



## PBA300F EMI/EMS Test result

 September 16, 2004  
 Design engineering dep.
Approved : *Takahiro Uoneda*Prepared : *Naime Ito*

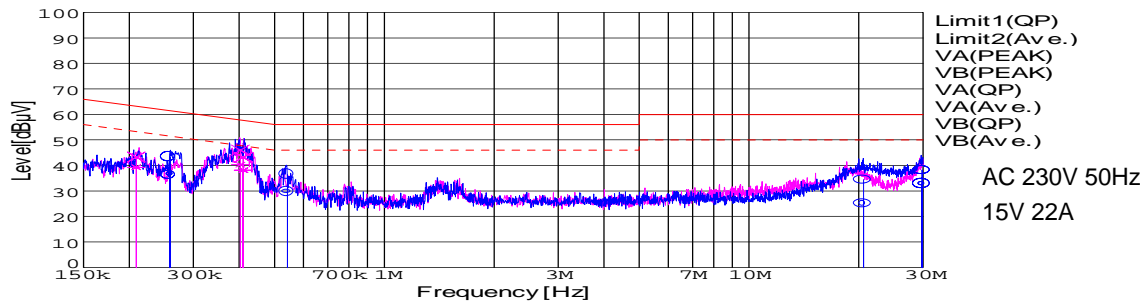
No.	Test item	Conditions	Conditions of Acceptability	Result
1	Line conduction	(1) Rated input(AC100V,120V,230V) (2) Rated load (3) Ambient temp. $25\pm 10^{\circ}\text{C}$	(1)Meets the undermentioned standard. FCC Part15 classB , VCCI classB CISPR22 classB , EN55022-B	OK
2	Radiated emission	(1) Rated 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

DATA SHEET			Date	15-Jan-04
Model	PBA300F-15		Temp.	25 degreeC
Test	EMI Line conduction & Radiated emission		Humid.	45 %RH
			Tested by	H.GOTO

## LINE CONDUCTION

Model Name : PBA300F-15  
 Model No. :  
 Serial No. :  
 Points : 7  
 Detector : PEAK/QP/Ave.  
 Line Mode : VA/VB  
 Power Supply : AC 230V 50Hz  
 Limit1: [EN 55022] Class B(QP)  
 Limit2: [EN 55022] Class B(Ave.)

Temp. : 25  
 Humi. : 45  
 Date : 2004/1/15 10:59  
 Test Equip. : R3132,ESPC  
 Load Line : 150mm  
 Comment : H.GOTO  
 15V 22A

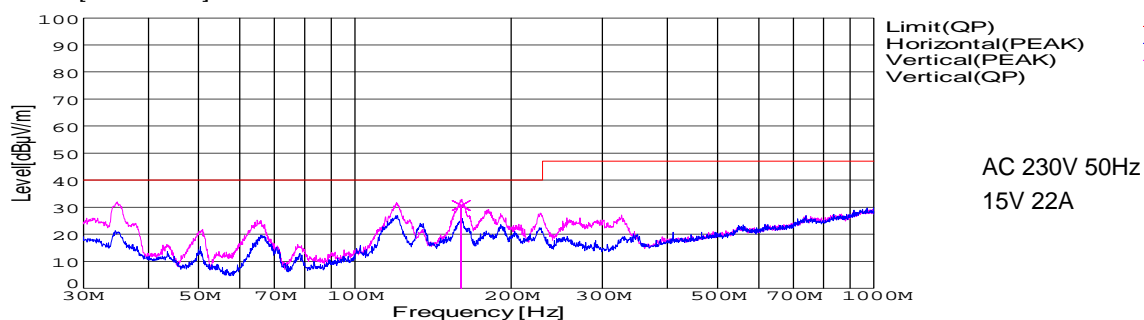


Frequency [MHz]	Meter Reading (Ave.) [dBuV]	Meter Reading (QP) [dBuV]	Factor [dB]	Level(Ave.) [dBuV]	Level(QP) [dBuV]	Line	Limit(Ave.) [dBuV]	Limit(QP) [dBuV]	Margin(Ave.) [dB]	Margin(QP) [dB]
0.2089	29.5	33.5	9.8	39.3	43.3	VB	53.3	63.3	14	20
0.2585	26.6	33.6	9.8	36.4	43.4	VA	51.5	61.5	15.1	18.1
0.4033	30.4	36.1	9.9	40.3	46	VB	47.8	57.8	7.5	11.8
0.4107	28.3	33.3	9.9	38.2	43.2	VB	47.6	57.6	9.4	14.4
0.5424	19.9	26.6	9.9	29.8	36.5	VA	46	56	16.2	19.5
20.592	14.8	24.1	10.3	25.1	34.4	VA	50	60	24.9	25.6
29.7875	22.3	27.7	10.5	32.8	38.2	VA	50	60	17.2	21.8

## RADIATED EMISSION

Model Name : PBA300F-15  
 Model No. :  
 Serial No. :  
 Points : 1  
 Detector : PEAK/QP  
 Polarization : Vertical  
 Power Supply : AC 230V 50Hz  
 Limit: [EN 55022] Class B<3m>

Temp. : 25  
 Humi. : 45  
 Date : 2004/1/15 17:06  
 Test Equip. : R3132,ESPC  
 Load Line : 150mm  
 Comment : H.GOTO  
 15V 22A



Frequency [MHz]	MeterReading (QP) [dBuV]	Ant. Type	Antenna Factor [dB/m]	Cable & Preamp [dB]	Level(QP) [dBuV/m]	Angle [°]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
160.313	52.2	BL	9.9	-31.5	30.6	2	159	Vert.	40	9.4