00	-7.66	-12.17
N	0.150000	60.74	41.76	66.00	56.00	-5.26	-14.24
	2.628592	50.03	34.83	56.00	46.00	-5.97	-11.17

Phase L



Phase N



2. Test Data

HFE2500

2.1 Conducted Emission

48V

(1) Test condition

Input voltage/frequency: 100VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

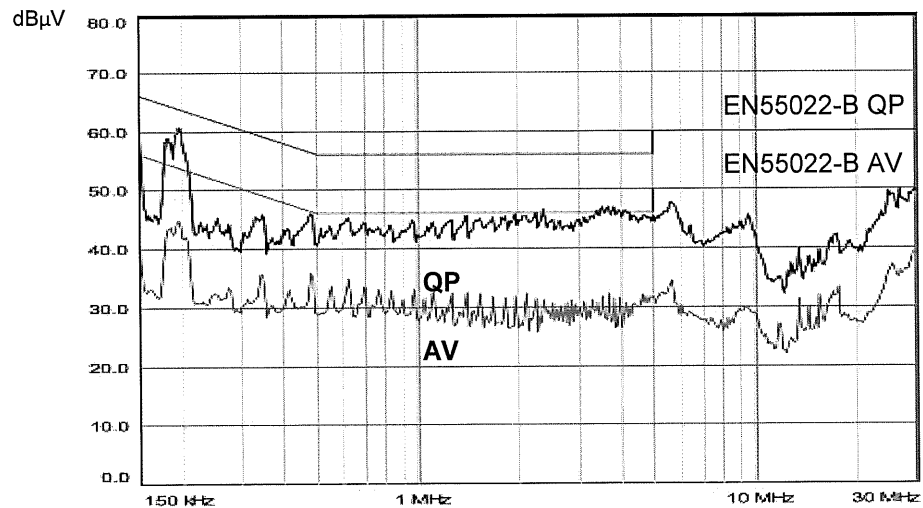
HFE 2500 installed in HFE-S1U Rack

(2) Test results

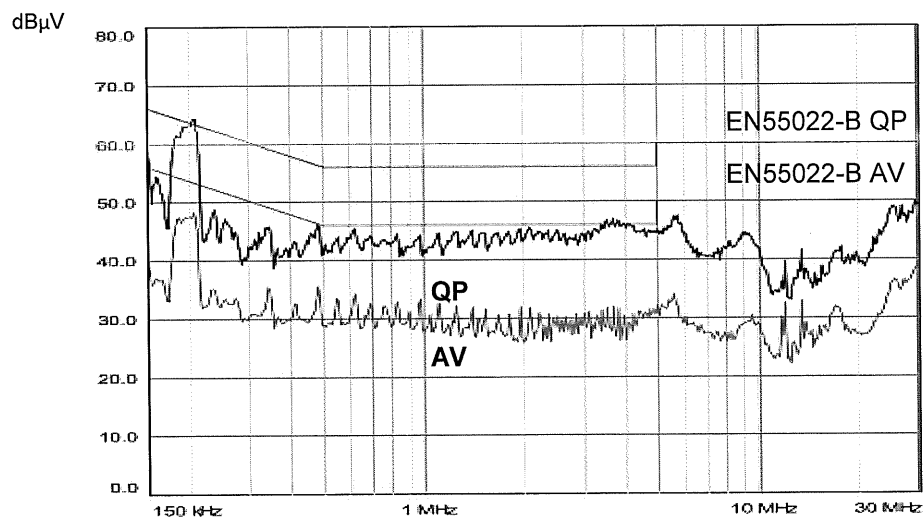
Interference wave list

PHASE	FREQ	EN55022-B					
		RESULT		LIMIT		MARGIN	
		QP	AV	QP	AV	QP	AV
	MHz	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V	dB μ V
L	0.183375	57.76	43.76	64.33	54.33	-6.57	-10.57
	0.194903	58.92	46.78	63.82	53.82	-4.9	-7.04
N	0.185217	57.31	44.14	64.25	54.25	-6.94	-10.11
	0.206330	60.53	45.02	63.35	53.35	-2.82	-8.33

Phase L



Phase N



2. Test Data

HFE2500

2.1 Conducted Emission

48V

(1) Test condition

Input voltage/frequency: 230VAC/50Hz
 Output current: 100%
 Ambient temperature: 25°C
 Regulation: EN55022-B

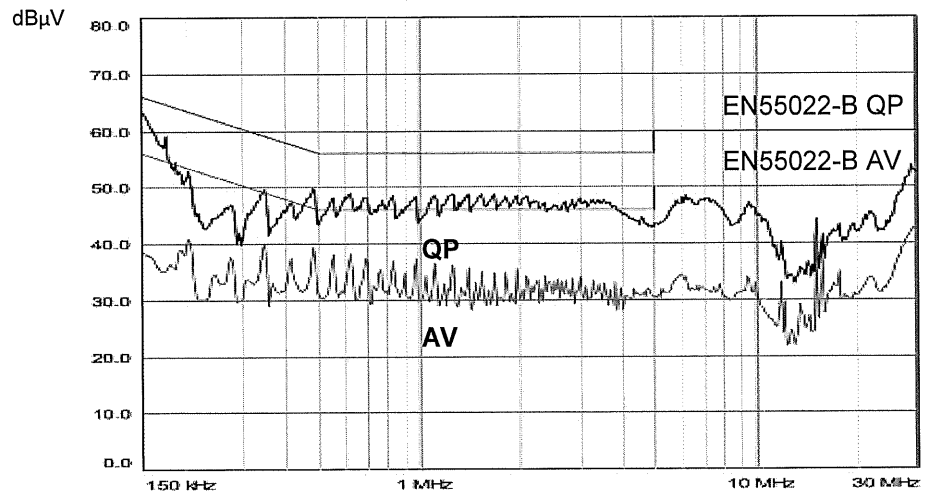
HFE 2500 installed in HFE-S1U Rack

(2) Test results

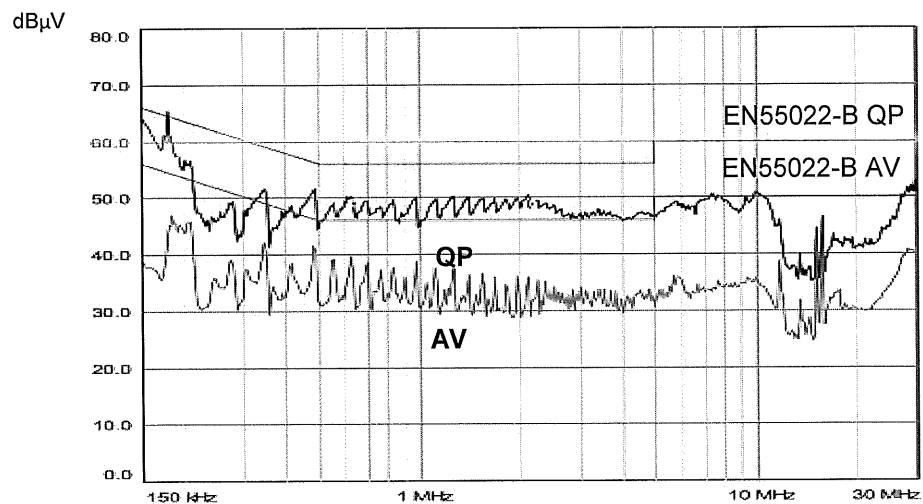
Interference wave list

PHASE	FREQ	EN55022-B					
		RESULT		LIMIT		MARGIN	
		QP	AV	QP	AV	QP	AV
	MHz	dBμV	dBμV	dBμV	dBμV	dBμV	dBμV
L	0.150601	59.68	38.40	65.97	55.97	-6.29	-17.57
	0.346269	47.02	37.27	59.05	49.05	-12.03	-11.78
N	0.184847	55.7	44.68	64.26	54.26	-8.56	-9.58
	0.485436	49.27	39.82	56.25	46.25	-6.98	-6.43

Phase L



Phase N



2. Test Data
2.2 Radiated Emission

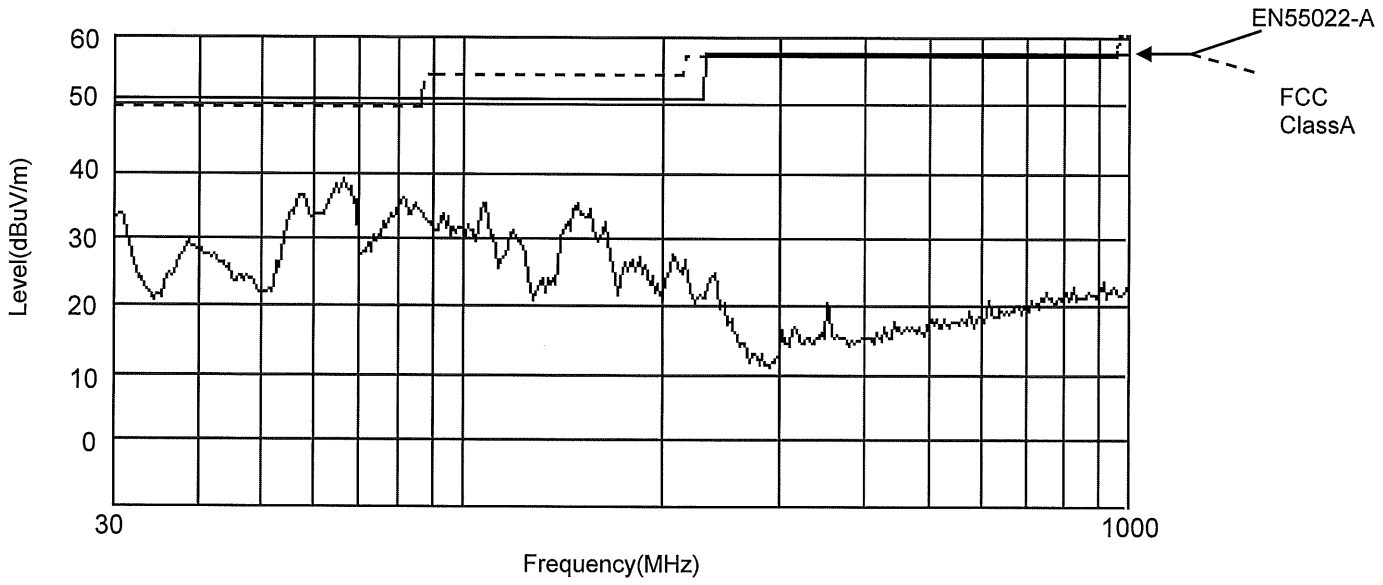
HFE2500

12V

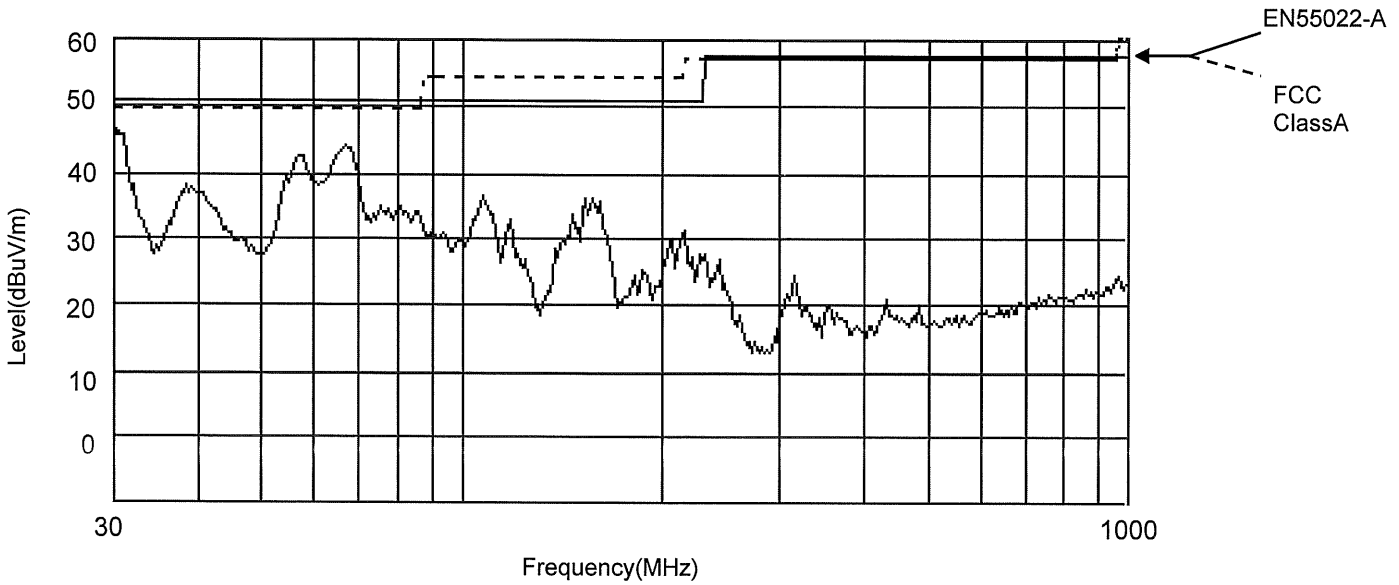
HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 100VAC
 Vout: 12V
 Iout: 100%
 Ta: 25°C

HORIZONTAL



VERTICAL



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
30.6	45.6	41.2	49.5(FCC)	-8.3	Vertical
30.6	45.6	41.2	50.5(EN)	-9.3	Vertical
66.3	38.5	34.5	49.5(FCC)	-15	Horizontal
66.3	38.5	34.5	50.5(EN)	-16	Horizontal

Limits of EN55022-A are same as VCCI-A

2. Test Data

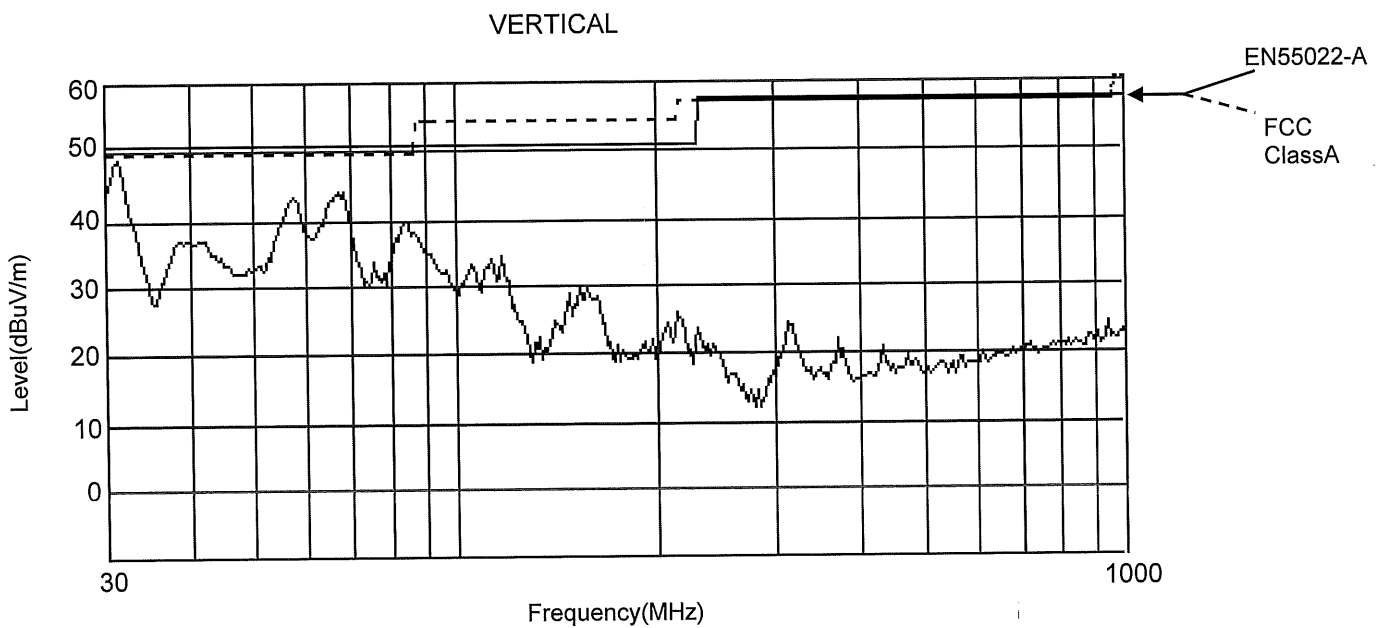
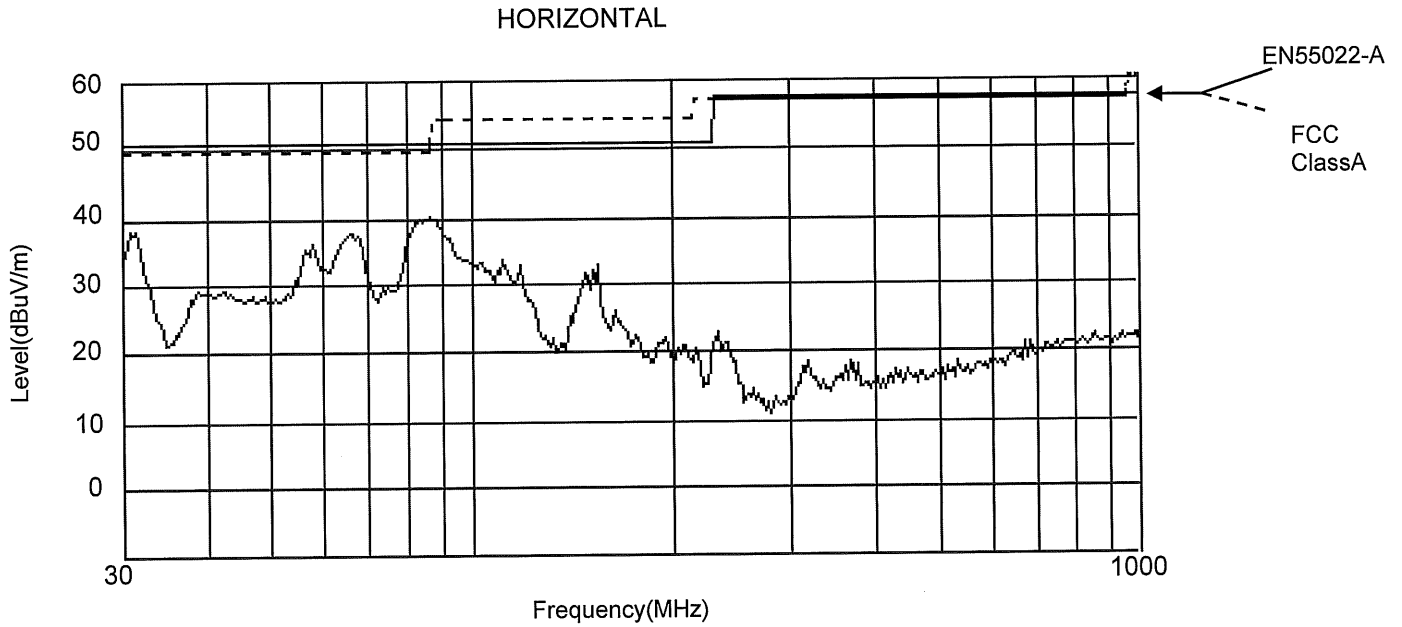
2.2 Radiated Emission

HFE2500

12V

HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 230VAC
 Vout: 12V
 Iout: 100%
 Ta: 25°C



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
31.6	49	44.6	49.5(FCC)	-4.9	Vertical
31.6	49	44.6	50.5(EN)	-5.9	Vertical
86.9	39.8	35.8	49.5(FCC)	-13.7	Horizontal
86.9	39.8	35.8	50.5(EN)	-14.7	Horizontal

Limits of EN55022-A are same as VCCI-A

2. Test Data

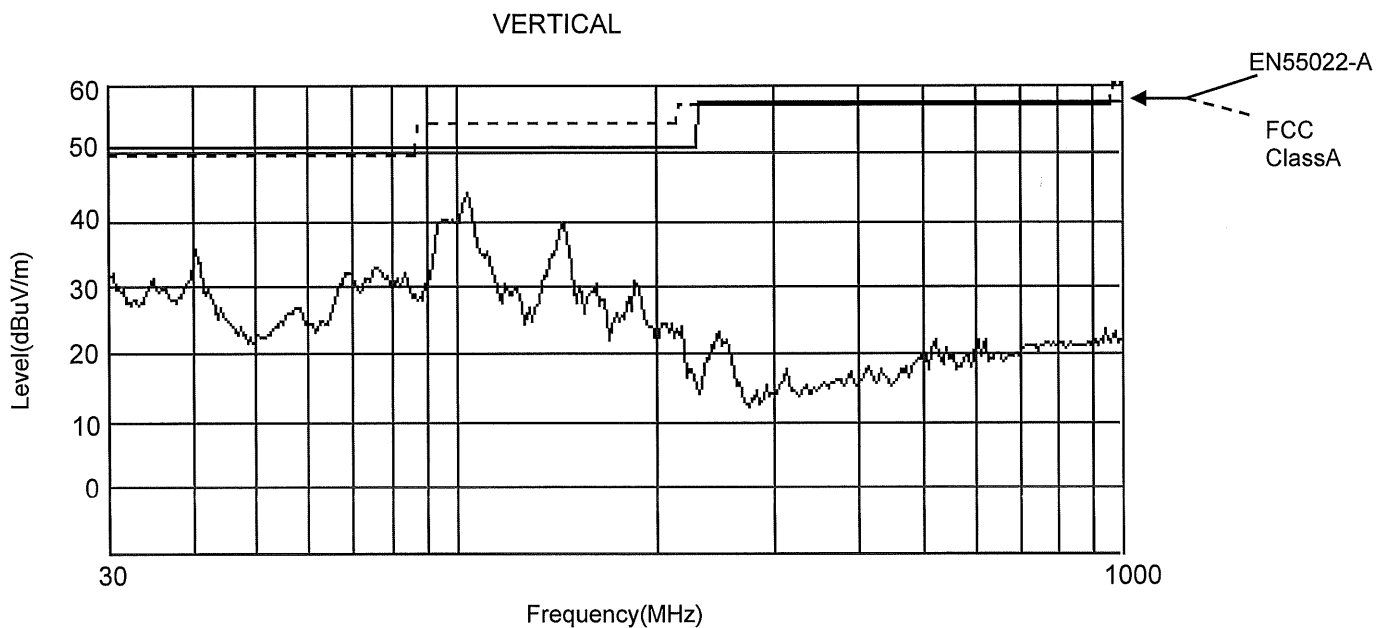
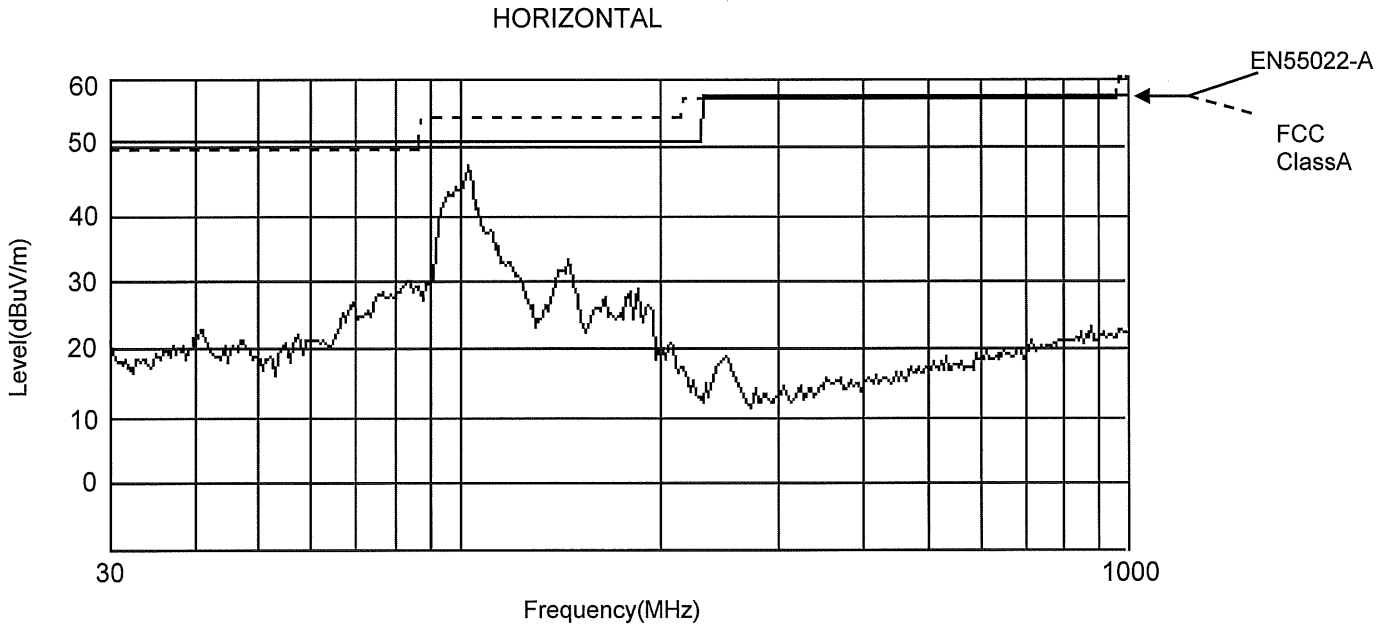
HFE2500

2.2 Radiated Emission

24V

HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 100VAC
 Vout: 24V
 Iout: 100%
 Ta: 25°C



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
103.7	43.6	38.8	54(FCC)	-15.2	Vertical
103.7	43.6	38.8	50.5(EN)	-11.7	Vertical
102.7	46.6	41.6	54(FCC)	-12.4	Horizontal
102.7	46.6	41.6	50.5(EN)	-8.9	Horizontal

Limits of EN55022-A are same as VCCI-A

2. Test Data

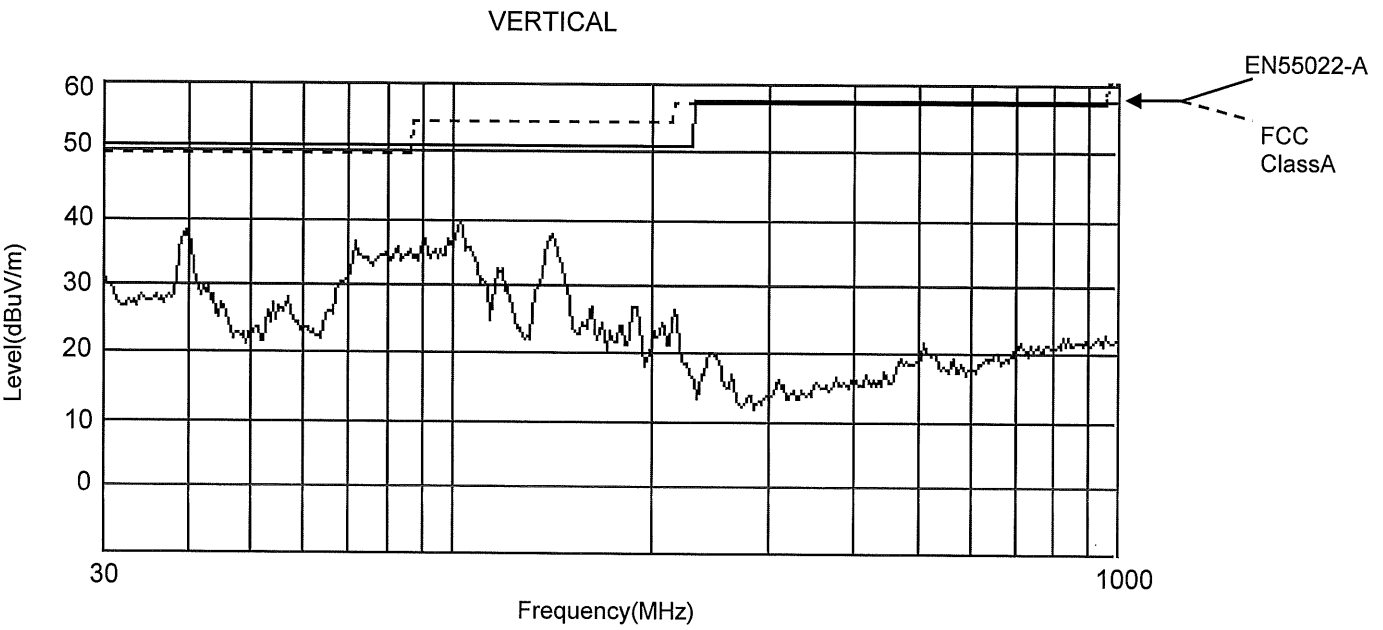
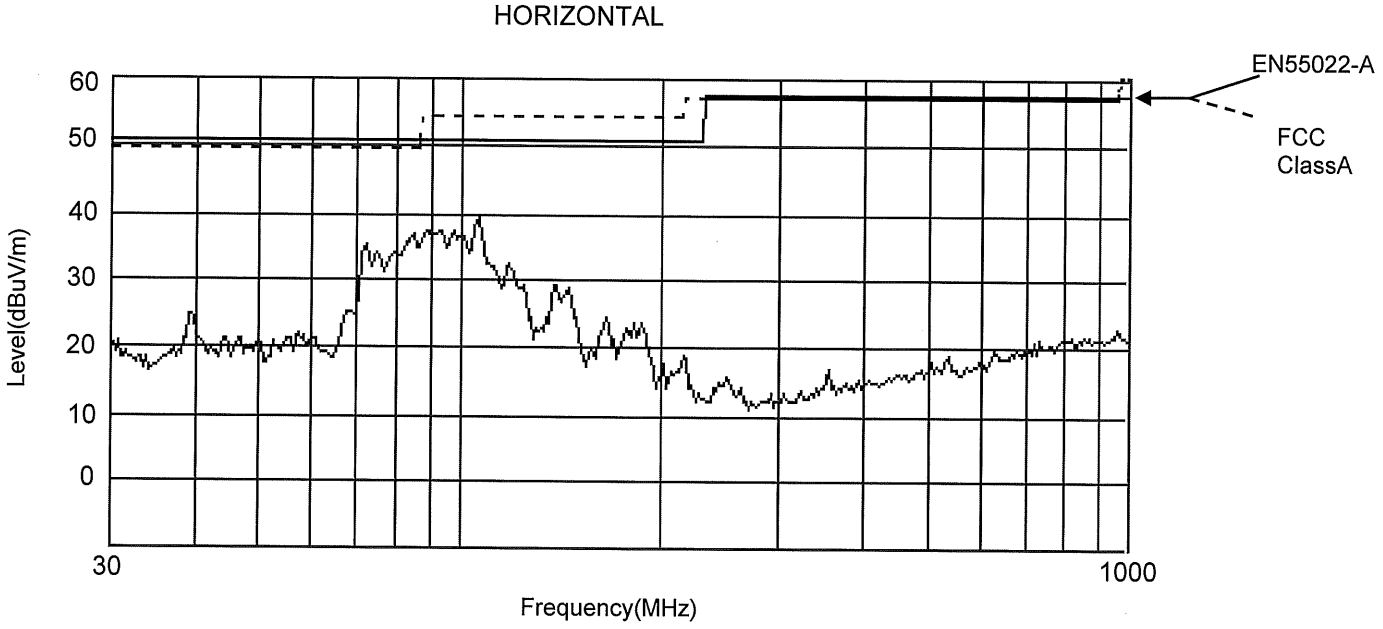
2.2 Radiated Emission

HFE2500

24V

HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 230VAC
 Vout: 24V
 Iout: 100%
 Ta: 25°C



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
102.7	39.2	35	54(FCC)	-19	Vertical
102.7	39.2	35	50.5(EN)	-15.5	Vertical
105.6	38.6	34.2	54(FCC)	-19.8	Horizontal
105.6	38.6	34.2	50.5(EN)	-16.3	Horizontal

Limits of EN55022-A are same as VCCI-A

2. Test Data

HFE2500

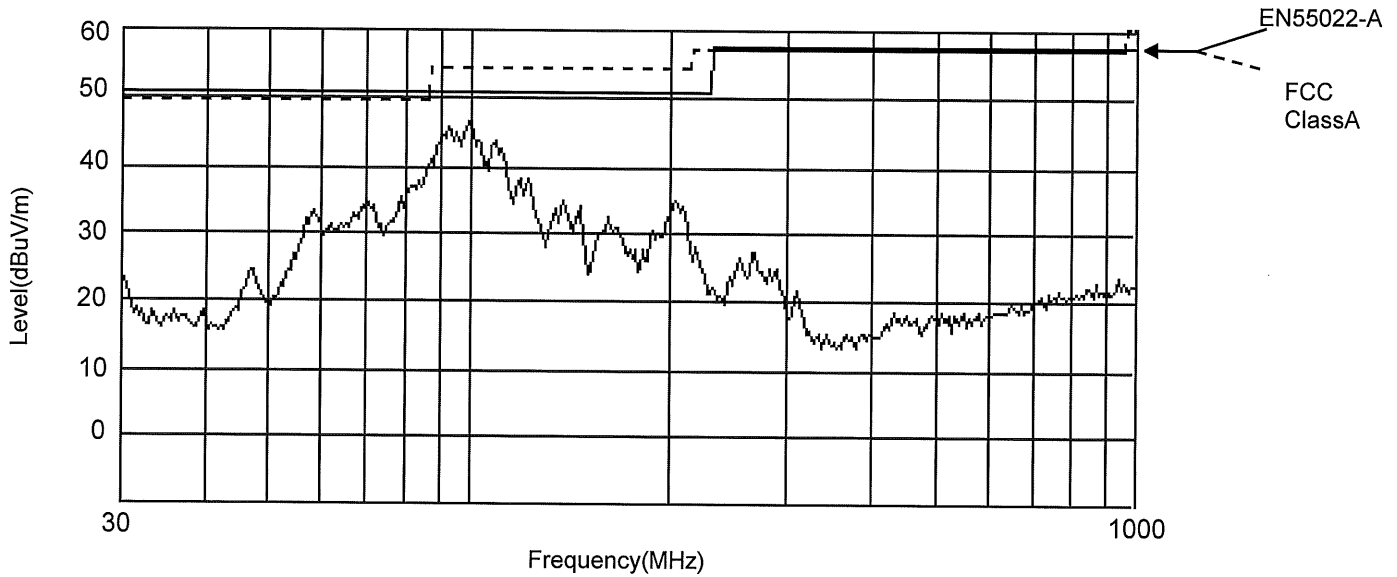
2.2 Radiated Emission

48V

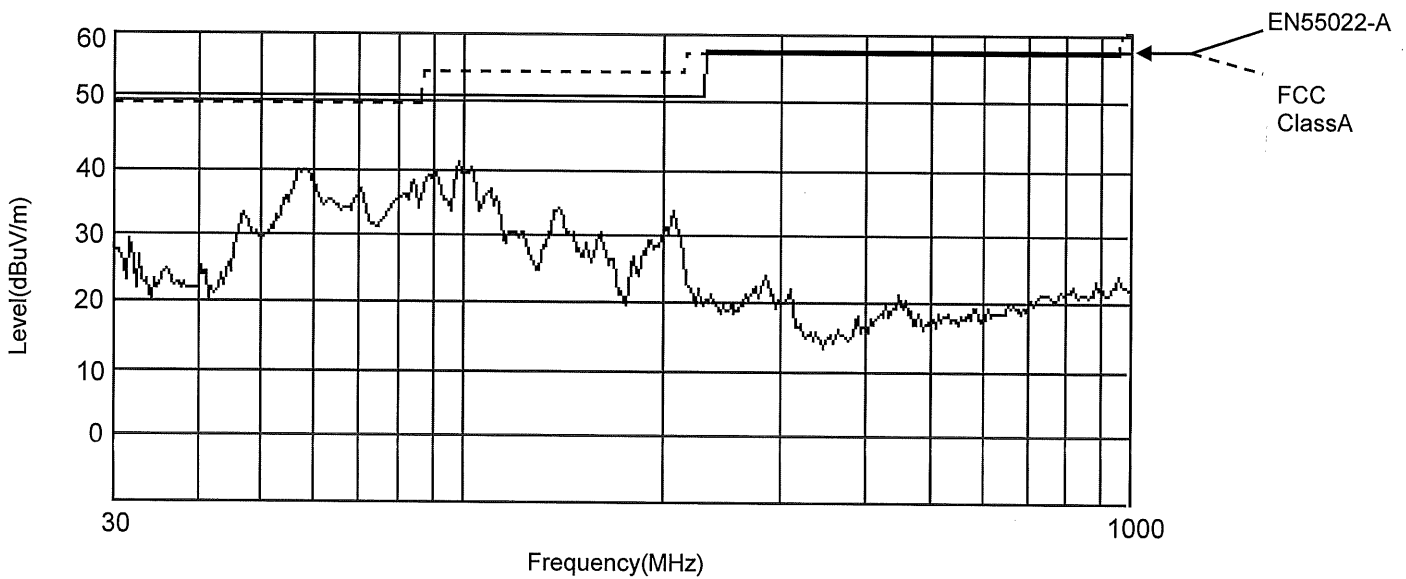
HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 100VAC
 Vout: 48V
 Iout: 100%
 Ta: 25°C

HORIZONTAL



VERTICAL



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
99.8	40.8	36.7	54(FCC)	-17.3	Vertical
99.8	40.8	36.7	50.5(EN)	-13.8	Vertical
98.9	47.4	42.7	54(FCC)	-11.3	Horizontal
98.9	47.4	42.7	50.5(EN)	-7.8	Horizontal

Limits of EN55022-A are same as VCCI-A

2. Test Data

HFE2500

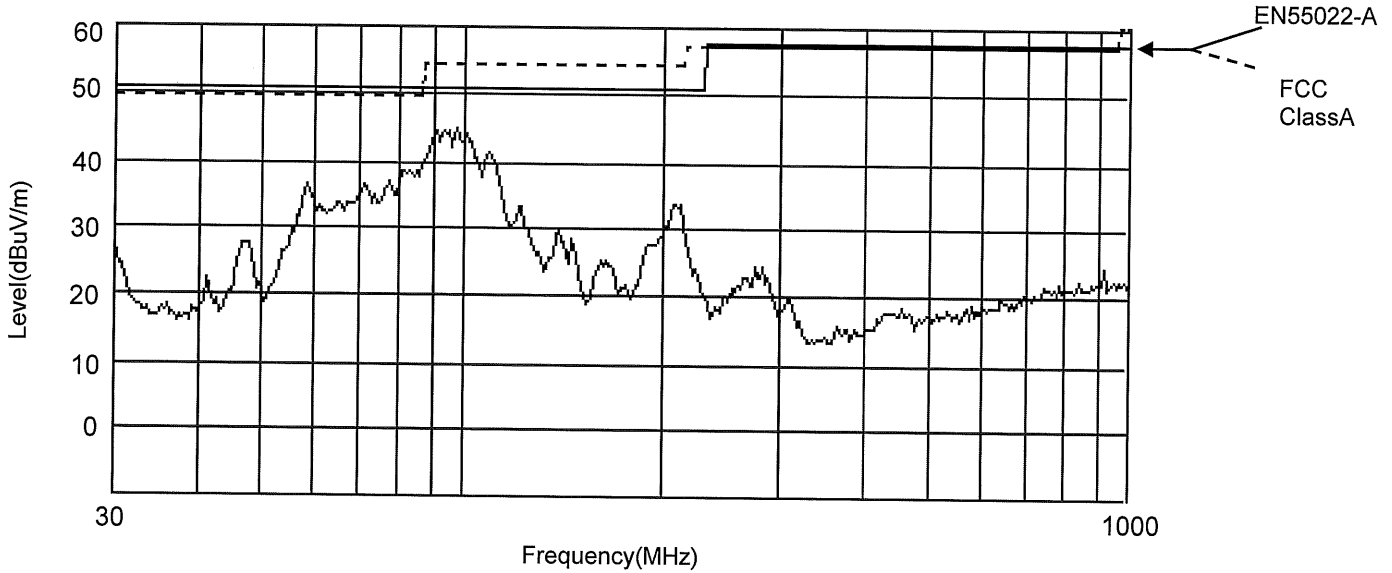
2.2 Radiated Emission

48V

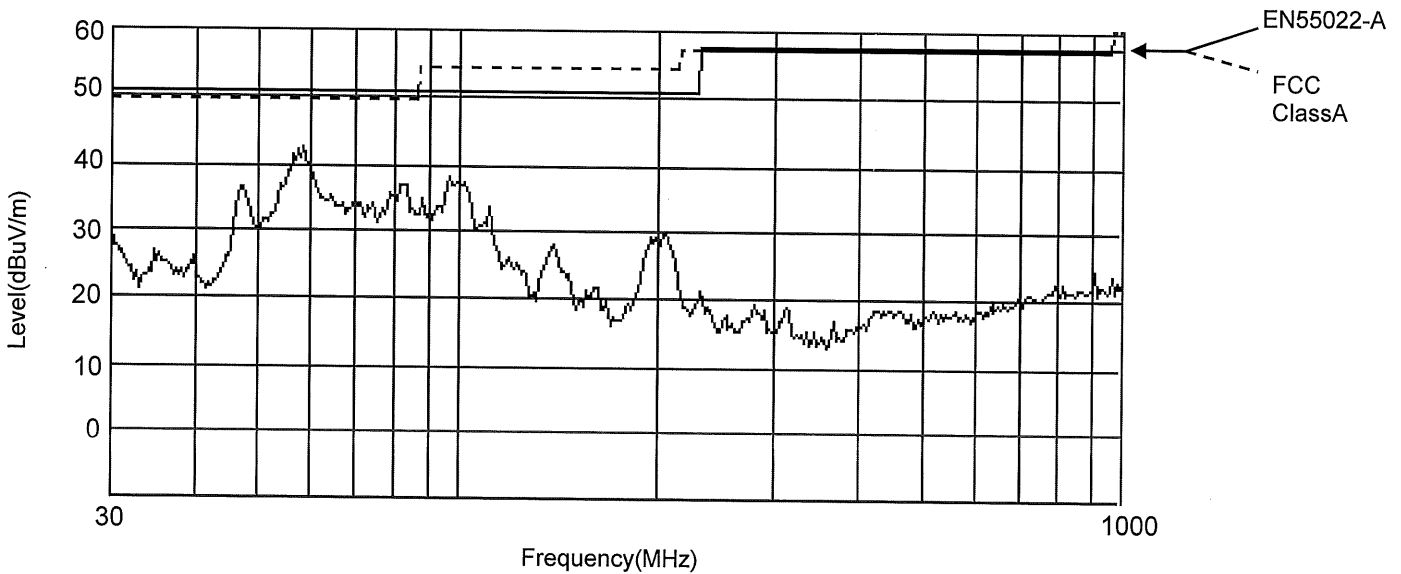
HFE 2500 installed in HFE-S1U Rack

Conditions: Vin: 230VAC
 Vout: 48V
 Iout: 100%
 Ta: 25°C

HORIZONTAL



VERTICAL



Freq (MHz)	Peak Amp (dBuV/m)	QP Amp (dBuV/m)	Limit (dBuV/m)	QP margin (dB)	Polariz.
58.9	42.4	38.2	49.5(FCC)	-11.3	Vertical
58.9	42.4	38.2	50.5(EN)	-12.3	Vertical
101.3	45.3	40.3	54(FCC)	-13.7	Horizontal
101.3	45.3	40.3	50.5(EN)	-10.2	Horizontal

Limits of EN55022-A are same as VCCI-A