

PM02006-00

SG6848

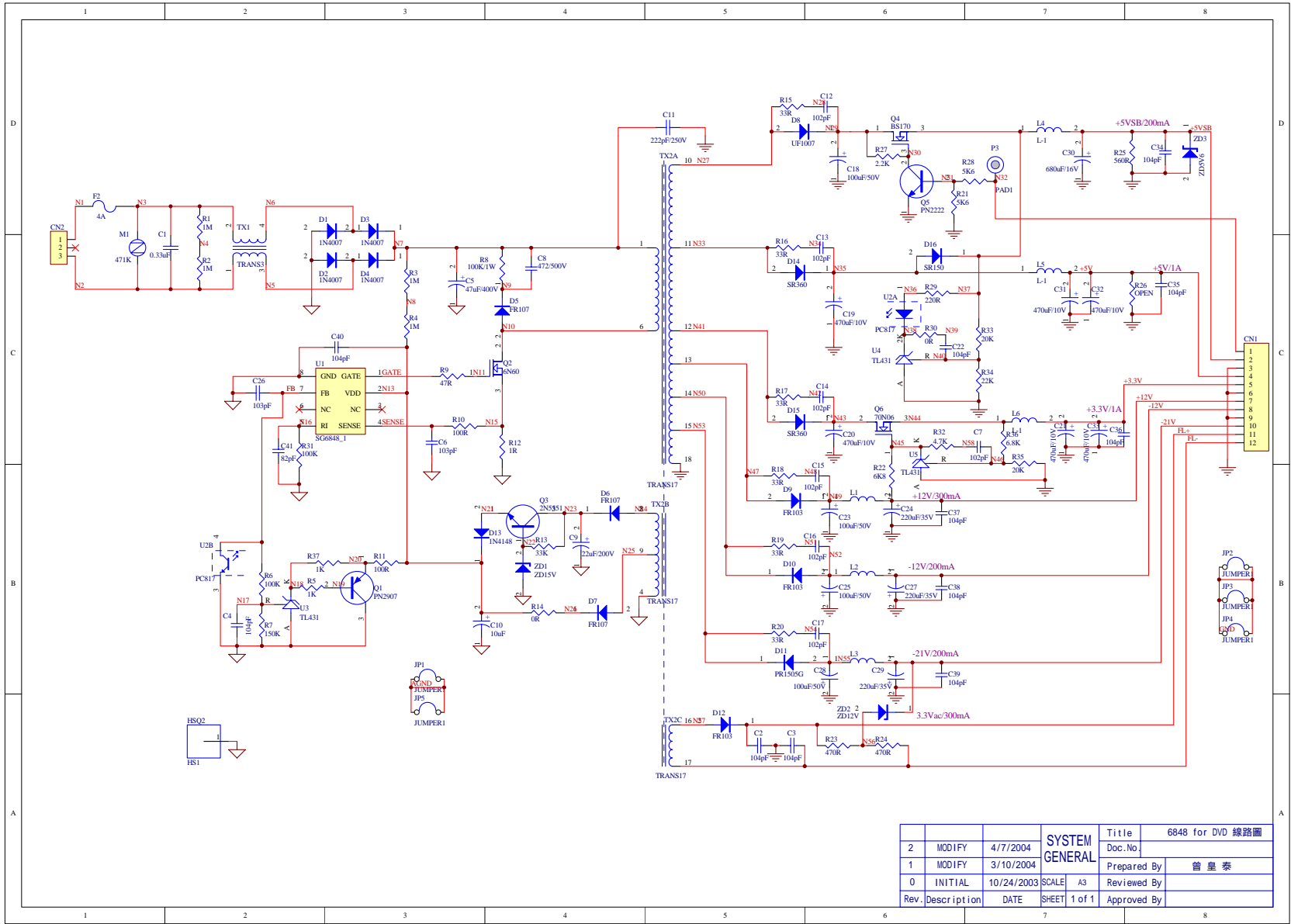
5VSB/0.2A; 5V/1A; 3.3V/1A ;
12V/0.3A; -12V/0.2A; -21V/0.2A

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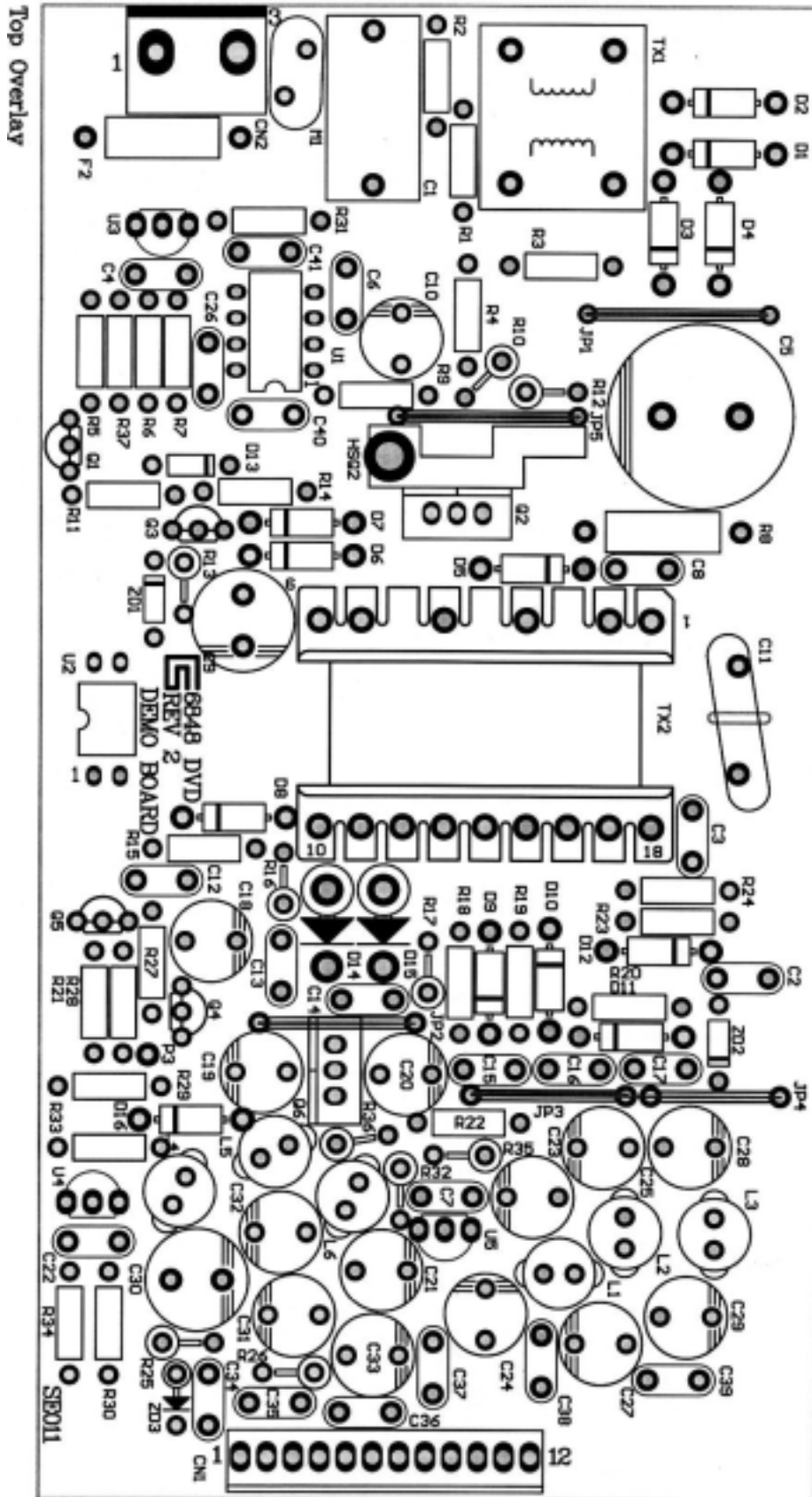
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文件名稱	PM02006-00線路圖	制訂部門	SE
文件編號	REV: A0	文件頁數	2/21

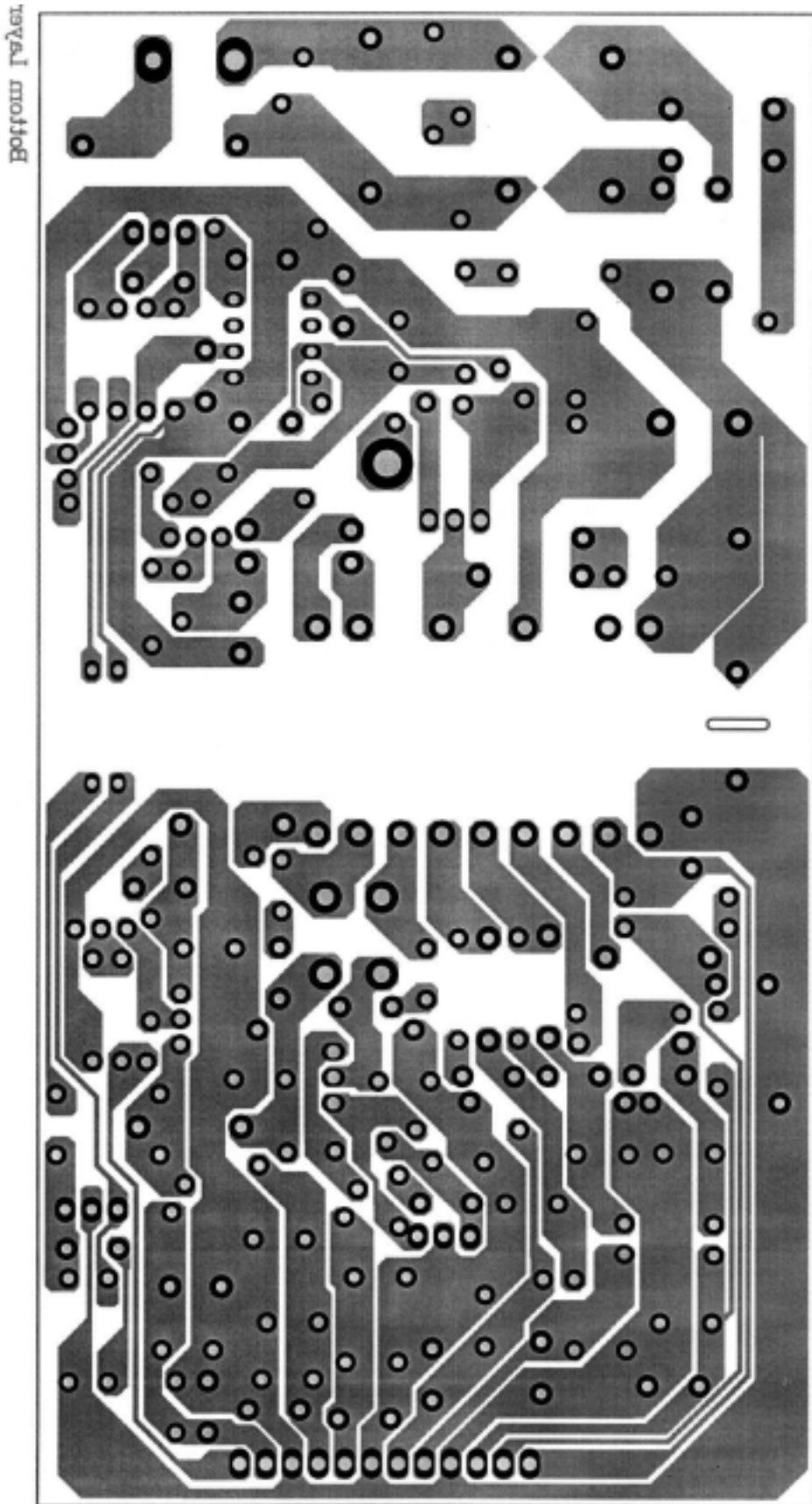


			SYSTEM GENERAL	Title	6848 for DVD 線路圖
				Doc.No.	
2	MODIFY	4/7/2004	Prepared By	曾皇泰	
1	MODIFY	3/10/2004	Reviewed By		
0	INITIAL	10/24/2003	SCALE	A3	
Rev.	Description	DATE	SHEET	1 of 1	Approved By

文件名稱	PM02006-00佈線圖	制訂部門	SE
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文件名稱	PM02006-00佈線圖	制訂部門	SE
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文件名稱	PM02006-00 BOM表	制訂部門	SE
文件編號	REV: A0	文件頁數	5/21

材料代號	材料名稱	標準用量	材料規格	組裝位置
02-1310505-00	碳膜電阻 1/4W 1MΩ +/-5% TAPING	4		R1,R2,R3,R4
02-1310205-00	碳膜電阻 1/4W 1K +/-5% TAPING	2		R5 R37
02-1310405-00	碳膜電阻 1/4W 100K +/-5% TAPING	2		R6,R31
02-1315405-03	碳膜電阻 1/4W 150K +/-5% F 型	1		R7
02-3510405-00	氧化膜電阻 1W 100K +/-5% TAPING	1		R8
02-1347005-00	碳膜電阻 1/4W 47 +/-5% TAPING	1		R9
02-1310105-00	碳膜電阻 1/4W 100 +/-5% TAPING	2		R10,R11
02-3500101-00	氧化膜電阻 1W 1 +/-1% TAPING	1		R12
02-1333305-00	碳膜電阻 1/4W 33K +/-5% TAPING	1		R13
02-0000000-00	JUMPER WIRE 0.6*52mm	7		R14,R30,JP1,JP2,JP3,JP4,JP5
02-1333005-00	碳膜電阻 1/4W 33 +/-5% TAPING	6		R15,R16,R17,R18,R19,R20
02-1356205-00	碳膜電阻 1/4W 5K6 +/-5% TAPING	2		R21,R28
02-1368205-00	碳膜電阻 1/4W 6K8 +/-5% TAPING	2		R22,R36
02-1347105-00	碳膜電阻 1/4W 470 +/-5% TAPING	2		R23,R24
02-1356105-03	碳膜電阻 1/4W 560 +/-5% F 型	1		R25
02-1322205-00	碳膜電阻 1/4W 2K2 +/-5% TAPING	1		R27
02-1322105-00	碳膜電阻 1/4W 220 +/-5% TAPING	1		R29
02-1347205-00	碳膜電阻 1/4W 4K7 +/-5% TAPING	1		R32
02-2320301-00	金屬膜電阻 1/4W 20K +/-1% TAPING	2		R33 R35
02-2322301-00	金屬膜電阻 1/4W 22K +/-1% TAPING	1		R34
03-B033211-00	X2 電容 0.33u 275V +/-20% 散裝	1	17.7*8.1*16	C1
03-101043B-00	積層電容 104P 50V +80/-20% TAPING	11		C2,C3,C4,C22,C34,C35,C36,C37,C38,C39,C40
03-51470C1-01	電解電容 47u 400V 105 RADIAL 散裝 KMG	1		C5
03-001033B-01	陶瓷電容 103 P 50V+80/-20% 散裝	2		C6,C26
03-001023B-01	陶瓷電容 102 P 50V +80/-20% 散裝	1		C7
03-004726B-01	陶瓷電容 472 P 500V +80/-20% 散裝	1		C8
03-5222091-01	電解電容 22u 200V 105 RADIAL 散裝 KMG	1	10*16	C9
03-5010051-01	電解電容 10u 50V 105 RADIAL 散裝	1		C10
03-D022201-00	Y2 電容 222P 250V +/-20% 散裝	1		C11
03-001027B-01	陶瓷電容 102 P 1KV +80/-20% 散裝	6		C12,C13,C14,C15,C16,C17
03-5110151-01	電解電容 100u 50V 105 RADIAL 散裝	4	8*11.5	C18,C23,C25,C28
03-5247111-01	電解電容 470u 10V 105 RADIAL 散裝	6		C19,C20,C21,C31,C32,C33
03-5222141-01	電解電容 220u 35V 85 RADIAL 散裝	3	8*11.5	C24,C27,C29
03-5068131-01	電解電容 680u 25V 105 RADIAL 散裝	1		C30
03-0008239-01	陶磁電容 82P 50V +/-10% 散裝	1		C41
07-0400700-01	二極體 1N4007 TAPING	4		D1,D2,D3,D4
07-0010700-00	二極體 FR107 TAPING	4		D5,D6,D7,D8,
07-0010300-00	二極體 FR103 TAPING	3		D9,D10,D12
07-0015700-00	二極體 FR157 TAPING	1		D11



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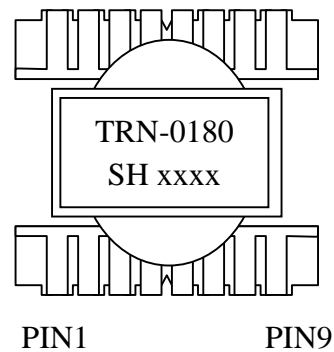
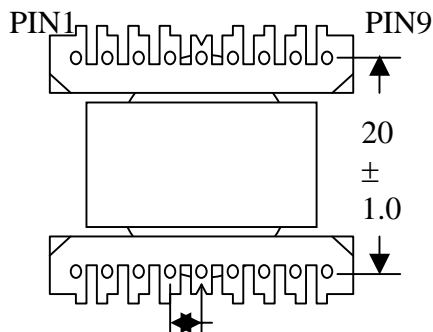
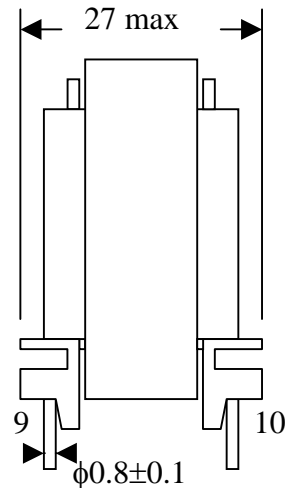
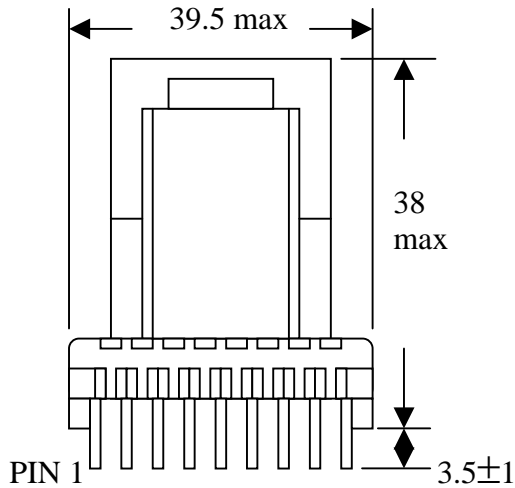
文件名稱	PM02006-00 BOM表	制訂部門	SE
文件編號	REV: A0	文件頁數	6/21

07-0414800-00	二極體 1N4148 TAPING	1		D13
07-0036000-00	二極體 SR360 TAPING	2		D14,D15
07-0015000-00	二極體 SR150 TAPING	1		D16
04-1000006-00	TRN0006 電感	6		L1,L2,L3, L4,L5,L6
04-1100040-10	MCH0040	2	BEAD C8B 3.5*3.2*1.0	D5,R12
07-2015000-00	ZENER 二極體 1/2W 15V TAPING	1		ZD1
07-2012000-00	ZENER 二極體 1/2W 12V TAPING	1		ZD2
07-2056A00-00	ZENER 二極體 1/2W 5V6 TAPING	1		ZD3
09-1029070-00	電晶體 PN2907	1		Q1
09-1007600-00	電晶體 7NB60	1		Q2
09-1255510-00	電晶體 2N5551	1		Q3
09-1001700-00	電晶體 BS170	1		Q4
09-1022220-00	電晶體 PN2222A	1		Q5
09-1070060-00	電晶體 70N06	1		Q6
11-7008170-00	IC PC817A DIP	1		U2
09-0004310-00	REGULATOR TL431 +/-1%	3		U3,U4,U5
52-0000142-00	HS MCH0142	1	HS P1-小型-AZ35	Q2 散熱片
58-2130801-00	螺絲圓頭 3 8mm 米厘牙 黑	1		Q2
54-1310198-00	MCH0198	1	絕緣釘 TR-220	Q2
54-0110165-00	MCH0165	1	矽膠片 TR-220	Q2
28-0001601-00	FUSE GLASS 250V 4A QUICK (引腳)	1	3.6*10	F2
30-0147100-00	突波吸收器 7 470V 散裝	1		M1
04-1000018-00	TRN0018	1	PNB60-T1	TX1
04-2000185-00	變壓器 TRN0185	1		TX2
SG6848D_E_FG	SG6848 DIP Ver:E	1		U1
42-8101231-00	WAFER(2510HHS)12p 2.54mm 180°	1		CN1
42-6100241-10	WAFER(8639HS) 3-1P 3.96mm 180°	1		CN2
70-0000011-02	PCB PC-SE011 REV.2	1		

SPECIFICATION APPROVAL

Customer	SYSTEM GENERAL CORP.			P/N:	TRN-0185
DATE	04/29/2004	版本	A 版	頁數	7/21

1.DIMENSION :



Note : 1.Pin 3.5.7 NO

2.Warrp 2Ts tape around side of X'FMR

3.N2 使用中間抽頭.18-12 採反方向繞線.皆在同一層.

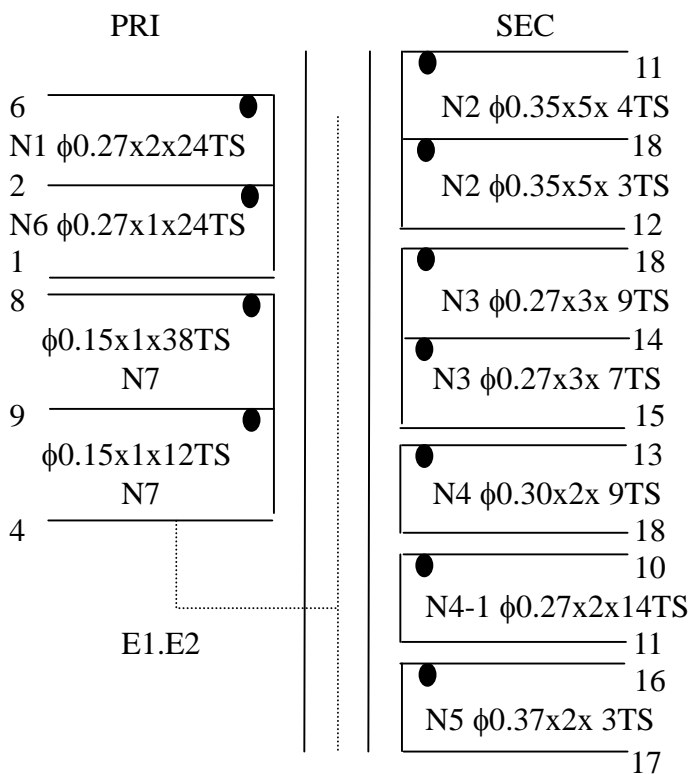
4.N2.N3.N4.N7 皆在同一層.

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)2215-8302	陳啟文	黃國隆	IDENT N O.	TRN-0185 SH XXX
FAX	(02)2215-8293	勝輝興業有限公司		DWG N O.	I2816
台北縣中和市復興路 20 號		SEN HUEI INDUSTRIAL CO.,LTD.			

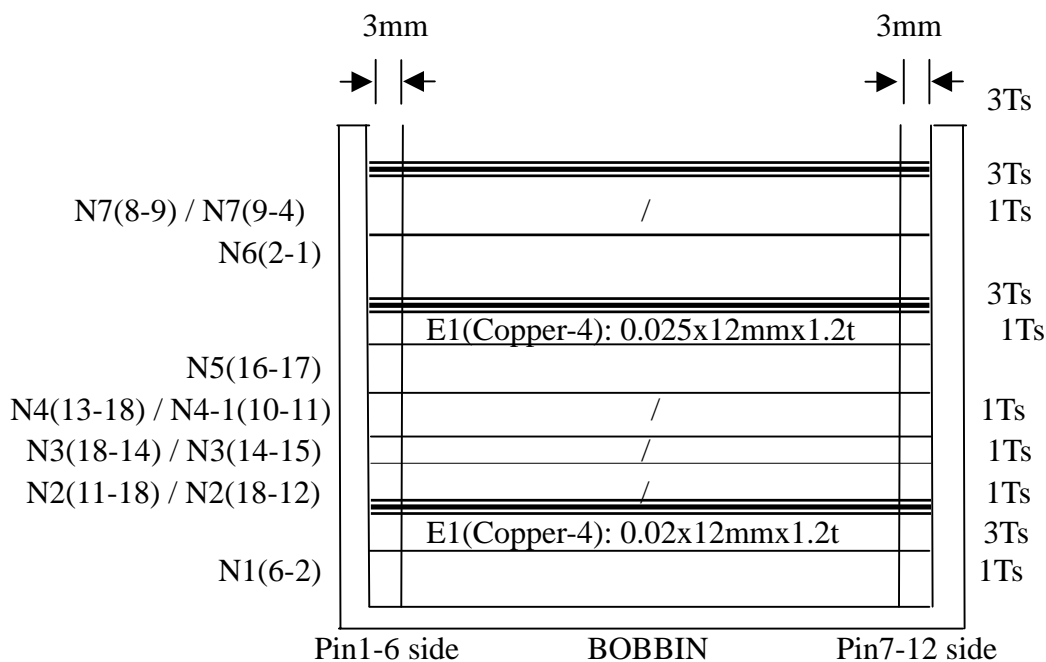
SPECIFICATION APPROVAL

Customer	SYSTEM GENERAL CORP.	P/N:	TRN-0185
DATE	04/29/2004	版本	A 版
		頁數	8/21

2.SCHEMATIC :



2.1SCHEMATIC :



Pin1-6 side BOBBIN Pin7-12 side

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)2215-8302	陳啟文	黃國隆	IDENT N O.	TRN-0185 SH XXX
FAX	(02)2215-8293	勝輝興業有限公司		DWG N O.	I2816
台北縣新店市安康路 2 段 341 巷 9 號		SEN HUEI INDUSTRIAL CO.,LTD.			

SPECIFICATION APPROVAL

Customer	SYSTEM GENERAL CORP.			P/N:	TRN-0185
DATE	04/29/2004	版本	A 版	頁數	9/21

3.ELECTRICAL SPECIFICATION :

3.1 Inductance test : at 1KHz ,1.0V

P(6-1) : 960 uH± 5%

3.2 DC Resisstance test at 25。 C

P(6-1) : 550 mOhmo max

P(11-18) : 14.0 mOhmo max

P(18-12) : 13.4 mOhmo max

P(18-14) : 71.5 mOhmo max

P(14-15) : 57 mOhmo max

P(13-18) : 89 mOhmo max

P(10-11) : 168 mOhmo max

P(16-17) : 25.0 mOhmo max

3.3 Hi-pot test :

AC 3.0K V /60Hz/5mA hi-pot for one minute between pri to sec.

AC 1.5K V /60Hz/5mA hi-pot for one minute between pri to core.

AC 1.5K V /60Hz/5mA hi-pot for one minute between sec to core.

3.4 Insuiation test :

The insulation resistance is between pri to sec and windings tocore measured by DC 500V, must Be over 100 MOhm.

3.5 Terminal strength :

1.5 Kg on terminals for 10 seconds, test the breakdown.

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)2215-8302	陳啟文	黃國隆	IDENT N O.	TRN-0185 SH XXX
FAX	(02)2215-8293	勝輝興業有限公司		DWG N O.	I2816
台北縣新店市安康路 2 段 341 巷 9 號		SEN HUEI INDUSTRIAL CO.,LTD.			

SPECIFICATION APPROVAL

Customer	SYSTEM GENERAL CORP.		P/N:	TRN-0185
DATE	04/29/2004	版本	A 版	頁數 10/21

MATERIALS LIST :

COMPONENT	MATERIAL	MANUFACTURE	UL FILE NO.
1.BOBIN	Phenolic 94v-0,t373J	Chang Chun plastics co. ltd. ERL-28-18PIN,	E59481(S)
2.CORE	3C90,PC40 NC-2H	Ferrite core ERL-28 Ferroxcube,TDK,NICERA.	
3.WIRE	UEW-B	Chuen Yih wire co.,ltd	E154709(S)
	UEW-2	Jung Shing wire co.,ltd	E79029(S)
	UEW	Tai-l electric wire & cable co.,ltd	E85640(S)
4.VARNISH	BC-346A	John C Dolph co.,itd.	E51047(M)
	468-2FC	Ripley resin engineering co inc.	E81777(N)
5.INSULATION TAPE	1350	Minnesota mining & MFG co	
	3161	Nitto denko corp.	
	749FC	Tennrich international corp.	E154354(S)
	DTS-204	Duck Sung tape co.,itd.	E105147(M)
6.MARGIN TAPE	44	Minnesota mining & MFG co	E17385(M)
	40	Tesa tuck inc.	E20780(M)
	T-750-A	Ldeal tape co inc.	E82910(M)
7.TERMINALS	Tin coated- Copper wire	Will fore special wire corp	
8.SHIELD	Copper foil	Hitachi cable ltd. 0.025x12mm	

UNIT	m/m	DRAWN	CHECK	TITLE	TRANS
TEL	(02)2215-8302	陳啟文	黃國隆	IDENT NO.	TRN-0185 SH XXX
FAX	(02)2215-8293	勝輝興業有限公司 SEN HUEI INDUSTRIAL CO.,LTD.		DWG NO.	I2816
台北縣新店市安康路 2 段 341 巷 9 號					

功能檢查表

Test Model	PM02006-00	S/N:6848XXXX
Test Date:	2004-03-24	
Test Temperature	Ambient	
Test Equipment	AC Source: EXTECH 6220 Electronic Load: Chroma 63030 Multimeter: YOKOGAWA WT210 Oscilloscope: Tektronix TDS3032	
	1 Input Current:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	2 Short Current:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	3 Input Wattage at DC output Min. load condition:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	4 Line Regulation & Load Regulation:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	5 Efficiency:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	6 Ripple & Noise:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	7 Dynamic load:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	8 DC output rise time:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	9 Trun on time:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	10 Hold up time:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	11 Overshoot & Undershoot Test:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	12 Over Power protection:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
	13 Brown out test:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
Note	V1= 5V Io(Max. load)=1A Io(Mid. load)=0.5A Io(Min. load)= 0A	V4= 12V Io(Max. load)= 0.3A Io(Mid. load)= 0.15A Io(Min. load)= 0A
	V2= 3.3V Io(Max. load)= 1A Io(Mid. load)= 0.5A Io(Min. load)= 0A	V5= -12V Io(Max. load)= 0.2A Io(Mid. load)= 0.1A Io(Min. load)= 0A
	V3= 5VSB Io(Max. load)= 0.2A Io(Mid. load)= 0.1A Io(Min. load)= 0A	V6= -21V Io(Max. load)= 0.2A Io(Mid. load)= 0.1A Io(Min. load)= 0A
Shown in this document is the typical test result performed on one demo unit. There could be some deviation between different demo units.		

核准：SY

審核：REX

填表：Addis

表單編號：RDF05.A0

功能檢查表

1 Input Current:

1.1 Test Condition:

Load: Max. Load Input current: 1A Max.

1.2 Test Result:

Input Voltage	Input Current (A)	Test Specifications
115V/60Hz	0.428A	< 1.0A
230V/50Hz	0.295A	

2 Short circuit protection:

2.1 Test Condition:

Short-circuit the all output the power supply will be protected and AC power input will be less than 2W (auto recovery)

2.2 Test Result:

Input Voltage	Max. Load	Mid. Load	Min. Load	Test Condition
90V/47Hz	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<2W
264V/63Hz	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

3 Input Wattage at DC output Min. load condition:

3.1 Test Condition:

Load: Min. Load Switch off in standby mode less than 1 Watt at nominal line condition.

3.2 Test Result:

Input Voltage	Input Power	Stability(V)						Test Spec
		V1	V2	V3	V4	V5	V6	
120V/60Hz	0.43W	2.09	1.22	4.90	4.22	4.29	7.79	<1W
240V/50Hz	0.77W	1.97	1.19	4.90	4.26	4.33	7.87	
264V/50Hz	0.85W	1.97	1.19	4.90	4.26	4.34	7.88	

功能檢查表

4 Line Regulation & Load Regulation:

4.1 Test Condition:

Line regulation: 1% Max. Load regulation: 5% Max.
--

4.2 Test Result:

Input Voltage	Max. Load(V)						Min. Load(V)					
	V1	V2	V3	V4	V5	V6	V1	V2	V3	V4	V5	V6
90V/60Hz	5.25V	3.28V	4.88V	12.3V	12.5V	23.0V	5.20V	3.34V	4.90V	11.9V	12.5V	22.3V
115V/60Hz	5.26V	3.28V	4.89V	12.3V	12.4V	22.9V	5.20V	3.34V	4.90V	11.9V	12.5V	22.3V
132V/60Hz	5.26V	3.28V	4.89V	12.3V	12.4V	22.9V	5.22V	3.34V	4.90V	12.0V	12.4V	22.3V
180V/50Hz	5.23V	3.28V	4.89V	12.2V	12.4V	22.8V	5.20V	3.34V	4.90V	11.9V	12.3V	22.1V
230V/50Hz	5.26V	3.28V	4.89V	12.3V	12.4V	22.8V	5.20V	3.34V	4.90V	11.9V	12.4V	22.2V
264V/50Hz	5.26V	3.28V	4.89V	12.3V	12.4V	22.9V	5.22V	3.34V	4.90V	12.0V	12.5V	22.4V
	V1		V2		V3		V4		V5		V6	
Line Regulation	0.6%		0%		0.2%		0%		0.8%		0.95%	
Load Regulation	1.2%		1.8%		0.4%		3.3%		1.6%		4.3%	

5 Efficiency:

5.1 Test Condition:

Load: Max. load Efficiency: 70% minimum at nominal line input
--

5.2 Test Result:

Input Voltage	Max. Load (%)	Test Spec.
90V/60Hz	78.1%	>70%
115V/60Hz	78.6%	
132V/60Hz	78.2%	
180V/50Hz	77.8%	
230V/50Hz	75.7%	
264V/50Hz	74.3%	

功能檢查表

6 Ripple & Noise:

6.1 Test Condition:

Tested by DC loading side parallel with a 10uF/EC and 0.1uF/CC capacitor and Measured Band-width with DC-20MHz
--

6.2 Test Result:

Input Voltage	Max. Load (mV)						Mid. Load (mV)						Test Spec.
	V1	V2	V3	V4	V5	V6	V1	V2	V3	V4	V5	V6	
115V/60Hz	35	56	18	60	45.6	72	15.6	6	11.6	5.6	8.8	9.6	
230V/50Hz	14.4	34	8	30	13.2	19.2	6.8	6	5.6	5.6	8.8	9.6	

7 Dynamic load:

7.1 Test Condition:

Dynamic loading (20% ~ 80% of the full load, 50mesc duty cycle)

7.2 Test Result:

Input Voltage	Overshoot (mV)	Undershoot (mV)	Test Spec.
	V1	V1	
115V/60Hz	84	100	
230V/50Hz	82	70	

7.3 Test Condition:

Dynamic loading (0% ~100% of the full load, 50mesc duty cycle)
--

7.4 Test Result:

Input Voltage	Overshoot (mV)	Undershoot (mV)	Test Spec.
	V1	V1	
115V/60Hz	113	157	
230V/50Hz	97	125	

8 DC output rise time:

8.1 Test Condition:

Load: Max. Load & Min. Load DC Output rise time: 20mS max.

8.2 Test Result:

Input Voltage	Max. Load (mS)						Min. Load (mS)						Test Spec.
	V1	V2	V3	V4	V5	V6	V1	V2	V3	V4	V5	V6	
90V/47Hz	15.2	11.6	15.4	15.3	15.7	16	7.6	3.8	7.4	7.6	7.4	7.2	< 20mS
264V/63Hz	7.2	4.2	7.2	7.1	7.2	7.5	3.8	2.2	4.0	3.8	4.4	4.8	

功能檢查表

9 Turn on time:

9.1 Test Condition:

Load: Max. load & Min. load AC switch on time: 3Sec max.

9.2 Test Result:

Input Voltage	Max. Load (Sec)		Min. Load (Sec)		Test Spec.
	V1		V1		
90V/47Hz	2.08		2.04		<3Sec
110V/60Hz	1.18		1.10		
220V/50Hz	0.74		0.84		

10 Hold up time:

10.1 Test Condition:

Load: Max. load DC Hold up time

10.2 Test Result:

Input Voltage	Max. Load (mS)						Test Spec.
	V1						
90V/47Hz	17						
110V/60Hz	24						
220V/50Hz	96						

11 Overshoot & Undershoot Test:

11.1 Test Condition:

Less than 5% of nominal voltage value Load: Max. Load & Min. Load
--

11.2 Test Result:

Input Voltage	Overshoot (mV)						Undershoot (mV)						Test Spec.
	V1	V2	V3	V4	V5	V6	V1	V2	V3	V4	V5	V6	
90V/47Hz; Max. Load	120	0	0	200	120	500	0	0	0	240	80	0	<5%
90V/47Hz; Min. Load	100	0	80	200	200	600	60	0	0	0	0	0	
264V/63Hz; Max. Load	0	0	0	0	0	0	0	0	0	0	0	0	
264V/63Hz; Min. Load	0	0	0	0	0	300	0	0	0	0	0	0	

功能檢查表

12 Over Power protection:

12.1 Test Condition:

An over current from the output to return line will not damage the power supply. The protection will be enabled if the output current exceeds 2A ~ 5A.(When Vout < 4.75V)

12.2 Test Result:

Input Voltage	Output Current (A)	Test Spec.
	V1	
90V/60Hz	2.1A	2A~5A
115V/60Hz	2.7A	
230V/50Hz	4.5A	
264V/50Hz	5.0A	

13 Brown out test:

13.1 Test Condition:

The power supply shall meet its output specification while the line voltage is reduced in 5 voltage decrements from 264Vac to 90Vac, with a minimum dwell at each increment of 15 minutes. The voltage transition time shall be equal to or less than 5 seconds.
The power supply shall recover and continue to meet its output specification after the line voltage is reduced in 5 volt decrements from 264Vac to 0Vac and subsequently increased to 85Vac (minimum dwell at each increment of 15 minutes). The voltage transition time shall be equal to or less than 5 seconds.

13.2 Test Result:

Input Voltage	Input Power (W)
90V/60Hz	25.75
85V/60Hz	25.74
80V/60Hz	25.82
75V/60Hz	25.94
70V/60Hz	26.00
65V/60Hz	26.00
60V/60Hz	0
55V/60Hz	0
50V/60Hz	0
45V/60Hz	0
40V/60Hz	0
35V/60Hz	0
30V/60Hz	0
25V/60Hz	0
20V/60Hz	0
15V/60Hz	0
10V/60Hz	0
5V/60Hz	0

EMC Test Reprot

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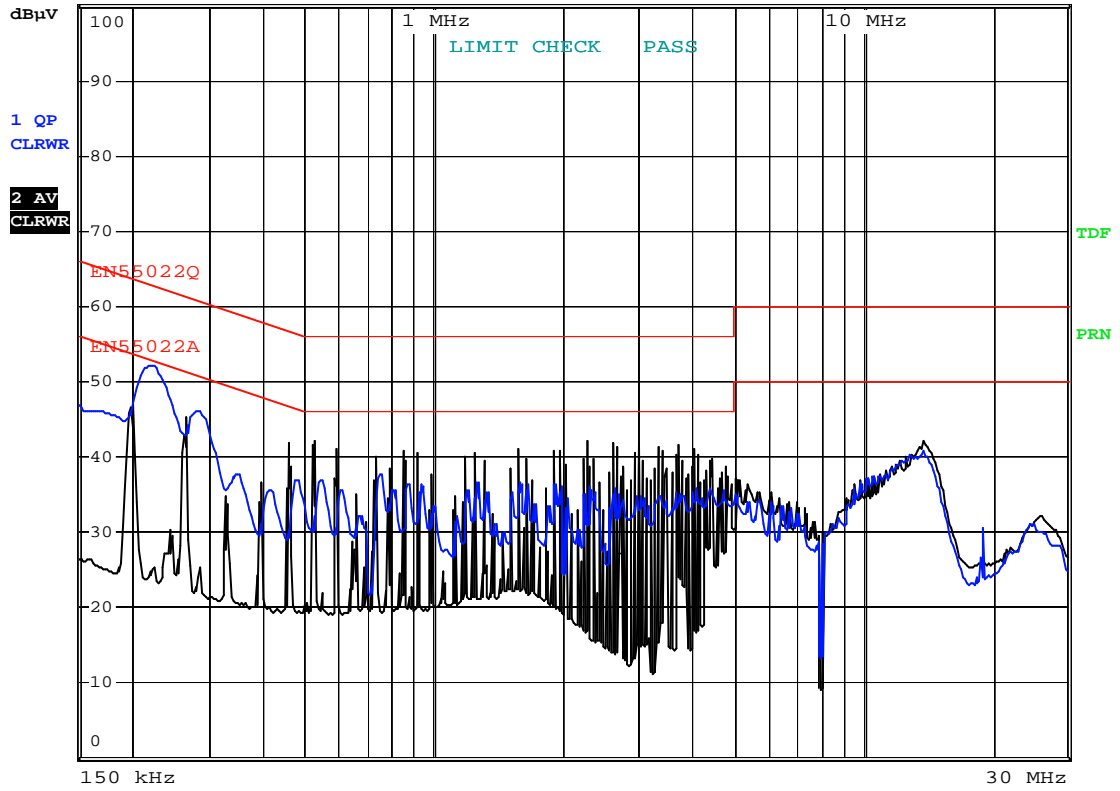
Shown in this document is the typical test result performed on one demo unit. There could be some deviation between different demo units.

Conduction-Neutral



RBW 9 kHz
MT 50 ms
PREAMP OFF

Att 10 dB



Comment B: 115N

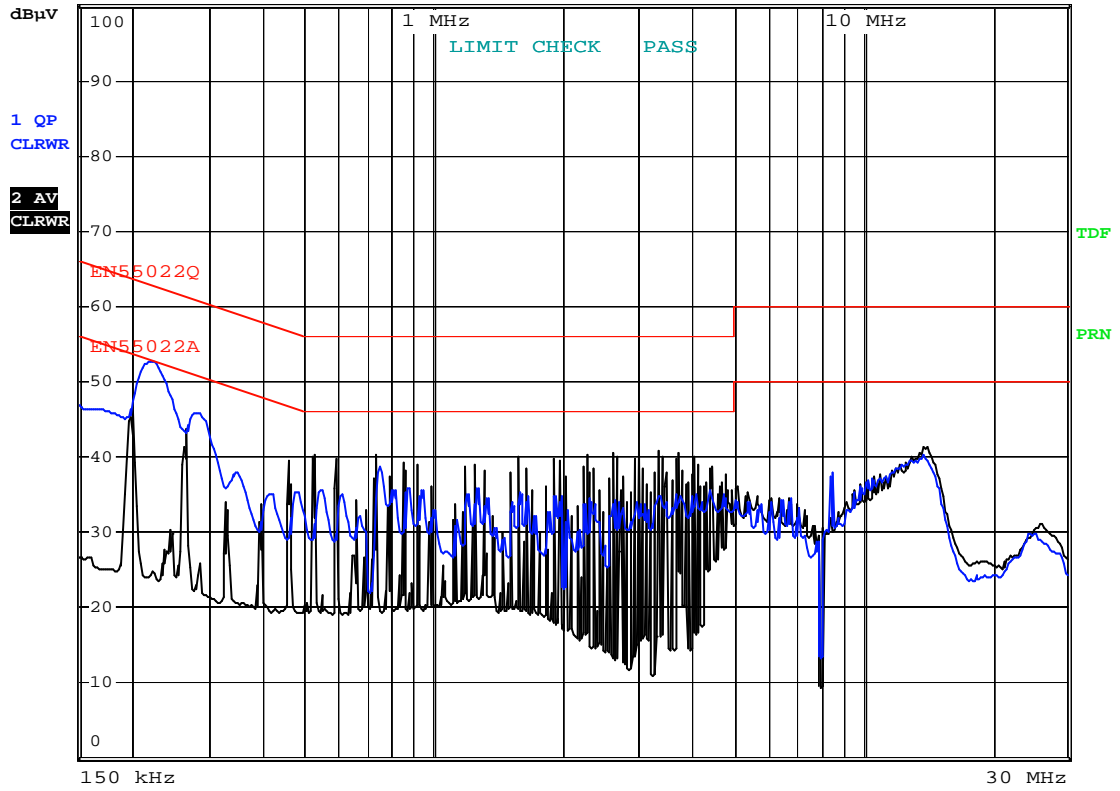
Date: 20.APR.2004 17:08:24

Conduction-Line



RBW 9 kHz
MT 50 ms
PREAMP OFF

Att 10 dB



Comment B: 115N

Date: 20.APR.2004 17:16:26

Surge Test

Mode	Polarity	Phase	Voltage	Judgment
L-N	+/-	0°	2KV	PASS
	+/-	90°		PASS
	+/-	180°		PASS
	+/-	270°		PASS
L-PE	+/-	0°	4KV	PASS
	+/-	90°		PASS
	+/-	180°		PASS
	+/-	270°		PASS
N-PE	+/-	0°	4KV	PASS
	+/-	90°		PASS
	+/-	180°		PASS
	+/-	270°		PASS

ESD Test

Mode	Air Discharge (15KV)		Contact Discharge (8KV)	
Location	P	N	P	N
1	PASS	PASS	PASS	PASS
2	PASS	PASS	PASS	PASS
3	PASS	PASS	PASS	PASS
4	PASS	PASS	PASS	PASS
5	PASS	PASS	PASS	PASS
6	PASS	PASS	PASS	PASS
7	PASS	PASS	PASS	PASS
8	PASS	PASS	PASS	PASS
9	PASS	PASS	PASS	PASS
10	PASS	PASS	PASS	PASS