



# ADA1000F EMI/EMS Test result

October 13, 2004  
Design engineering dep.

Approved : Takahiro Yoneda  
Takahiro Yoneda

Prepared : Tetsuo Koide  
Tetsuo Koide

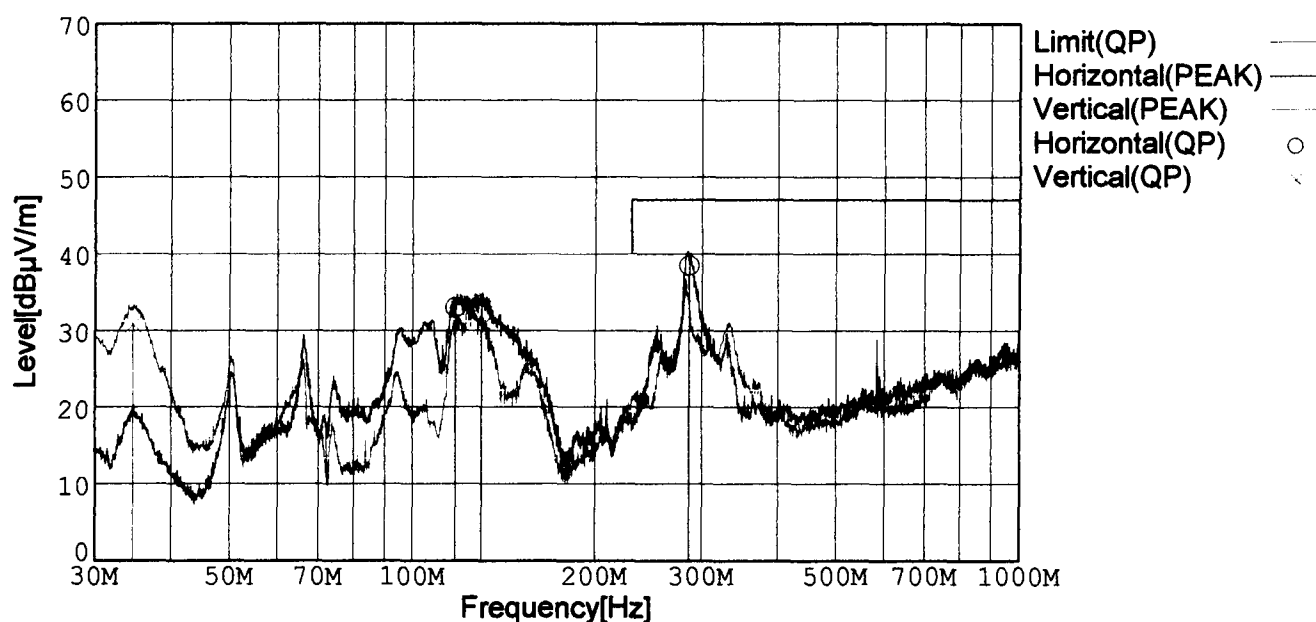
No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input(AC100V,120V,230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$	(1)Meets the undermentioned standard. FCC Part15 classB , VCCI classB CISPR22 classB , EN55022-B	OK
2	Radiated emission	(1) Rated input(AC100V,120V,230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$	(1)Meets the undermentioned standard. FCC Part15 classB , VCCI classB CISPR22 classB , EN55022-B	OK
3	Harmonic current (EN61000-3-2)	(1) Rated input (AC100V,230V) (2) Load - 0 - Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$	(1)Meets the undermentioned standard. EN61000-3-2 classA	OK
4	Static electricity immunity test (EN61000-4-2)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Contact discharge voltage 8[kV] (Level 4)	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
5	Radiated, radio-frequency, electromagnetic field immunity test (EN61000-4-3)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4)Testing field strength 10[V/m] (Level 3)	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
6	Electrical fast transient/ burst immunity test (EN61000-4-4)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test peak voltage 4[kV] (Level 4)	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
7	Surge immunity test (EN61000-4-5)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Test voltage Line to line 2[kV] (Level 3) Line to earth 4[kV] (Level 4)	(1)The power supply is not stop (2)Circuit does not malfunction. (3)No abnormality of the insulation destruction etc. (4)Parts are no damaged.	OK
8	Immunity to conducted disturbances, induced by radio-frequency fields (EN61000-4-6)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Voltage level (e.m.f.) 10[V] (Level 3)	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
9	Power frequency magnetic field immunity test (EN61000-4-8)	(1) Rated input (AC230V) (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$ (4) Magnetic field 30A/m (Level 4)	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK
10	Voltage dips, short interruptions and voltage variations immunity test (EN61000-4-11)	(1) Rated input (AC230V) -30% reduction at 10mS min. -60% reduction at 100mS min -95% reduction at 5S min. - $\pm 10\%$ variation at 15 minutes (2) Rated load (3) Ambient temp. $25 \pm 10^{\circ}\text{C}$	(1)No protection circuit failure. (2)No output voltage drop with control circuit failure. (3)No any other function failure	OK



# RADIATED EMISSION

Model Name : ADA1000F-48  
 Model No. :  
 Serial No. :  
 Points : 4  
 Detector : PEAK/QP  
 Polarization : Hori. & Vert.  
 Power Supply : 230V(1Phase) 50Hz  
 Limit: [EN 55022] Class B<3m>

Temp. : 25deg C  
 Humi. : 45%  
 Date : 2002/11/11 16:59  
 Test Equip. : R3132,ESPC  
 Comment : Load100%(+48V21A)



Frequency [MHz]	Meter Reading (QP) [dBμV]	Ant. Type	Antenna Factor [dB/m]	Cable & Preamp [dB]	Level (QP) [dBμV/m]	Angle[°]	Height [cm]	Polar.	Limit [dBμV/m]	Margin [dB]
117.847	47.1	BL	10.9	-25.1	32.9	159	150	Hori.	40.0	7.1
130.133	46.0	BL	11.2	-25.0	32.2	141	156	Hori.	40.0	7.8
285.851	50.2	BL	12.4	-24.2	38.4	170	104	Hori.	47.0	8.6
34.729	43.2	BL	15.5	-27.9	30.8	276	101	Vert.	40.0	9.2

BL: Biconi-Log



# LINE CONDUCTION

Model Name : ADA1000F-48

Model No. :

Serial No. :

Points : 8

Detector : PEAK/QP/Ave.

Line Mode : VA/VB

Power Supply : 230V(1Phase) 50Hz

Limit1: [EN 55022] Class B(QP)

Limit2: [EN 55022] Class B(Ave.)

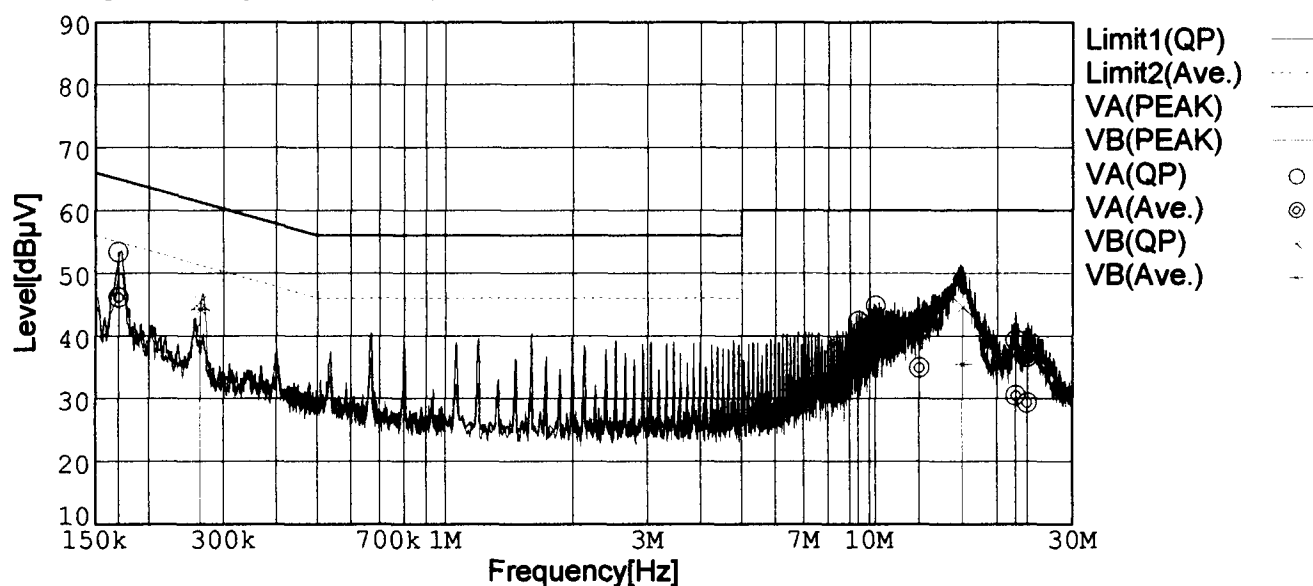
Temp. : 25deg C

Humi. : 45%

Date : 2002/11/11 15:33

Test Equip. : R3132,ESPC

Comment : Load100%(+48V21A)



Frequency [MHz]	Meter Reading (QP) [dBμV]	Meter Reading (Ave.) [dBμV]	Factor [dB]	Level (QP) [dBμV]	Level (Ave.) [dBμV]	Line	Limit (QP) [dBμV]	Limit (Ave.) [dBμV]	Margin (QP)[dB]	Margin (Ave.) [dB]
0.1698	43.4	36.1	10.0	53.4	46.1	VA	65.0	55.0	11.6	8.9
9.4088	31.8	28.8	10.5	42.3	39.3	VA	60.0	50.0	17.7	10.7
10.3322	34.3	31.7	10.5	44.8	42.2	VA	60.0	50.0	15.2	7.8
13.1077	30.2	24.3	10.6	40.8	34.9	VA	60.0	50.0	19.2	15.1
22.1074	28.4	19.6	10.9	39.3	30.5	VA	60.0	50.0	20.7	19.5
23.5571	25.7	18.4	10.9	36.6	29.3	VA	60.0	50.0	23.4	20.7
0.2642	35.4	34.2	10.0	45.4	44.2	VB	61.3	51.3	15.9	7.1
16.5711	33.8	24.8	10.7	44.5	35.5	VB	60.0	50.0	15.5	14.5