



PBA30F EMI/EMS Test result

November 8, 2005
Design engineering dep.

Approved : *K. Iyohara*

Prepared : *Akito Ioboji*

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 EN55011-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 EN55011-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 strength 30[A/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

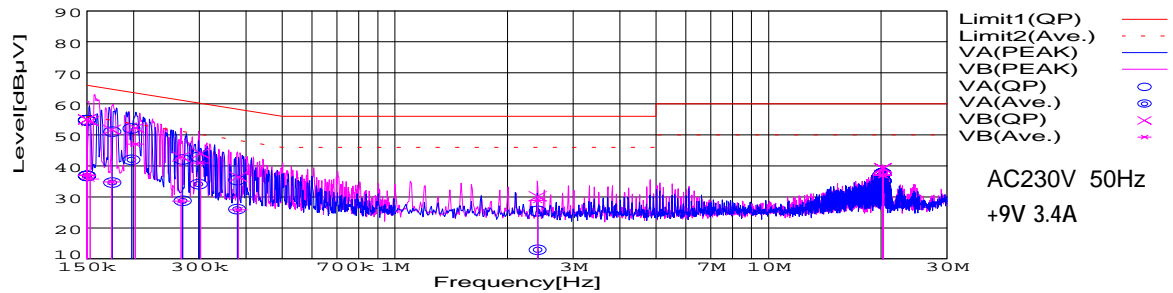
DATA SHEET

Date	16-May-05
Temp.	25 degreeC
Humid.	45 %RH
Tested by	K.Kosugi

Model	PBA30F-9
Test	EMI Line conduction & Radiated emission

LINE CONDUCTION

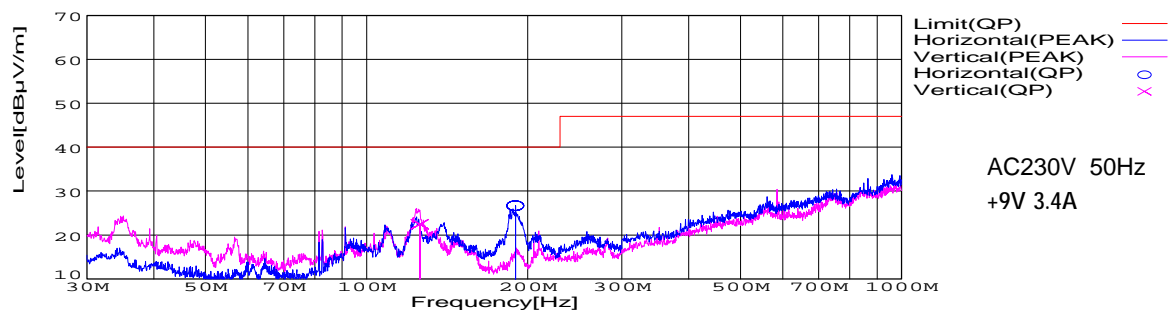
Model Name	: PBA30F-9	Temp.	: 25 degreeC
Model No.	:	Humi.	: 45 %
Serial No.	:	Date	: 2005/5/16 19:17
Points	: 9	Test Equip.	: R3132,ESPC
Detector	: PEAK/QP/Ave.	Load Line	: 100 mm
Line Mode	: VA/VB	Comment	:
Power Supply	: AC 230V 50Hz		
Limit1	: [EN 55022] Class B(QP)		
Limit2	: [EN 55022] Class B(Ave.)		



Frequency [MHz]	Meter Reading (Ave.) [dBμV]	Meter Reading (QP) [dBμV]	Factor [dB]	Level(Ave.) [dBμV]	Level(QP) [dBμV]	Line	Limit(Ave.) [dBμV]	Limit(QP) [dBμV]	Margin(Ave.) [dB]	Margin(QP) [dB]
0.1503	26.7	44.6	10	36.7	54.6	VA	56	66	19.3	11.4
0.1501	27	44.9	10	37	54.9	VB	56	66	19	11.1
0.1749	24.9	41.7	10	34.9	51.7	VB	54.7	64.7	19.8	13
0.2023	37	42.3	10	47	52.3	VB	53.5	63.5	6.5	11.2
0.268	18.7	33	10	28.7	43	VB	51.2	61.2	22.5	18.2
0.3022	30.9	34.1	10	40.9	44.1	VB	50.2	60.2	9.3	16.1
2.4116	18.7	20	10.2	28.9	30.2	VB	46	56	17.1	25.8
20.2127	26.1	28.4	10.8	36.9	39.2	VB	50	60	13.1	20.8

RADIATED EMISSION

Model Name	: PBA30F-9	Temp.	: 25 degreeC
Model No.	:	Humi.	: 45 %
Serial No.	:	Date	: 2005/5/24 14:00
Points	: 2	Test Equip.	: R3132,ESPC
Detector	: PEAK/QP	Load Line	: 100mm
Polarization	: Hori. & Vert.	Comment	:
Power Supply	: AC 230V 50Hz		
Limit	: [EN 55022] Class B<3m>		



Frequency [MHz]	MeterReading (QP) [dBμV]	Ant. Type	Antenna Factor [dB/m]	Cable & Preamp [dB]	Level(QP) [dBμV/m]	Angle [°]	Height [cm]	Polar.	Limit [dBμV/m]	Margin [dB]
189.748	41.9	BL	8.1	-23.3	26.7	271	133	Hori.	40	13.3
125.779	38.4	BL	11.2	-27.2	22.4	112	120	Vert.	40	17.6