DARFON
Darfon Electronics Corp.

DATE: 2 July 2013

Customer Name : 永碩聯合國際股份有限公司
Unihan Corporation

Customer Approval Sheet

PRODUCT : **LIPS BOARD**
MODEL NAME : **B191-203**
PART NO : **BK.01191.203**
CUSTOMER PART NO : **0433-0086000**

Customer Approval Signature	Darfon Electronics (Taiwan) Corp.		
	WRITTEN	CHECKED	CONFIRMED
	David DC Wu 2013/07/02	Tony Ku 2013/07/02	Peter Wang 2013/07/02

Darfon Electronics (Taiwan) Corp.

167, Shanying Road, Gueishan , Taoyuan 33341, Taiwan R.O.C.
Tel : +886-3-250-8800 Fax : +886-3-250-7177

Darfon Electronics (Suzhou) Co.,Ltd.

99 ZhuYuan Road,New District, SuZhou, China
Tel : +86-512-88188800 Fax : +86-512-68093709

“若蒙承認請簽回一份，如未知會任何修改，本公司將以此文件爲生產交貨依據

SPECIFICATION OF DOCUMENT

ITEM	DOCUMENT	DESCRIPTION	REVISION DATE	REVISION NO
1	201	Product Engineer Specification (Electrical)		4
2	202	BOM & QVL (Prel.)		3
3	209	PCB Outline Drawing		0
4	304	Schematics		1
5	309	Packing Description		2

Contents

1. Purpose

This functional specification defines the performance characteristics of 40" TV LIPS.

The LIPS includes AC to DC converters and LED converter.

There are three outputs with the DC/DC converter: 5.1V / 0.37A ; 12.5V / 7.08A and 12Va / 1.77A for standby / Tcon / Audio and 67V / 120mA for LED light-bar.

The LED converter can drive 6 string light-bars for 40" backlight.

2. Input Characteristics

2.1 Rated Voltage

It is normal for 230Vac±10% input AC voltage.

2.2 Input Voltage Range

The power supply operates from 198Vac to 264Vac and no range switching is necessary or possible.

2.3 Rated Frequency

It is normal for 50~60Hz±3 and single phase.

2.4 Frequency Range

The power supply shall operate with an input frequency from 47Hz to 63Hz.

2.5 Efficiency

87% minimum at 230Vac input voltage, Maximum load for the PSU.

(5V/0.37A 12V/7.08A 12Va/1.77A 48V/1.12A)

2.6 Inrush Current

Maximum inrush current from AC power turns on at any point on AC Sin-wave.

(1) Must not cause any damage on the all of power supply components.

(2) No fuse breakdown

Specification	Condition
70A peak	230Vac,Cold start

2.7 Leakage Current

Specification	Condition
UL60065 : 0.45 [MIU] or less IEC60065 : 0.28 [Vp] or less	230Vac input

3. Output characteristics

3.1 Rated Voltage

The rated output voltage is specified at 5V, 12V, 12Va, VLED

3.2 Voltage Range

The output voltage will be performed

O/P	Vtypical	Total reg.
5V1	5.1V	5.1V±5%
12.5V	12.5V	12.5V±5%
12.5Va	12.5V	12.5V±5%
VLED	VLED	±20%

3.3 Output Current and Output Ripple

O/P	Vtyp Vdc	Output Current (Adc)				Ripple Volt. mVpp (1%)	Max rated power <min>	OVP <max> Vdc
		Off	Min.	Typ.	Max. Peak			
5V	5.1	0.02	0.1	0.37	0.37	51	172w↑	9
12V	12.5	Off	0 (Note 3)	7.08	7.08	125		18
12Va	12.5	off	0 (Note 3)	1.77	1.77	125		18
VLED	65	Off	--	0.72	0.76	--		110

3.3.1 +12.5V 0A light load define (Note3)

230V / 50Hz	Design requirement

No	+5V	+12.5V	LED Load	+12.5V meet the electrical specification : 12.5V±5% The measurement output regulation shall test voltage of output connects.
1	0.37A	0.0A	OFF	
2	0.37A	0.0A	OFF	
3	0.37A	0.0A	ON	
4	0.37A	0.0A	ON	

Notes:

Note1 The measured terminal is paralleled with a 10uF Ecap and a 0.1uF Ceramic cap.

Note2 Band Width is limited within 20MHz.

Note3 +12.5V 0A load regulation should follow dynamic item 3.8 and between 0~0.9A

3.4 Power saving (standby mode) and PS ON / OFF define

Specification	Condition
0.27W Max.	With 5.1V/20mA, at 240Vac

PS ON / OFF define

PW ON signal	Test Specification	Outputs Status
Active-high	2.5V~5V	Enable
Active-low	0V~0.5V	Disable

3.5 Turn On Delay Time (Power On Time)

The power supply is in regulation within 2S max. after specified rated input voltage is applied.

3.6 Hold Up Time

See 4. Time sequence of power on/off

Output voltage	230Vac input	Condition
5V	>20ms	TV SET
12V	>20ms	TV SET

12Va	>20ms	TV SET

3.7 Output Overshoot & undershoot

Less than + / - 5% of nominal value.

3.8 Dynamic Load Regulation

Less than + / - 5% of nominal value.

The voltage shall remain within the 10% regulation when loading change from 10%-50%-100% load with slew rate 0.05A/μs and 200Hz with duty 50%. The capacitor load is 2200uF.

3.9 Output Voltage Rise Time

Rise time @ cold start-up

Output voltage	230Vac input	Condition
12V	>20mS	Max load
12Va	>20mS	Max load

Remark: The output voltages shall rise from 10% to 90% of their output voltage

4. Output Protections

4.1 Over Voltage Protection

Output voltage	Specification	Over Voltage Protection Status
5V	< 9V	Shut down and Auto recovery
12V	< 18V	Latch
12Va	< 18V	Latch

Remark: All output should be max load and LED full dimming while this protection was testing.

4.2 Short Circuit Protection

Output voltage	Short Circuit Protection Status
5V	Auto recovery
12V	Latch
12Va	Latch

Remark: All output should be max load and LED full dimming while this protection was testing.

4.3 Total Power Protection

Output voltage	Specification	Total Power Protection Status
5V	Min: 1A ; Max: 6A	Auto recovery
12V	Min: 11A ; Max: 17A	Latch
12Va	Min: 6A ; Max: 12A	Latch

Remark: All output should be max load and LED full dimming while this protection was testing.

5. LED Characteristics

5.1 Output & Input Ratings:

5.1.1 The LED Light bar relation

Panel type	E1.40D-LED FHD		LED CHANEL		6	CH
Parameters			min.	typ.	max.	unit
LED Voltage	VLED	-	57	61	65	Vdc
	△Vf	Per string			3	V
LED Current	ILED	One string current	100	120	140	mArms

Remark: Vled range is based on LED chip voltage. Per string of LED chips for light-bar must be sorted for △Vf<3V. Vled range has no direct concern with △Vf.

5.1.2 Power board LED side output characteristics at 2D mode

Panel type	E1.40D-LED FHD		LED CHANEL		6	CH
Parameters			min.	typ.	max.	unit
LED Voltage	VLED	-	57	61	65	Vdc
LED Current	ILED	One string current	100	120	140	mArms
Power consumption	PBL	Full brightness	34.2	43.92	54.6	W
PWM Dimming	DIM	High level	2.5	3.3	5.5	Vdc
		Low Level	-0.3	0	0.5	Vdc
		PWM Frequency	100	-	180	Hz
	Duty	Burst dimming duty	1	-	100	%
On/Off Control	BLON	On	2.5	3.3	5.5	Vdc
		Off	-0.3	-	0.5	Vdc

5.1.3 Power board LED side output characteristics at 3D mode

Panel type	E1.40D-LED FHD		LED CHANEL		6	CH
Parameters			min.	typ.	max.	unit
LED Voltage	VLED	-	68	75	80	Vdc
LED Current	ILED	One string current	340	360	380	mA
Power consumption	PBL	20% duty brightness	28.56	32.4	36.48	W
3D control signal	PWM2	High level enable 3D	2.5	3.3	5.5	Vdc
		Low Level enable 2D	-0.3	0	0.5	Vdc
PWM Dimming	DIM	PWM Frequency	95	100	105	Hz
	Duty	Burst dimming duty	17	20	23	%
On/Off Control	BLON	On	2.5	3.3	5.5	Vdc
		Off	-0.3	-	0.5	Vdc

Protection Function:

Category	Condition	Max	Description
OVP_VLED	Full dimming range	110V	LED Driver Latch off

Category	Condition	Min	Description
Over Current Protection	Full dimming range	0.5Arms	LED Driver clamping

6. Environmental

6.1 Temperature.

Operating

The power supply is capable to operate from -10 to 60℃.

6.2 Humidity

Operating

The power supply is capable to operate from 5 to 90% RH.

Non- Operating

The power supply is capable to be stored from 5 to 90% RH (non-condensing).

6.3 Dielectric Withstand Voltage (HI-POT)

PA/OQC/Product Line：

Between AC input and secondary applied AC 3KV test time 1 minute, cut off current shall be less than 6mA for design sample

AC 3.5KV/6mA test time 3sec. for mass production

6.4 MTBF-Calculation

50K hours min.

MTBF Calculation compliant with MIL-217F.

6.5 Components de-rating

All components de-rating should be meet DARFON's components de-rating criteria.

6.6 Open/Short test

All components should to do Open/Short test.

6.7 Acoustics

<30dB distance 10cm (with system) at ac max./min. voltage, <24dB at standby mode.

6.8 EMS

Test item	Test Specification	IEC Standard
ESD	Air 8KV, Contact 4KV	61000-4-2
SURGE	1KV(L-N) & 2KV(L/N-PE)/1.2~50μsec	61000-4-5
EFT	2KV on AC power line	61000-4-4
DIPS	0% 250Cy, 40% 5Cy,70% 5Cy	61000-4-11

Products Safety Approvals

The power supply should be meet safety regulation as following: UL 60065, IEC/EN 60065.

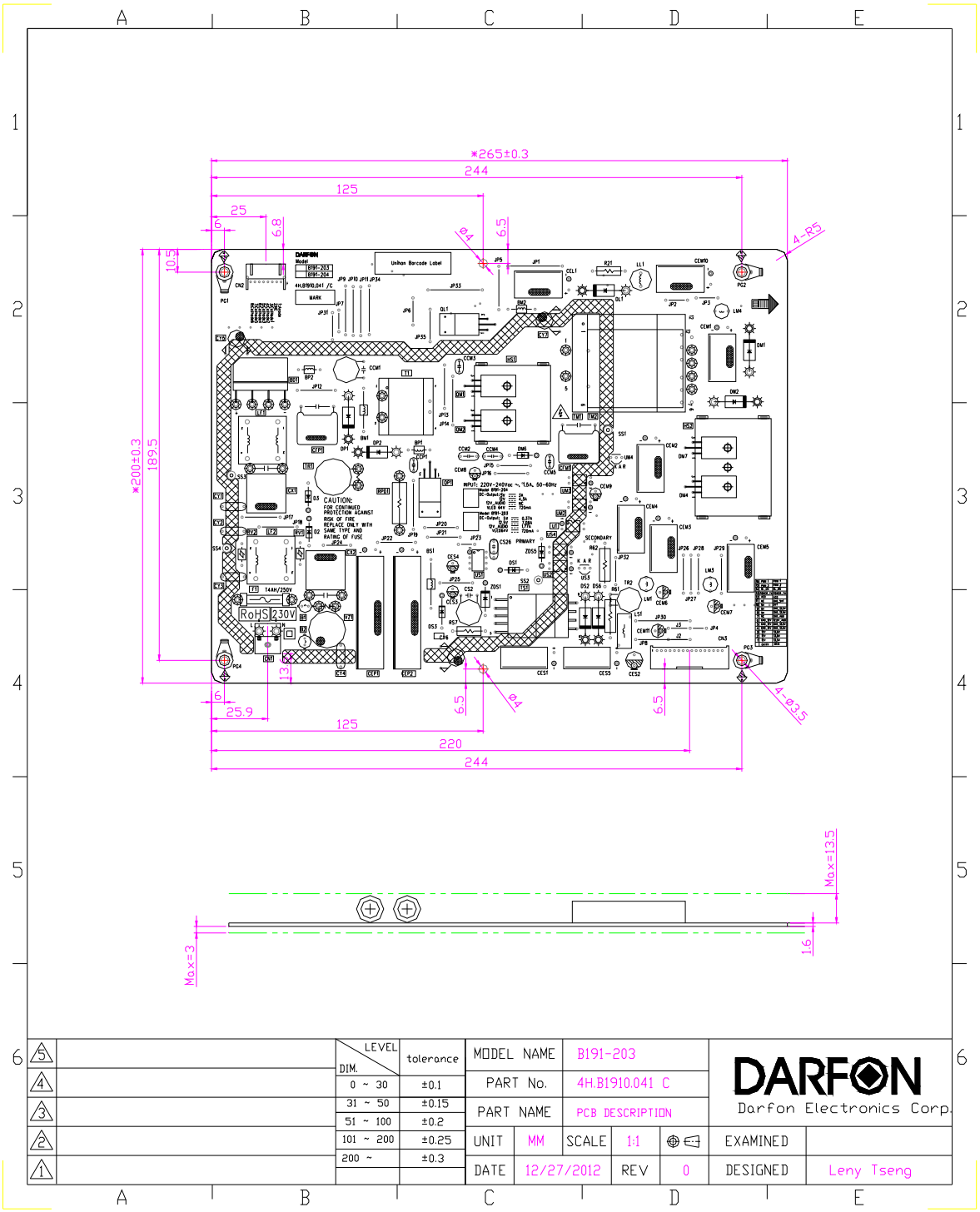
6.9 Insulation resistance

(1) Test Requirements: Input Voltage: 500VdcTemperature: 25+/-5℃

(2) Criterion for judging: insulation resistance: >100M ohm.

7. Mechanical Drawing

Power supply drawing



8. Connectors Type and Pins Assignment

8.1 Connected to Power Cord (CN1) A3963WR2-NP-D-PG

Pin No.	Symbol
1	L
2	NC
3	N

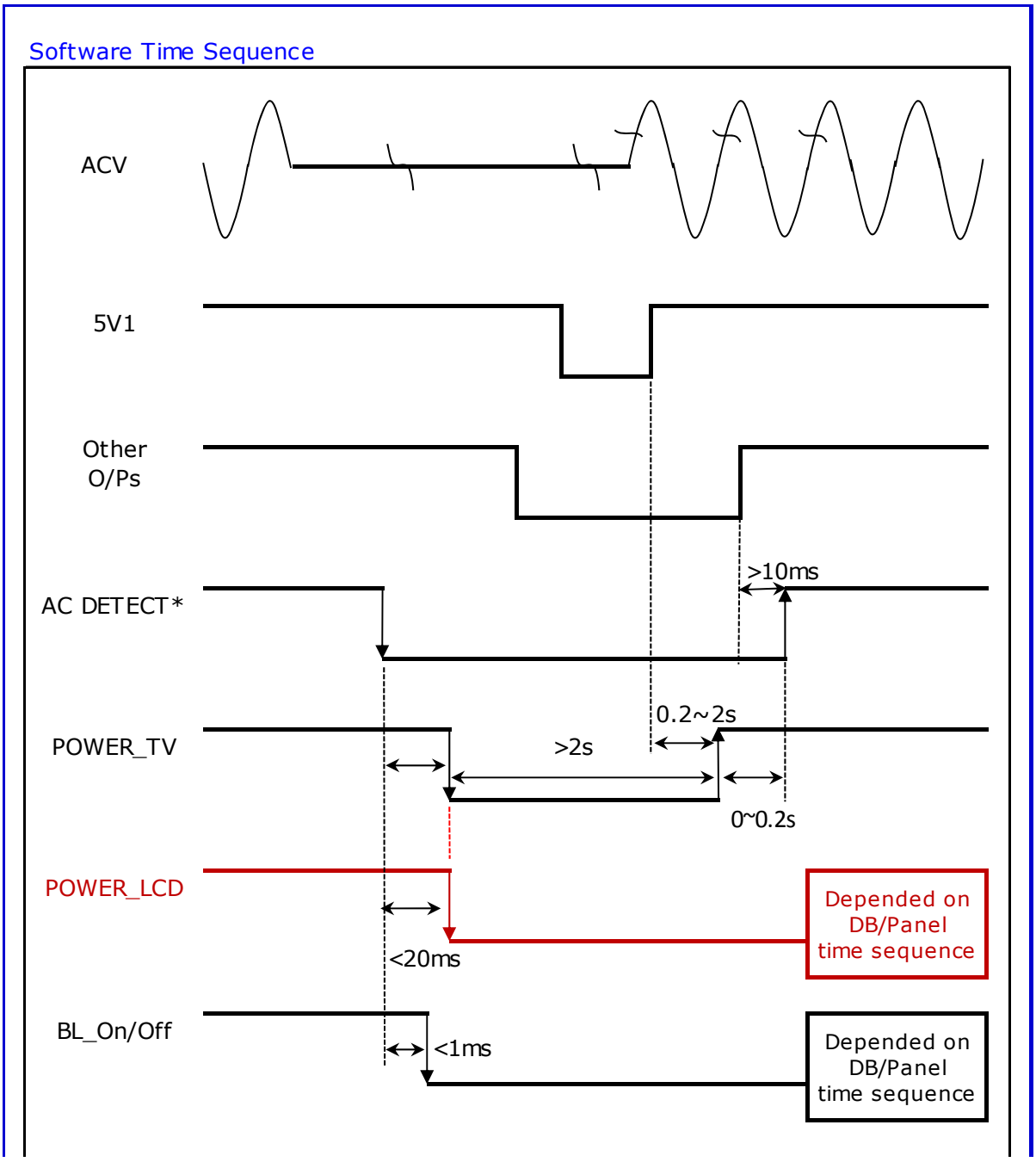
8.2 Connected to Main Board (CN3) A2010WR0-16P-SW-5e-3.2

Pin No.	Symbol	Description
1,2,3	12.5V	12.5Vdc output for main board
4,5	GND_12V	Power ground of 12.5V
6	12.5V_AUD	12.5Vdc output for main board
7	GND_12VAUD	Power ground of 12.5VAUD
8.9	GND_12V	Power ground of 12.5V
10	5V1	5.1Vdc output for main board
11	GND_5V1	Power ground of 5.1V
12	ACD	AC detection signal Normal: 3.3V~5.5V Abnormal: 0V~0.5V
13	Power_TV	On/Off control signal of main power system On: 2.5V~5V Off: 0V~0.5V
14	BL_ON_OFF	On/Off control signal of Backlight On: 2.5V~5V Off: 0V~0.5V
15	PWM2	On/Off control 3D mode of Backlight On: 2.5V~5V Off: 0V~0.5V
16	PWM1	EPWM dimming signal for Luminance control

8.3 Connected to LED Light Bar (CN2) A2010WR0-8P-SW-5e-3.2

Pin No.	Symbol	Description
1	Anode	LED Anode
2	NC	No connection
3	Cathode 1	LED Channel 1 Cathode
4	Cathode 2	LED Channel 2 Cathode
5	Cathode 3	LED Channel 3 Cathode
6	Cathode 4	LED Channel 4 Cathode
7	Cathode 5	LED Channel 5 Cathode
8	Cathode 6	LED Channel 6 Cathode

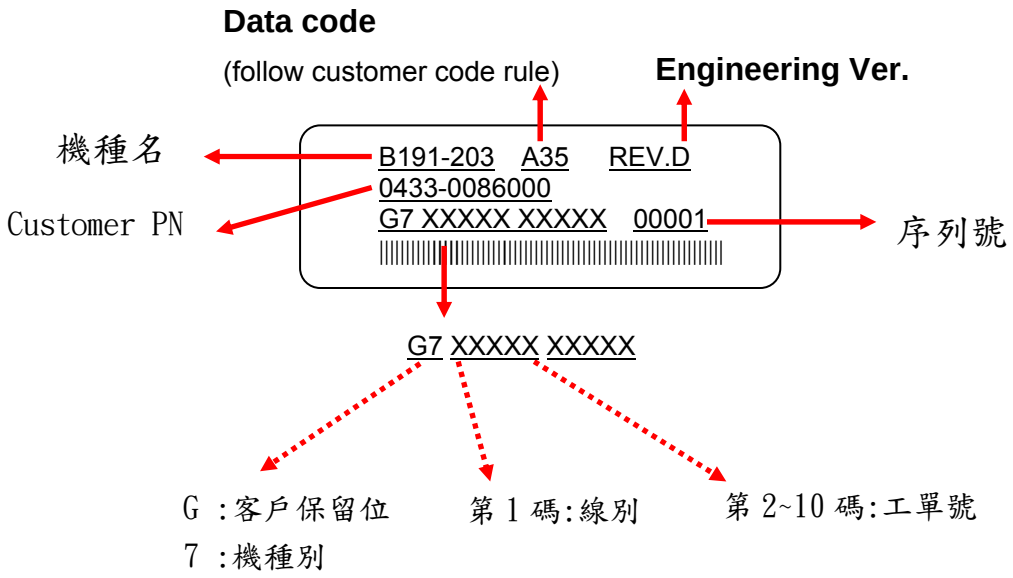
9. Time sequence of power on / off



10. PCB Label Printing

10.1 DARFON PCB Label Coding Rule (Label Size: 28*8mm)

(4E+10001.137, Label Size: 28*8 mm)



DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

Level	Parent Item	Component Item	Description	Qty	Designator	ASL
1	BK.01191.203	3H+04605.031	TAPE CLEAR 48MMW 50YDS GP	33.7176		YA HUA(亞化)
1	BK.01191.203	3H+17001.381	RIBBON PRINTER110MM*300M	0.7476		RUIHAO(蘇州瑞豪)
1	BK.01191.203	3H+23000.501	PALLET 1070*1070*110MM	0.0028		SU XIN(蘇鑫)
1	BK.01191.203	4B+B0167.03A	BAG PE BUBBLY 300*260MM	1		GUANG DA(光大)
1	BK.01191.203	4B+B0949.03A	SHEET PE BUBBLY 507*331MM	0.167		GUANG DA(光大)
1	BK.01191.203	4D+B0063.011	CTN AB 515*338*233MM B006	0.084		VICTORY(維特力)
1	BK.01191.203	4E+00003.00A	CTN LABEL 100*85	0.084		JIN LIAN(東橋金聯) LIAN TE(聯特)
1	BK.01191.203	4F+20001.222	PARTITION AB 515*205*7MM	0.167		VICTORY(維特力)
1	BK.01191.203	4G+B0066.031	PAD AB 507*331*7MM B006	0.084		VICTORY(維特力)
1	BK.01191.203	4G+B0066.081	PAD NOTCH 331*205*7MM U25*30	1.084		VICTORY(維特力)
1	BK.01191.203	4E+30001.211	LABEL MARK ROHS D25MM B191	0.084		JIN LIAN(東橋金聯)
1	BK.01191.203	4B+B191A.06C	PCB SPACER SUPPORT MAE-17V0	4	SS1 SS2 SS3 SS4	KANG YANG(康揚)
1	BK.01191.203	BA.01191.023	ASSY SMD+DIP B191-203	1		DARFON
2	BA.01191.023	0E.00817.014	IC OPTO LTV-817 C CTR200-400	5	U1 UM2 UM3 US2 US4	LITEON
ALT	0E.00817.014	0E.00817.017	IC OPTO EL817C DIP 4P	5		EVERLIGHT
2	BA.01191.023	0F.4R060.220	DIODE SF MUR460 600V4A	1	DP2	LITEON
ALT	0F.4R060.220	0F.4R060.210	DIODE UF MUR460 4A600V DO27	1		SECOS
2	BA.01191.023	0F+01820.024	FET MOS P1820ATF 18A200V TO-	1	QL1	NIKO-SEM
2	BA.01191.023	0F.5R006.11B	DIODE S.B. SR560 5A60V DO-27 MK-	1	DS2	SECOS
2	BA.01191.023	0F.5R010.116	DIODE S.B. SR5100 5A100V DO-27	1	DL1	SECOS
2	BA.01191.023	0F.5R015.114	DIODE S.B. SR5150 5A150V DO-27	2	DM1 DM2	SECOS
2	BA.01191.023	0F+01060.023	FET MOS P1060ATF 10A 600V	1	QP1	NIKO-SEM
ALT	0F+01060.023	0F.01060.027	FET MOS TK10A60D10A600V	1		TOSHIBA
2	BA.01191.023	0F+4R080.15C	DIODE BRIDGE T3SB80F 4A 800V	1	BD1	ZHONGHUAN
ALT	0F+4R080.15C	0F.4R080.157	DIODE BRIDGE KBJ408G 4A 800V	1		LITEON
2	BA.01191.023	0H.1013A.C2W	CAP DISC 100P 1KV J SL RT5 V-K	1	CCM5	WALSIN
ALT	0H.1013A.C2W	0H.1013A.D2W	CAP DISC 100P 1KV J SL RT5 V-K LY	1		沂南同皓
2	BA.01191.023	0H.33126.134	CAP Y 330P 250V K Y5P RT10 OK	2	CY5 CY6	WALSIN
ALT	0H.33126.134	0H.33126.264	CAP Y 330P250V RT10VK BLUE TDK	2		TDK
2	BA.01191.023	0J.6861M.B9C	CAP EL 68U 450V M RF5 CS 12.5*50	2	CEP1 CEP2	NCC
ALT	0J.6861M.B9C	0J.6861M.C9C	CAP EL 68U 450V M RF5 KXJ 12.5*50	2		NCC
2	BA.01191.023	0J+10812.R9C	CAP EL 1000U25V M RT5 HW	4	CEM2 CEM3 CEM4 CEM5	TAICON
ALT	0J+10812.R9C	0J.10812.Q9C	CAP EL 1000U25V M RT5 KY12.5*20	4		NCC
2	BA.01191.023	0J+1081D.L9C	CAP 1000U 16V M RT5 HW 10*20	1	CES5	TAICON
ALT	0J+1081D.L9C	0J.1081D.B9C	CAP 1000U16V M ESR105C RF5 KZE	1		NCC
2	BA.01191.023	0J+8261L.09C	CAP EL 82U160V M RT5 BY 12.5*20	2	CEM1 CEM10	TAICON
ALT	0J+8261L.09C	0J.8261L.A9C	CAP EL 82U160V M RT5 KXG12.5*20	2		NCC
2	BA.01191.023	0J.8261L.A9C	CAP EL 82U160V M RT5 KXG12.5*20	1	CEL1	NCC
2	BA.01191.023	1A.1033A.06E	CAP MPP 0.01U 1KV J RF15	1	CFM1	TAI YANG
ALT	1A.1033A.06E	1A.1033A.A6E	CAP MPP 0.01U 1KV J RF15 L20MM	1		EUROPTRONIC
2	BA.01191.023	1A.2242V.AAE	CAP X 0.22U 305V K RF15 L20 EURO	1	CX1	EUROPTRONIC
ALT	1A.2242V.AAE	1A.2242N.CAE	CAP X 0.22U 275V K RF15 CARLI	1		CARLI
2	BA.01191.023	1A.4742V.11E	CAP X 0.47U305V K RF15 L20 EUR	1	CX2	EUROPTRONIC
ALT	1A.4742V.11E	1A.4742N.AAE	CAP X 0.47U 275V K RF15 CARLI	1		CARLI
2	BA.01191.023	1A.1052G.B6E	CAP MPP 1U 500V K RF15 L20 TAI	1	CFP1	TAIWAN TAI YANG(泰陽)
2	BA.01191.023	1C+R3036.BJ2	RES NWWM 0.3 J 3W AT MINI PAK	1	RPD1	PAK HENG
ALT	1C+R3036.BJ2	1C+R3036.AJ2	RES NWWM 0.3 J 3W AT MINI FUT	1		FUTABA
2	BA.01191.023	1G.60114.2R5	THERM NTC2.5OHM RT7.5 2.5D2-15	1	TR1	XINGSHUN
ALT	1G.60114.2R5	1G.60070.2R5	THERM NTC 2.5OHM RF7.5	1		THINKING
2	BA.01191.023	1G.61102.5R3	THERM PTC 5.3OHM RF5	1	TR2	THINKING(興勤)
2	BA.01191.023	2E.70040.001	BEAD 3T ST D6*10 F8C R6HW	2	B1 B2	URITE(优磁)
ALT	2E.70040.001	2E.70029.001	BEAD 3T D6*10 Z580/100M L6D	2		3L(三禮)
2	BA.01191.023	2E.R441A.070	EMI CORE K5B RH 5*5*2.3 KING	1	*DL1	KING(鈞寶)
2	BA.01191.023	2F+14001.903	FUSE 4A 250V 215SP L/H 5*20	1	F1	LITTELFUSE
ALT	2F+14001.903	2F.14001.9AD	FUSE 4A 250V UDA-A L/H SEMKO	1		CONQUER
2	BA.01191.023	2K.62101.102	HEAD PCB ML 1R2P RT D7.92 H9.6	1	CN1	AMA
ALT	2K.62101.102	2K.62097.102	HEAD PCB ML 1R2P RT D7.92 H9.6	1		JWT
2	BA.01191.023	2K.62122.108	HEAD PCB ML 1R8P RT D2 H5.6	1	CN2	AMA
ALT	2K.62122.108	2K+62113.108	HEAD PCB ML 1R8 RT D2 H5.6	1		JWT
2	BA.01191.023	2K.62122.116	HEAD PCB ML 1R16P RT D2 H5.6	1	CN3	AMA
ALT	2K.62122.116	2K+62113.116	HEAD PCB ML 1R16P RT D2 H5.6	1		JWT
2	BA.01191.023	3D+V2683.320	GROUND TERMINAL PLATE D5	4	PG1 PG2 PG3 PG4	UNICORN YUDA(昆山宇達)
2	BA.01191.023	3H.14011.001	FLUX EC-19S-8	7.785		TAMURA(田村)
2	BA.01191.023	3H+01012.241	GLUE SILICON SKF323	1.92		XINDAYANG(新大洋)
ALT	3H+01012.241	3H+01012.121	GLUE SILICON ES2044H	1.92		CANADA SILICONE
2	BA.01191.023	3H+05002.402	SOLDER BAR PF648-B AG0.3	8.54		SHENGMAO(升貿)
ALT	3H+05002.402	3H+05002.302	SOLDER BAR SCS2 ASAHI	8.54		ASAHI(朝日)
2	BA.01191.023	3H+05103.408	SOLDER LEAD WIRE D0.8 PF629-F4	1.04		SHENGMAO(升貿)
ALT	3H+05103.408	3H+05003.308	SOLDER LEAD WIRE D0.8 H800B-	1.04		ASAHI(朝日)
2	BA.01191.023	LK.CB003.M00	CHOKE COIL 11.5L*11.5W*13H	1	LL1	DARFON
2	BA.01191.023	LK.CF013.K00	CHOKE COIL R4*15 CF013-K00	1	LS1	DARFON
2	BA.01191.023	LK.PD001.AG0	POWER TRANSFORMER ET20	2	LF1 LF2	DARFON
2	BA.01191.023	LK.PG001.A50	POWER TRANS CIS.04 EE-22	1	TS1	DARFON

DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

Level	Parent Item	Component Item	Description	Qty	Designator	ASL
2	BA.01191.023	LK.PL013.F00	POWER TRANS CIS.04 EEM4344	1	TM1	DARFON
2	BA.01191.023	LK.PP006.C00	POWER TRANSFORMER CQ2612	1	T1	DARFON
ALT	LK.PP006.C00	1J.20282.041	XFORM POWER 200uH CQ2612	1		ABLISS(豐達)
2	BA.01191.023	LZ.CL001.A00	CHOKE COIL CL001-A00	3	LM1 LM3 LM4	DARFON
2	BA.01191.023	BB.01191.023	ASSY SMD B191-203	1		DARFON
3	BB.01191.023	3E.10441.002	EPOXY RED GLUE SEAL-GLO	0.05		FUJI CHEMICAL(富士化學)
ALT	3E.10441.002	3H.21002.014	EPOXY RED GLUE LOCTITE 3616	0.05		LOCTITE(漢高樂泰)
3	BB.01191.023	6D+R4005.41M	CHIP RES 0.4 F 1/4W 1206 TY	1	RL12	TZAI YUAN
ALT	6D+R4005.41M	6D+R4005.411	CHIP RES 0.4 F 1/4W 1206	1		TA-I
ALT	6D+R4005.41M	6D+R4005.41W	CHIP RES 0.4 F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+10005.16M	CHIP RES 100 F 1/8W 0805 TY	2	RI9 RI10	TZAI YUAN
ALT	6D+10005.16M	6D+10005.161	CHIP RES 100 F 1/8W 0805 GP	0.5		TA-I
ALT	6D+10005.16M	6D+10005.16W	CHIP RES100 F 1/8W 0805 WS	0.5		WALSIN
3	BB.01191.023	6D+22015.41M	CHIP RES 2.2K F 1/4W 1206 TY	1	RM25	TZAI YUAN
ALT	6D+22015.41M	6D+22015.411	CHIP RES 2.2K F 1/4W 1206	1		TA-I
ALT	6D+22015.41M	6D+22015.41W	CHIP RES 2.2K F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+11305.16M	CHIP RES 113 F 1/8W 0805 TY	1	RM18	TZAI YUAN
ALT	6D+11305.16M	6D+11305.16W	CHIP RES 113 F 1/8W 0805 WS	1		WALSIN
ALT	6D+11305.16M	6D+11305.161	CHIP RES 113 F 1/8W 0805	1		TA-I
3	BB.01191.023	6D+30035.16M	CHIP RES300K F 1/8W 0805 TY	1	R15	TZAI YUAN
ALT	6D+30035.16M	6D+30035.161	CHIP RES 300K F 1/8W 0805	1		TA-I
ALT	6D+30035.16M	6D+30035.16W	CHIP RES300K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+43035.16M	CHIP RES 430K F 1/8W 0805 TY	1	RP27	TZAI YUAN
ALT	6D+43035.16M	6D+43035.161	CHIP RES 430K F 1/8W 0805	1		TA-I
ALT	6D+43035.16M	6D+43035.16W	CHIP RES 430K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+90915.16M	CHIP RES 9.09K F 1/8W 0805 TY	1	RL76	TZAI YUAN
ALT	6D+90915.16M	6D+90915.16W	CHIP RES 9.09K F 1/8W 0805 WS	1		WALSIN
ALT	6D+90915.16M	6D+90915.161	CHIP RES 9.09K F 1/8W 0805	1		TA-I
3	BB.01191.023	6C+R0031.16M	CHIP RES 0 J 1/8W 0805 TY	26	R10 R14 RS20 RJ1 RJ13 RJ20 RJ26	TZAI YUAN
ALT	6C+R0031.16M	6C+R0031.161	CHIP RES 0 J 1/8W 0805	26		TA-I
ALT	6C+R0031.16M	6C+R0031.16W	CHIP RES 0 J 1/8W 0805 WS	26		WALSIN
3	BB.01191.023	6C+R0032.11M	CHIP RES 0 J 1/4W 1206 TY	36	R13 RJ2 RJ3 RJ4 RJ6 RJ7 RJ8 RJ9	TZAI YUAN
ALT	6C+R0032.11M	6C+R0032.111	CHIP RES 0 J 1/4 W 1206	36		TA-I
ALT	6C+R0032.11M	6C+R0032.11W	CHIP RES 0 J 1/4W 1206 WS	36		WALSIN
3	BB.01191.023	6D+10005.41M	CHIP RES 100 F 1/4W 1206 TY	10	R20 RI1 RI2 RI3 RI4 RL10 RM20	TZAI YUAN
ALT	6D+10005.41M	6D+10005.411	CHIP RES 100 F 1/4W 1206 GP	10		TA-I
ALT	6D+10005.41M	6D+10005.41W	CHIP RES 100 F 1/4W 1206 WS	10		WALSIN
3	BB.01191.023	6D+10015.16M	CHIP RES 1K F 1/8W 0805 TY	2	RM26 RL27	TZAI YUAN
ALT	6D+10015.16M	6D+10015.161	CHIP RES 1K F 1/8W 0805 GP	2		TA-I
ALT	6D+10015.16M	6D+10015.16W	CHIP RES 1K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+10015.41M	CHIP RES 1K F 1/4W 1206 TY	2	RL66 RM31	TZAI YUAN
ALT	6D+10015.41M	6D+10015.411	CHIP RES 1K F 1/4W 1206	2		TA-I
ALT	6D+10015.41M	6D+10015.41W	CHIP RES 1K F 1/4W 1206 WS	2		WALSIN
3	BB.01191.023	6D+10025.16M	CHIP RES 10K F 1/8W 0805 TY	14	R8 R24 RL8 RL29 RL65 RM32 RP16	TZAI YUAN
ALT	6D+10025.16M	6D+10025.161	CHIP RES 10K F 1/8W 0805	14		TA-I
ALT	6D+10025.16M	6D+10025.16W	CHIP RES10K F 1/8W 0805 WS	14		WALSIN
3	BB.01191.023	6D+10025.41M	CHIP RES 10K F 1/4W 1206 TY	4	RL7 RM6 RM14 RP13	TZAI YUAN
ALT	6D+10025.41M	6D+10025.411	CHIP RES 10K F 1/4W 1206	4		TA-I
ALT	6D+10025.41M	6D+10025.41W	CHIP RES 10K F 1/4W 1206 WS	4		WALSIN
3	BB.01191.023	6D+10035.16M	CHIP RES 100K F 1/8W 0805 TY	3	RI11 RM38 RL28	TZAI YUAN
ALT	6D+10035.16M	6D+10035.16W	CHIP RES 100K F 1/8W 0805 WS	3		WALSIN
ALT	6D+10035.16M	6D+10035.161	CHIP RES 100K F 1/8W 0805	3		TA-I
3	BB.01191.023	6D+10035.41M	CHIP RES 100K F 1/4W 1206 TY	2	RM1 RM2	TZAI YUAN
ALT	6D+10035.41M	6D+10035.411	CHIP RES 100K F 1/4W 1206	2		TA-I
ALT	6D+10035.41M	6D+10035.41W	CHIP RES 100K F 1/4W 1206 WS	2		WALSIN
3	BB.01191.023	6D+10045.16M	CHIP RES 1M F 1/8W 0805 TY	15	R18 R22 RL33 RL46 RL50 RL51 RP1	TZAI YUAN
ALT	6D+10045.16M	6D+10045.161	CHIP RES 1M F 1/8W 0805	15		TA-I
ALT	6D+10045.16M	6D+10045.16W	CHIP RES 1M F 1/8W 0805 WS	15		WALSIN
3	BB.01191.023	6D+10055.41M	CHIP RES 10M F 1/4W 1206 TY	7	R1 R2 R3 R4 R5 R6 R12	TZAI YUAN
ALT	6D+10055.41M	6D+10055.411	CHIP RES 10M F 1/4W 1206	7		TA-I
ALT	6D+10055.41M	6D+10055.41W	CHIP RES 10M F 1/4W 1206 WS	7		WALSIN
3	BB.01191.023	6D+10R05.16M	CHIP RES 10 F 1/8W 0805 TY	2	RL23 RL26	TZAI YUAN
ALT	6D+10R05.16M	6D+10R05.161	CHIP RES 10 F 1/8W 0805	2		TA-I
ALT	6D+10R05.16M	6D+10R05.16W	CHIP RES 10 F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+10R05.41M	CHIP RES 10 F 1/4W 1206 TY	10	R19 RL2 RL15 RL16 RL17 RL18 RL24	TZAI YUAN
ALT	6D+10R05.41M	6D+10R05.411	CHIP RES 10 F 1/4W 1206	10		TA-I
ALT	6D+10R05.41M	6D+10R05.41W	CHIP RES 10 F 1/4W 1206 WS	10		WALSIN
3	BB.01191.023	6D+11325.16M	CHIP RES 11.3K F 1/8W 0805 TY	1	RM36	TZAI YUAN
ALT	6D+11325.16M	6D+11325.161	CHIP RES 11.3K F 1/8W 0805	1		TA-I
ALT	6D+11325.16M	6D+11325.16W	CHIP RES11.3K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+12015.16M	CHIP RES 1.2K F 1/8W 0805 TY	1	RM33	TZAI YUAN
ALT	6D+12015.16M	6D+12015.161	CHIP RES 1.2K F 1/8W 0805 GP	1		TA-I
ALT	6D+12015.16M	6D+12015.16W	CHIP RES 1.2K F 1/8W 0805 WS	1		WALSIN

DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

Level	Parent Item	Component Item	Description	Qty	Designator	ASL
3	BB.01191.023	6D+12015.41M	CHIP RES 1.2K F 1/4W 1206 TY	2	RM47 RM48	TZAI YUAN
ALT	6D+12015.41M	6D+12015.411	CHIP RES 1.2K F 1/4W 1206	2		TA-I
ALT	6D+12015.41M	6D+12015.41W	CHIP RES 1.2K F 1/4W 1206 WS	2		WALSIN
3	BB.01191.023	6D+12035.16M	CHIP RES 120K F 1/8W 0805 TY	2	RL31 RM16	TZAI YUAN
ALT	6D+12035.16M	6D+12035.161	CHIP RES 120K F 1/8W 0805	2		TA-I
ALT	6D+12035.16M	6D+12035.16W	CHIP RES 120K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+17425.41M	CHIP RES 17.4K F 1/4W 1206 TY	1	RL64	TZAI YUAN
ALT	6D+17425.41M	6D+17425.41W	CHIP RES 17.4K F 1/4W 1206 WS	1		WALSIN
ALT	6D+17425.41M	6D+17425.411	CHIP RES 17.4K F 1/4W 1206	1		TA-I
3	BB.01191.023	6D+17835.16M	CHIP RES 178K F 1/8W 0805 TY	1	RM35	TZAI YUAN
ALT	6D+17835.16M	6D+17835.161	CHIP RES 178K F 1/8W 0805	1		TA-I
ALT	6D+17835.16M	6D+17835.16W	CHIP RES 178K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+18725.16M	CHIP RES 18.7K F 1/8W 0805 TY	1	RL32	TZAI YUAN
ALT	6D+18725.16M	6D+18725.161	CHIP RES 18.7K F 1/8W 0805	1		TA-I
ALT	6D+18725.16M	6D+18725.16W	CHIP RES 18.7K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+20015.16M	CHIP RES 2K F 1/8W 0805 TY	1	RS13	TZAI YUAN
ALT	6D+20015.16M	6D+20015.161	CHIP RES 2K F 1/8W 0805	1		TA-I
ALT	6D+20015.16M	6D+20015.16W	CHIP RES 2K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+20035.41M	CHIP RES 200K F 1/4W 1206 TY	2	RS3 RS5	TZAI YUAN
ALT	6D+20035.41M	6D+20035.411	CHIP RES 200K F 1/4W 1206	2		TA-I
ALT	6D+20035.41M	6D+20035.41W	CHIP RES 200K F 1/4W 1206 WS	2		WALSIN
3	BB.01191.023	6D+21525.16M	CHIP RES 21.5K F 1/8W 0805 TY	1	RL49	TZAI YUAN
ALT	6D+21525.16M	6D+21525.161	CHIP RES 21.5K F 1/8W 0805	1		TA-I
ALT	6D+21525.16M	6D+21525.16W	CHIP RES21.5K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+22005.16M	CHIP RES 220 F 1/8W 0805 TY	1	RS11	TZAI YUAN
ALT	6D+22005.16M	6D+22005.161	CHIP RES 220 F 1/8W 0805	1		TA-I
ALT	6D+22005.16M	6D+22005.16W	CHIP RES 220 F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+22R05.41M	CHIP RES 22 F 1/4W 1206 TY	1	RP7	TZAI YUAN
ALT	6D+22R05.41M	6D+22R05.411	CHIP RES 22 F 1/4W 1206	1		TA-I
ALT	6D+22R05.41M	6D+22R05.41W	CHIP RES 22 F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+24015.16M	CHIP RES 2.4K F 1/8W 0805 TY	2	RS19 RL71	TZAI YUAN
ALT	6D+24015.16M	6D+24015.161	CHIP RES 2.4K F 1/8W 0805	2		TA-I
ALT	6D+24015.16M	6D+24015.16W	CHIP RES 2.4K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+30025.16M	CHIP RES 30K F 1/8W 0805 TY	2	RM23 RS10	TZAI YUAN
ALT	6D+30025.16M	6D+30025.161	CHIP RES 30K F 1/8W 0805 GP	2		TA-I
ALT	6D+30025.16M	6D+30025.16W	CHIP RES30K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+30045.16M	CHIP RES 3M F 1/8W 0805 TY	2	RM28 RM30	TZAI YUAN
ALT	6D+30045.16M	6D+30045.161	CHIP RES 3M F 1/8W 0805	2		TA-I
ALT	6D+30045.16M	6D+30045.16W	CHIP RES3M F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+33035.16M	CHIP RES 330K F 1/8W 0805 TY	2	RL70 RL4	TZAI YUAN
ALT	6D+33035.16M	6D+33035.161	CHIP RES 330K F 1/8W 0805	2		TA-I
ALT	6D+33035.16M	6D+33035.16W	CHIP RES330K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+33R05.41M	CHIP RES 33 F 1/4W 1206 TY	1	RP12	TZAI YUAN
ALT	6D+33R05.41M	6D+33R05.411	CHIP RES 33 F 1/4W 1206	1		TA-I
ALT	6D+33R05.41M	6D+33R05.41W	CHIP RES 33 F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+36025.16M	CHIP RES 36K F 1/8W 0805 TY	1	RS32	TZAI YUAN
ALT	6D+36025.16M	6D+36025.161	CHIP RES 36K F 1/8W 0805	1		TA-I
ALT	6D+36025.16M	6D+36025.16W	CHIP RES36K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+36035.16M	CHIP RES 360K F 1/8W 0805 TY	1	RS33	TZAI YUAN
ALT	6D+36035.16M	6D+36035.161	CHIP RES 360K F 1/8W 0805	1		TA-I
ALT	6D+36035.16M	6D+36035.16W	CHIP RES 360K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+39015.16M	CHIP RES 3.9K F 1/8W 0805 TY	1	RS16	TZAI YUAN
ALT	6D+39015.16M	6D+39015.161	CHIP RES 3.9K F 1/8W 0805	1		TA-I
ALT	6D+39015.16M	6D+39015.16W	CHIP RES3.9K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+39025.16M	CHIP RES 39K F 1/8W 0805 TY	1	R16	TZAI YUAN
ALT	6D+39025.16M	6D+39025.161	CHIP RES 39K F 1/8W 0805	1		TA-I
ALT	6D+39025.16M	6D+39025.16W	CHIP RES39K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+39025.41M	CHIP RES 39K F 1/4W 1206 TY	1	RP5	TZAI YUAN
ALT	6D+39025.41M	6D+39025.411	CHIP RES 39K F 1/4W 1206	1		TA-I
ALT	6D+39025.41M	6D+39025.41W	CHIP RES39K F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+3R905.41M	CHIP RES 3.9 F 1/4W 1206 TY	6	RL35 RL37 RL39 RL41 RL43 RL45	TZAI YUAN
ALT	6D+3R905.41M	6D+3R905.411	CHIP RES 3.9 F 1/4W 1206	6		TA-I
ALT	6D+3R905.41M	6D+3R905.41W	CHIP RES 3.9 F 1/4W 1206 WS	6		WALSIN
3	BB.01191.023	6D+40235.16M	CHIP RES 402K F 1/8W 0805 TY	1	RM37	TZAI YUAN
ALT	6D+40235.16M	6D+40235.161	CHIP RES 402K F 1/8W 0805	1		TA-I
ALT	6D+40235.16M	6D+40235.16W	CHIP RES 402K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+47005.16M	CHIP RES 470 F 1/8W 0805 TY	1	RM24	TZAI YUAN
ALT	6D+47005.16M	6D+47005.161	CHIP RES 470 F 1/8W 0805	1		TA-I
ALT	6D+47005.16M	6D+47005.16W	CHIP RES 470 F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+47005.41M	CHIP RES 470 F 1/4W 1206 TY	6	RS25 RS26 RS27 RS28 RS34 RS35	TZAI YUAN
ALT	6D+47005.41M	6D+47005.411	CHIP RES 470 F 1/4W 1206 GP	6		TA-I
ALT	6D+47005.41M	6D+47005.41W	CHIP RES 470 F 1/4W 1206 WS	6		WALSIN
3	BB.01191.023	6D+47015.16M	CHIP RES 4.7K F 1/8W 0805 TY	8	RL52 RL53 RL54 RL55 RL56 RL57	TZAI YUAN

DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

Level	Parent Item	Component Item	Description	Qty	Designator	ASL
ALT	6D+47015.16M	6D+47015.161	CHIP RES 4.7K F 1/8W 0805 GP	8		TA-I
ALT	6D+47015.16M	6D+47015.16W	CHIP RES 4.7K F 1/8W 0805 WS	8		WALSIN
3	BB.01191.023	6D+47045.16M	CHIP RES 4.7M F 1/8W 0805 TY	17	RM39 RM40 RM41 RM42 RM43	TZAI YUAN
ALT	6D+47045.16M	6D+47045.161	CHIP RES 4.7M F 1/8W 0805	17		TA-I
ALT	6D+47045.16M	6D+47045.16W	CHIP RES 4.7M F 1/8W 0805 WS	17		WALSIN
3	BB.01191.023	6D+47R05.41M	CHIP RES 47 F 1/4W 1206 TY	1	RL5	TZAI YUAN
ALT	6D+47R05.41M	6D+47R05.411	CHIP RES 47 F 1/4W 1206	1		TA-I
ALT	6D+47R05.41M	6D+47R05.41W	CHIP RES 47 F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+49915.16M	CHIP RES 4.99K F 1/8W 0805 TY	2	RS12 RS18	TZAI YUAN
ALT	6D+49915.16M	6D+49915.161	CHIP RES 4.99K F 1/8W 0805	2		TA-I
ALT	6D+49915.16M	6D+49915.16W	CHIP RES 4.99K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+4R705.41M	CHIP RES 4.7 F 1/4W 1206 TY	7	RL34 RL36 RL38 RL40 RL42 RL44	TZAI YUAN
ALT	6D+4R705.41M	6D+4R705.411	CHIP RES 4.7 F 1/4W 1206	7		TA-I
ALT	6D+4R705.41M	6D+4R705.41W	CHIP RES 4.7 F 1/4W 1206 WS	7		WALSIN
3	BB.01191.023	6D+51005.16M	CHIP RES 510 F 1/8W 0805 TY	1	RP17	TZAI YUAN
ALT	6D+51005.16M	6D+51005.161	CHIP RES 510 F 1/8W 0805	1		TA-I
ALT	6D+51005.16M	6D+51005.16W	CHIP RES 510 F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+51015.16M	CHIP RES 5.1K F 1/8W 0805 TY	4	R11 RS14 RS24 RS30	TZAI YUAN
ALT	6D+51015.16M	6D+51015.161	CHIP RES 5.1K F 1/8W 0805 GP	4		TA-I
ALT	6D+51015.16M	6D+51015.16W	CHIP RES 5.1K F 1/8W 0805 WS	4		WALSIN
3	BB.01191.023	6D+51015.41M	CHIP RES 5.1K F 1/4W 1206 TY	1	R7	TZAI YUAN
ALT	6D+51015.41M	6D+51015.411	CHIP RES 5.1K F 1/4W 1206	1		TA-I
ALT	6D+51015.41M	6D+51015.41W	CHIP RES 5.1K F 1/4W 1206 WS	1		WALSIN
3	BB.01191.023	6D+51025.16M	CHIP RES 51K F 1/8W 0805 TY	3	RL1 RL3 RL6	TZAI YUAN
ALT	6D+51025.16M	6D+51025.161	CHIP RES 51K F 1/8W 0805 GP	3		TA-I
ALT	6D+51025.16M	6D+51025.16W	CHIP RES51K F 1/8W 0805 WS	3		WALSIN
3	BB.01191.023	6D+51035.16M	CHIP RES 510K F 1/8W 0805 TY	2	RP26 RP29	TZAI YUAN
ALT	6D+51035.16M	6D+51035.161	CHIP RES 510K F 1/8W 0805 GP	2		TA-I
ALT	6D+51035.16M	6D+51035.16W	CHIP RES 510K F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+62015.16M	CHIP RES 6.2K F 1/8W 0805 TY	1	RM27	TZAI YUAN
ALT	6D+62015.16M	6D+62015.161	CHIP RES 6.2K F 1/8W 0805	1		TA-I
ALT	6D+62015.16M	6D+62015.16W	CHIP RES 6.2K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+62025.16M	CHIP RES 62K F 1/8W 0805 TY	1	RL48	TZAI YUAN
ALT	6D+62025.16M	6D+62025.16W	CHIP RES62K F 1/8W 0805 WS	1		WALSIN
ALT	6D+62025.16M	6D+62025.161	CHIP RES 62K F 1/8W 0805	1		TA-I
3	BB.01191.023	6D+64925.16M	CHIP RES 64.9K F 1/8W 0805 TY	1	RP28	TZAI YUAN
ALT	6D+64925.16M	6D+64925.161	CHIP RES 64.9K F 1/8W 0805	1		TA-I
ALT	6D+64925.16M	6D+64925.16W	CHIP RES 64.9K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+68005.16M	CHIP RES 680 F 1/8W 0805 TY	2	RL9 RS23	TZAI YUAN
ALT	6D+68005.16M	6D+68005.161	CHIP RES 680 F 1/8W 0805 GP	2		TA-I
ALT	6D+68005.16M	6D+68005.16W	CHIP RES 680 F 1/8W 0805 WS	2		WALSIN
3	BB.01191.023	6D+82005.16M	CHIP RES 820 F 1/8W 0805 TY	1	RM15	TZAI YUAN
ALT	6D+82005.16M	6D+82005.161	CHIP RES 820 F 1/8W 0805	1		TA-I
ALT	6D+82005.16M	6D+82005.16W	CHIP RES 820 F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+82025.16M	CHIP RES 82K F 1/8W 0805 TY	1	RL75	TZAI YUAN
ALT	6D+82025.16M	6D+82025.161	CHIP RES 82K F 1/8W 0805	1		TA-I
ALT	6D+82025.16M	6D+82025.16W	CHIP RES82K F 1/8W 0805 WS	1		WALSIN
3	BB.01191.023	6D+91R05.41M	CHIP RES 91 F 1/4W 1206 TY	2	RM4 RM12	TZAI YUAN
ALT	6D+91R05.41M	6D+91R05.411	CHIP RES 91 F 1/4W 1206 GP	2		TA-I
ALT	6D+91R05.41M	6D+91R05.41W	CHIP RES 91 F 1/4W 1206 WS	2		WALSIN
3	BB.01191.023	6D+R2005.41M	CHIP RES 0.2 F 1/4W 1206 TY	1	RL11	TZAI YUAN
ALT	6D+R2005.41M	6D+R2005.41W	CHIP RES 0.2 F 1/4W 1206 WS	1		WALSIN
ALT	6D+R2005.41M	6D+R2005.411	CHIP RES 0.2 F 1/4W 1206	1		TA-I
3	BB.01191.023	7D.07930.0QD	IC PFC FAN7930CMX SOP8	1	UP1	FAIRCHILD
3	BB.01191.023	7D+00431.13B	IC VR AP431R 36V SC59R	1	QP2	DIODES
ALT	7D+00431.13B	7D.00431.43B	IC VR SLF431ASF SOT-23F	1		AUK
3	BB.01191.023	7D+01101.01P	IC OP IN1M101-T6G SOT-26	1	UA1	INFINNO
3	BB.01191.023	7D+09479.0W9	IC CONVERTER BD9479FV SSOP-	1	UL1	ROHM
3	BB.01191.023	7D+09522.0PD	IC PWM SSC9522S SOP18	1	UM1	SANKEN
3	BB.01191.023	7D+15031.0TK	IC MICROCONTROLLERS	1	U2	MICROCHIP
3	BB.01191.023	7H+10134.111	CHIP CAP 100P 50V J0805 NPO	3	C11 CM11 CL11	DARFON
ALT	7H+10134.111	7H+10134.11K	CHIP CAP 100P 50V J0805 NPO WS	3		WALSIN
3	BB.01191.023	7H+10222.211	CHIP CAP 1000P 25V K0805 X7R	3	CP7 CS6 CS12	DARFON
ALT	7H+10222.211	7H+10222.21K	CHIP CAP 1000P25V K0805 X7R WS	3		WALSIN
3	BB.01191.023	7H+10224.211	CHIP CAP C 1000P 50V K0805 X7R	5	CL7 CL14 CL16 CM5 CM13	DARFON
ALT	7H+10224.211	7H+10224.21K	CHIP CAP1000P50V K0805 X7R WS	5		WALSIN
3	BB.01191.023	7H+10225.211	CHIP CAP C 1000P100V K0805 X7R	2	CS3 CS4	DARFON
ALT	7H+10225.211	7H+10225.21K	CHIP CAP 1000P 100V K0805 X7R	2		WALSIN
3	BB.01191.023	7H+10322.211	CHIP CAP 0.01U25V K0805 X7R GP	5	C13 C15 C16 C17 CM15	DARFON
ALT	7H+10322.211	7H+10322.21K	CHIP CAP0.01U25V K0805 X7R WS	5		WALSIN
3	BB.01191.023	7H+10422.211	CHIP CAP C 0.1U 25V K0805 X7R	6	C2 C10 CL15 CS11 CS19 CL8	DARFON
ALT	7H+10422.211	7H+10422.21K	CHIP CAP 0.1U 25V K0805 X7R WS	6		WALSIN
3	BB.01191.023	7H+10424.211	CHIP CAP C 0.1U 50V K0805 X7R	5	CL13 CS10 CS14 CS15 CS17	DARFON

DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

Level	Parent Item	Component Item	Description	Qty	Designator	ASL
ALT	7H+10424.211	7H+10424.21K	CHIP CAP 0.1U 50V K0805 X7R WS	5		WALSIN
3	BB.01191.023	7H+10425.211	CHIP CAP 0.1U 100V K0805 X7R	2	CL1 CL3	DARFON
ALT	7H+10425.211	7H+10425.21K	CHIP CAP 0.1U 100V K0805 X7R WS	2		WALSIN
3	BB.01191.023	7H+10522.211	CHIP CAP 1U 25V K0805 X7R GP	4	CM2 CM18 CS5 CM4	DARFON
ALT	7H+10522.211	7H+10522.21K	CHIP CAP 1U 25V K0805 X7R WS	4		WALSIN
3	BB.01191.023	7H+10524.211	CHIP CAP 1U 50V K0805 X7R GP	4	CL12 CM8 CP2 CS8	DARFON
ALT	7H+10524.211	7H+10524.21K	CHIP CAP 1U 50V K0805 X7R WS	4		WALSIN
3	BB.01191.023	7H+22224.211	CHIP CAP C 2200P 50V K0805 X7R	1	C6	DARFON
ALT	7H+22224.211	7H+22224.21K	CHIP CAP 2200P50V K0805 X7R WS	1		WALSIN
3	BB.01191.023	7H+22424.211	CHIP CAP0.22U 50V K0805 X7R GP	7	CL2 CL4 CL5 CM3 CM6 CP5 CL10	DARFON
ALT	7H+22424.211	7H+22424.21K	CHIP CAP 0.22U50V K0805 X7R WS	7		WALSIN
3	BB.01191.023	7H+22523.211	CHIP CAP C 2.2U 10V K0805 X7R	1	C5	DARFON
ALT	7H+22523.211	7H+22523.21K	CHIP CAP 2.2U 10V K0805 X7R WS	1		WALSIN
3	BB.01191.023	7H+33324.211	CHIP CAP 0.033U 50V K0805 X7R	1	CM9	DARFON
ALT	7H+33324.211	7H+33324.21K	CHIP CAP0.033U50V K0805 X7R WS	1		WALSIN
3	BB.01191.023	7H+33422.211	CHIP CAP C 0.33U 25V K0805 X7R	1	C8	DARFON
ALT	7H+33422.211	7H+33422.21K	CHIP CAP0.33U25V K0805 X7R WS	1		WALSIN
3	BB.01191.023	7H+47124.211	CHIP CAP 470P 50V K0805 X7R	2	CL6 CP4	DARFON
ALT	7H+47124.211	7H+47124.21K	CHIP CAP 470P 50V K0805 X7R WS	2		WALSIN
3	BB.01191.023	7H+47322.211	CHIP CAP 0.047U 25V K0805 X7R	4	CP3 CM14 CS9 CM7	DARFON
ALT	7H+47322.211	7H+47322.21K	CHIP CAP 0.047U25V K0805X7R WS	4		WALSIN
3	BB.01191.023	7H+47424.211	CHIP CAP0.47U 50V K0805 X7R GP	2	CL9 CM10	DARFON
ALT	7H+47424.211	7H+47424.21K	CHIP CAP 0.47U50V K0805 X7R WS	2		WALSIN
3	BB.01191.023	7H+47521.511	CHIP CAP C 4.7U 16V K0805 X5R	1	CM12	DARFON
ALT	7H+47521.511	7H+47521.51K	CHIP CAP 4.7U 16V K0805 X5R WS	1		WALSIN
3	BB.01191.023	7H+47522.511	CHIP CAP 4.7U 25V K0805 X5R	2	CM16 CS13	DARFON
ALT	7H+47522.511	7H+47522.51K	CHIP CAP 4.7U 25V K0805 X5R WS	2		WALSIN
3	BB.01191.023	7H+56322.211	CHIP CAP 0.056U 25V K0805 X7R	1	C12	DARFON
ALT	7H+56322.211	7H+56322.21K	CHIP CAP 0.056U 25V K0805 X7R WS	1		WALSIN
3	BB.01191.023	8C+04148.01L	DIODE DET CD4148WSN 100V 0805	14	D1 D4 DL2 DL15 DM3 DM5 DM8	CROWNPO
ALT	8C+04148.01L	8C+00355.01F	DIODE DET 1SS355 90V SOD323	14		ROHM
3	BB.01191.023	8C+10R05.03L	DIODE ZEN 10V CDZ55B10S 0805	3	ZL7 ZL8 ZL9	CROWNPO
ALT	8C+10R05.03L	8C+10R03.13F	DIODE ZEN 10V PDZ10B SOD323	3		NXP
3	BB.01191.023	8C+15R05.03L	DIODE ZEN 15V CDZ55B15S 0805	5	ZD1 ZDM1 ZDM4 ZDS7 ZDL1	CROWNPO
ALT	8C+15R05.03L	8C+15R03.23F	DIODE ZEN15V PDZ-15B SOD323 GP	5		NXP
3	BB.01191.023	8C+22R05.03L	DIODE ZEN 22V CDZ55B22S 0805	2	ZDS2 ZDS3	CROWNPO
ALT	8C+22R05.03L	8C+22R03.23F	DIODE ZEN22V PDZ22B SOD323	2		NXP
3	BB.01191.023	8C+27R05.03L	DIODE ZEN 27V CDZ55B27S 0805	2	ZD5 ZD6	CROWNPO
ALT	8C+27R05.03L	8C+27R03.23F	DIODE ZEN 27V PDZ-27B SOD323	2		NXP
3	BB.01191.023	8C+5R105.03L	DIODE ZEN 5.1V CDZ55B5V1S 0805	1	ZD4	CROWNPO
ALT	8C+5R105.03L	8C+5R103.23F	DIODE ZEN 5.1V PDZ-5.1B SOD323	1		NXP
3	BB.01191.023	8C+6R205.03L	DIODE ZEN 6.2V CDZ55B6V2S 0805	1	ZDM5	CROWNPO
ALT	8C+6R205.03L	8C+6R203.23F	DIODE ZEN 6.2V PDZ6.2B SOD323	1		NXP
3	BB.01191.023	8C+9R105.03L	DIODE ZEN 9.1V CDZ55B9V1S 0805	1	ZDM7	CROWNPO
ALT	8C+9R105.03L	8C+9R103.23F	DIODE ZEN 9.1V PDZ9.1B SOD323	1		NXP
3	BB.01191.023	8D+00210.031	FET MOS PB210BM 100V SOT23	7	QL15 QL16 QL17 QL18 QL19 QL20	NIKO-SEM
3	BB.01191.023	8D+00306.013	XTOR PBSS306PX 3.7A 100V PNP	6	QL3 QL4 QL5 QL6 QL7 QL8	NXP
3	BB.01191.023	8D+00514.031	FET MOS PM514BA 3A20V SOT-23	1	Q3	NIKO-SEM
ALT	8D+00514.031	8D+03002.031	FET MOS EMF30N02J 5A20V SOT-23	1		EXCELLIANCE(杰力)
3	BB.01191.023	8D+02907.011	XTOR PMBT2907A SOT-23 PNP	2	QS6 QS7	NXP
ALT	8D+02907.011	8D.T2907.021	XTOR SST2907A SOT-23 PNP	2		ROHM
3	BB.01191.023	8D+07002.031	$FET MOS RK7002 SOT-23	6	Q1 Q2 QL2 QL14 QM10 QS9	ROHM
ALT	8D+07002.031	8D+27002.A31	FET MOS 2N7002CK 60V SOT23	6		NXP
3	BB.01191.023	8D+3904T.011	XTOR PMBT3904 SOT-23L NPN	1	QS4	NXP
ALT	8D+3904T.011	8D+03904.011	XTOR SST3904 SOT-23 NPN	1		ROHM
3	BB.01191.023	8D+S3906.011	XTOR PMBS3906 SOT-23L PNP	1	QS3	NXP
ALT	8D+S3906.011	8D+03906.011	XTOR SST3906 SOT-23L PNP	1		ROHM
3	BB.01191.023	8D+T2222.011	XTOR PMBT2222A SOT-23 NPN	1	QS8	NXP
ALT	8D+T2222.011	8D+02222.021	XTOR SST2222A SST3 NPN	1		ROHM
2	BA.01191.023	BB.01191.161	ASSY HSK+QM1/QM2 B191-203	1		DARFON
3	BB.01191.161	0F+00850.020	FET MOS P0850ATF 8A500V TO220F	2	QM1 QM2	NIKO-SEM
ALT	0F+00850.020	0F.00850.021	FET MOS SMK0850F 500V8A TO220F	2		AUK
3	BB.01191.161	3D+73535.AG1	HEATSINK 35*35*9.8 PIN3.5 B168-	1	HS1	堯峰,星和
3	BB.01191.161	3H+01042.021	GLUE HEATSINK JS-101	0.05		SHANGHAI WEIYI(上海偉懿)
2	BA.01191.023	BB.01191.162	ASSY HSK+DM4/DM7 B191-203	1		DARFON
3	BB.01191.162	0F.30004.113	DIODE SB PFR30L45CTF 30A 45V	2	DM4 DM7	PFC
ALT	0F.30004.113	0F+30004.113	DIODE SB PFR30L45CTFH 30A 45V	2		PFC
3	BB.01191.162	3D+74535.AG1	HEATSINK 45*35*9.8MM PIN3.5	1	HS2	堯峰,星和
3	BB.01191.162	3H+01042.021	GLUE HEATSINK JS-101	0.05		SHANGHAI WEIYI(上海偉懿)
2	BA.01191.023	BB.01191.223	ASSY SUB B191-203	1		DARFON
3	BB.01191.223	8F.6A534.6R0	SCREW MACH ROUND NI M3*6L	5	*QM1 *QM2 *DM7 *DM4 *QL1	濱中松琴,歐暉
3	BB.01191.023	BC.01191.023	ASSY AI B191-203	1		DARFON
4	BC.01191.023	0D.00431.03B	IC V.R. AS431BZTR-E1 TO-92 3P	2	UM4 US3	BCD

DFS-Module
Indented Bills Report

Program No:XXBOMR105
Date:02-JUL-2013 15:37:41

Organization Code：SPM

Project Code：BK.01191.001

Finished Goods：BK.01191.203

Description：POWER BOARD B191-203

Model：B191-203

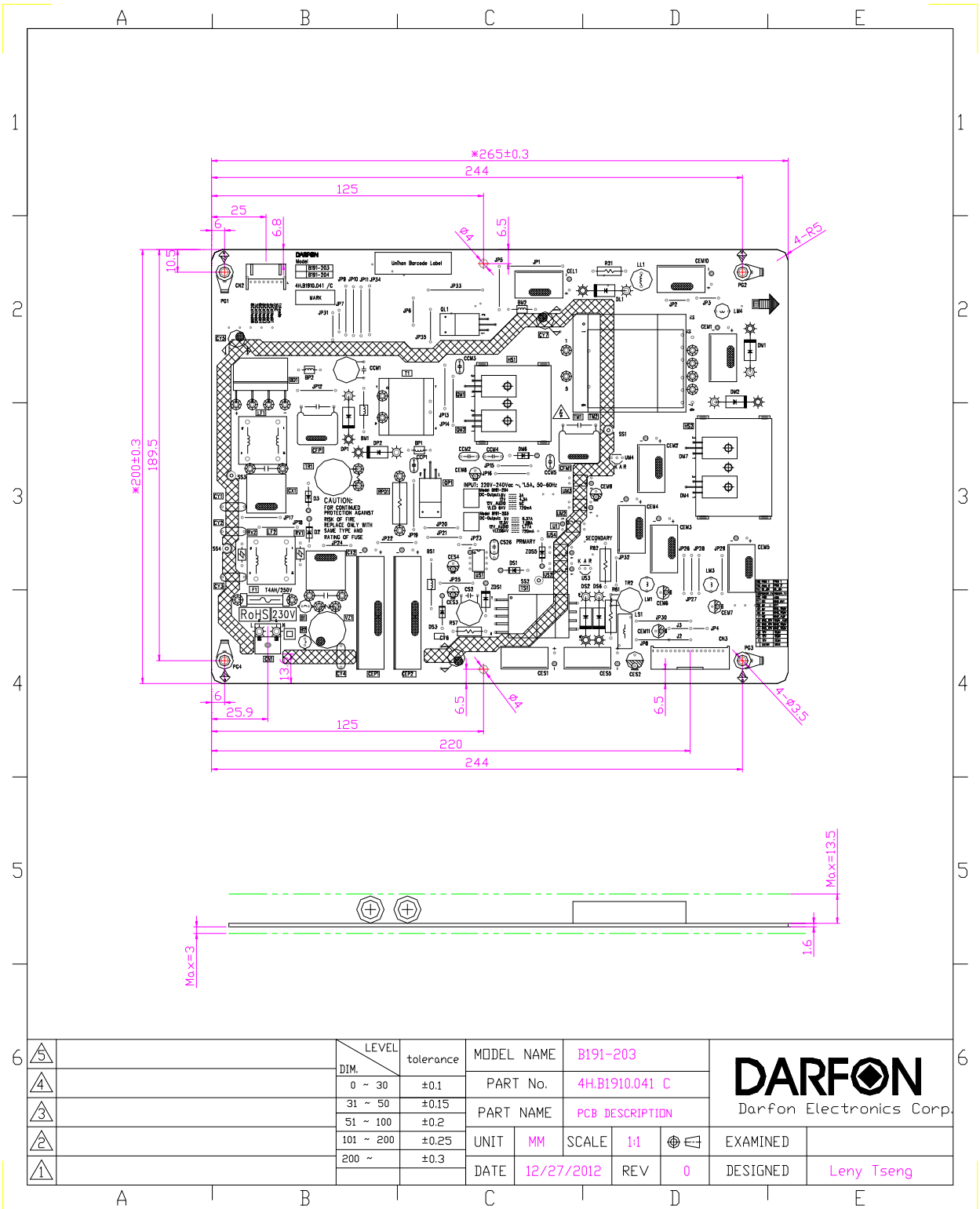
Level	Parent Item	Component Item	Description	Qty	Designator	ASL
4	BC.01191.023	0D+00127.160	IC PWM FSB127HNY DIP8	1	US1	FAIRCHILD
4	BC.01191.023	0F.17003.070	DIODE ZEN P6KE170A 170V 600W	1	ZDS1	LITEON
ALT	0F.17003.070	0F.17003.071	DIODE ZEN P6KE170A 170V 600W	1		SECOS
4	BC.01191.023	0F.1R0A0.033	DIODE REC 1N4007 1KV1A DO-41LI	2	D2 D3	LITEON
ALT	0F.1R0A0.033	0F.1R0A0.03P	DIODE REC 1N4007G 1A1KV DO-41	2		SECOS
4	BC.01191.023	0F.1R0A0.12H	DIODE FAST FR107G 1A1KV	2	DS1 DS3	SECOS
ALT	0F.1R0A0.12H	0F.1R0A0.12A	DIODE FAST PR1007G 1A 1000V	2		LITEON
4	BC.01191.023	0F.1R0A0.210	DIODE U.F. UF1007 1000V1A DO41	1	DM6	LITEON
ALT	0F.1R0A0.210	0F.1R0A0.212	DIODE U.F. UF1010 1A1000V DO-41	1		PANJIT(強茂)
4	BC.01191.023	0F.22R03.071	DIODE ZEN 22V 1N5251B DO-35	1	ZDS5	SECOS
ALT	0F.22R03.071	0F+22R03.073	DIODE ZEN 22V 1N5251B DO-35	1		LITEON
4	BC.01191.023	0H.1003M.A2D	CAP DISC 10P 3KV J SL RT7.5	2	CCM2 CCM4	WALSIN
ALT	0H.1003M.A2D	0H+1003M.B2D	CAP 10P 3KV J SL RT7.5 HOLY	2		HOLYSTONE
4	BC.01191.023	0H.1012A.37W	CAP DISC100P 1KV K CT81 RF5 IK	2	CCP1 CCM3	沂南同皓
ALT	0H.1012A.37W	0H.1012A.DFW	CAP DISC 100P1KV K X7R RT5	2		WALSIN
4	BC.01191.023	0H.68126.BV4	CAP Y1 680P 250V K RT10 OK POE	2	CY1 CY2	WALSIN
ALT	0H.68126.BV4	0H.68116.AV4	CAP D Y1 680P250V M RT10VK TDK	2		TDK
4	BC.01191.023	0J.22614.099	CAP EL 22U 50V M ESR105C RF2 KY	3	CES3 CES4 CEM8	NCC
ALT	0J.22614.099	0J.22614.D99	CAP 22U50V M RF2 YXG 5*11RUBY	3		RUBYCON
ALT	0J.22614.099	0J.22614.B9P	CAP 22U 50V M RT2 YXF 5*11 RUB	3		RUBYCON
4	BC.01191.023	0J+10712.E9B	CAP 100U 25V M RT2.5 HW 6.3*11	3	CEM6 CEM7 CEM11	TAICON
ALT	0J+10712.E9B	0J.10712.B9B	CAP EL100U25V M ESR105 RF2.5KY	3		NCC
4	BC.01191.023	0J+4771D.A90	CAP EL 470U 16V M RT5 HW 8*11.5	1	CES2	TAICON
ALT	0J+4771D.A90	0J.4771D.A9C	CAP 470U 16V M RT5 KZH 8*11.5	1		NCC
4	BC.01191.023	1C+20235.072	RES MOFM 2K J 2W AT FUTABA	1	R21	FUTABA
4	BC.01191.023	1C+5R134.072	RES MOFM 5.1 J 1W AT MINI	1	RS7	FUTABA
ALT	1C+5R134.072	1C+5R134.A72	RES MOFM 5.1 J 1W AT MINI PAK	1		PAK HENG(百亨)
4	BC.01191.023	2E.RA28A.180	EMI CORE S4A RHW 3.5*4.7*0.8	5	BM1 BM2 BP1 BP2 BS1	RUIYUAN(蕊源)
ALT	2E.RA28A.180	2E.R428A.130	EMI CORE A6 RH 3.5*4.7*0.8 T52	5		KING(鈞寶)
4	BC.01191.023	BD.01191.023	ASSY JUMPER B191-203	1		DARFON
5	BD.01191.023	1C+R0003.AH2	RES WOR 0 0.6MM AT HUHUI	2.52675	(7.5MM) JP23 (10MM) J2 J3 JP2 JP3	HUHUI(滬惠)
5	BD.01191.023	BE.01191.023	ASSY PCB+LABEL+RIVET B191-203	1		DARFON
6	BE.01191.023	3D+B0834.001	RIVET CU TINNING D1.6*3MM B083	22	#F1*2 #CX2*2 #CX1*2 #RPD1*2?	宇達,堯峰,啓東匯通
6	BE.01191.023	3D+B0944.001	RIVET CU TINNING D2.2*3MM B094	12	#CN1*2 #DP2*2 #DS2*2 #DM2*2	宇達,堯峰,啓東匯通
6	BE.01191.023	3H+17001.371	RIBBON PRINTER40MM*300M	1.2		RUIHAO
6	BE.01191.023	4E+10001.137	LABEL BLANK 28*8MM HI-TEMP	1		JIN LIAN(東橋金聯)
6	BE.01191.023	4H.B1910.041	PCB 265*200*1.6 FR1 CTI400 B191-	1		三照,敬鵬,匯和,迪飛達,萬年富

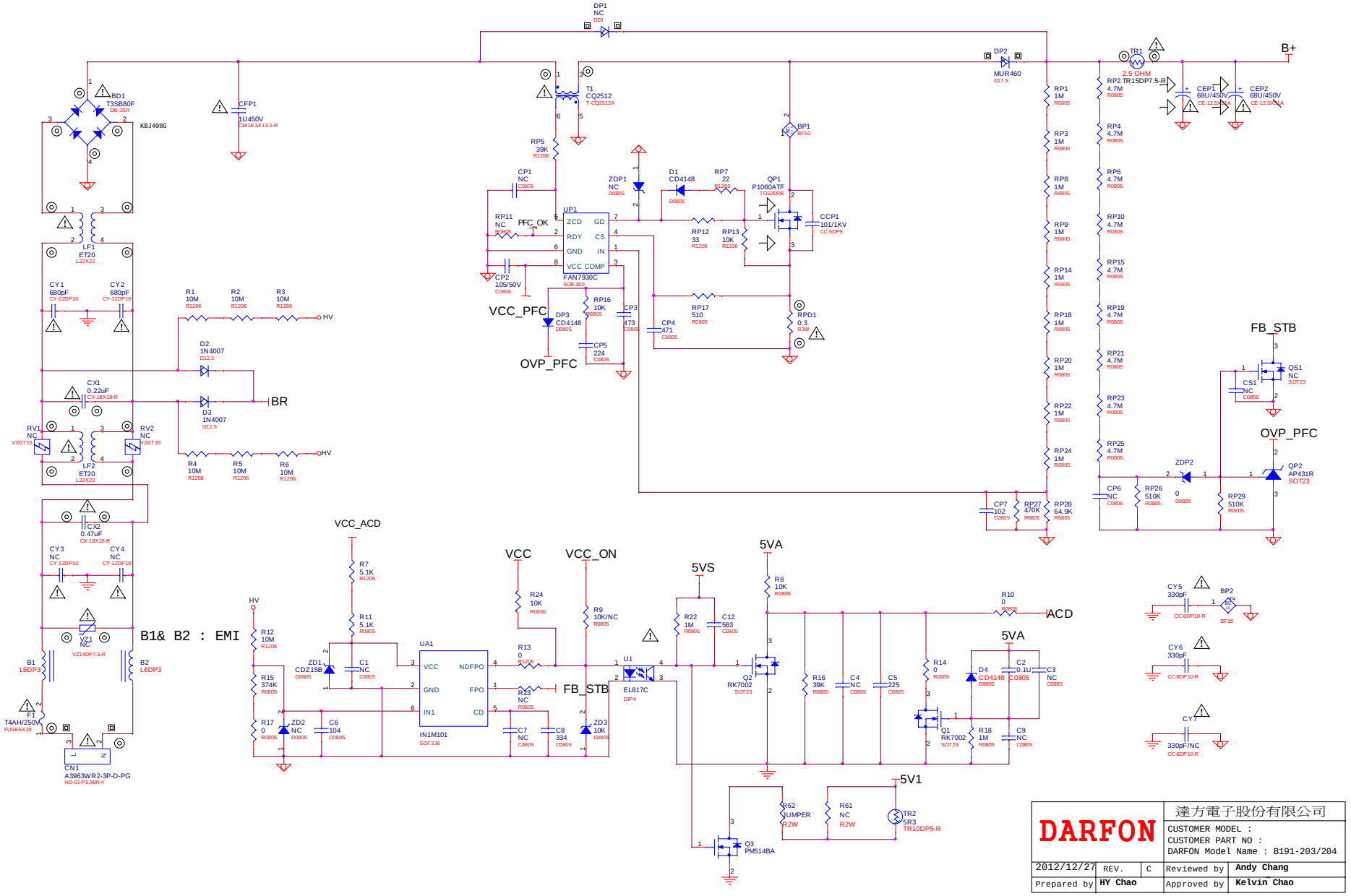
DARFON

Release Notice

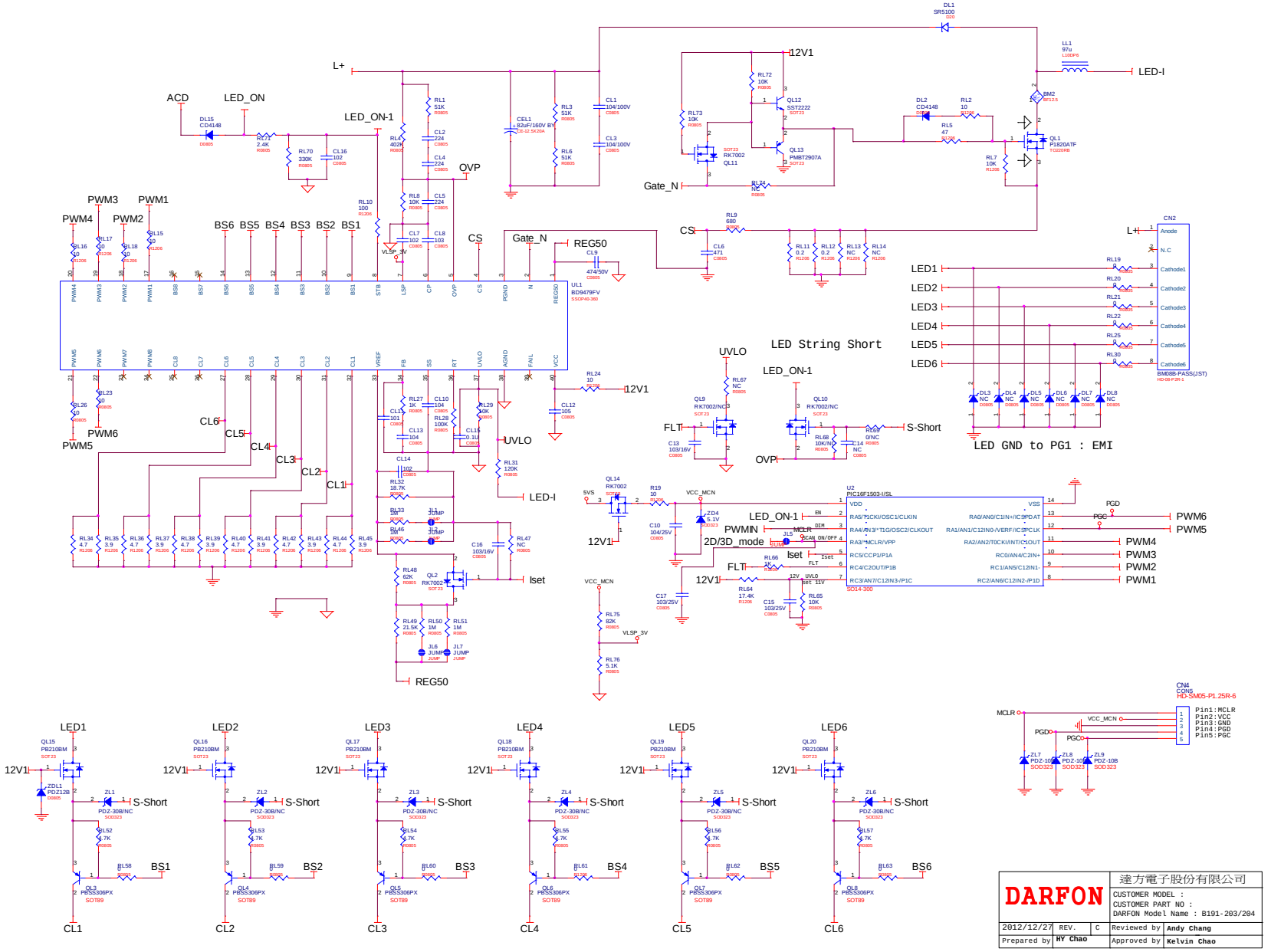
Subject:	PCB Outline Drawing	Part No.:	BK.01191.203	Rev.:	0
		Doc. No.:	209-C005		
Project Code:	BK.01191.001			Page	1 of 1
Model Name:	B191-203				

1. PCB Outline drawing :

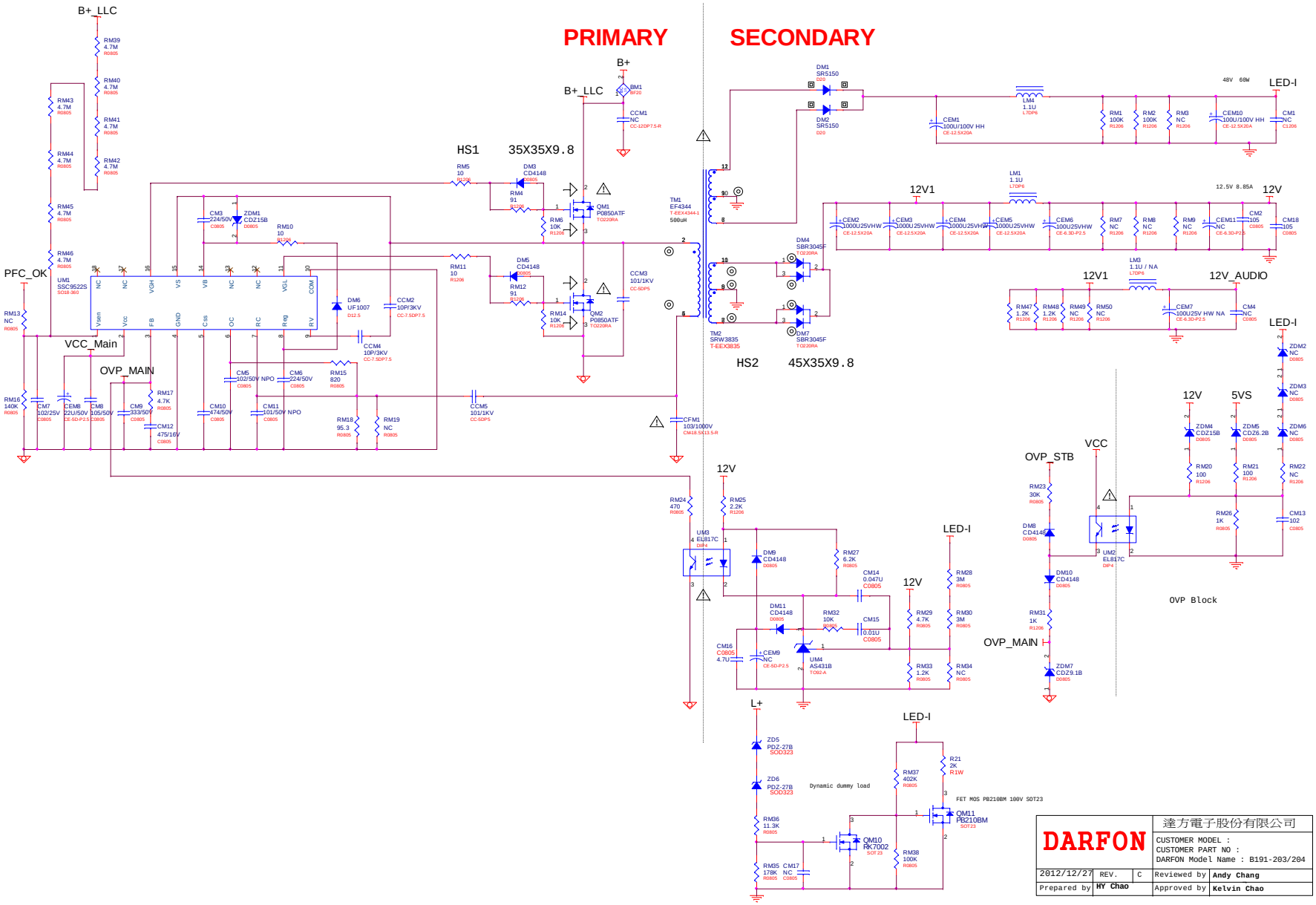


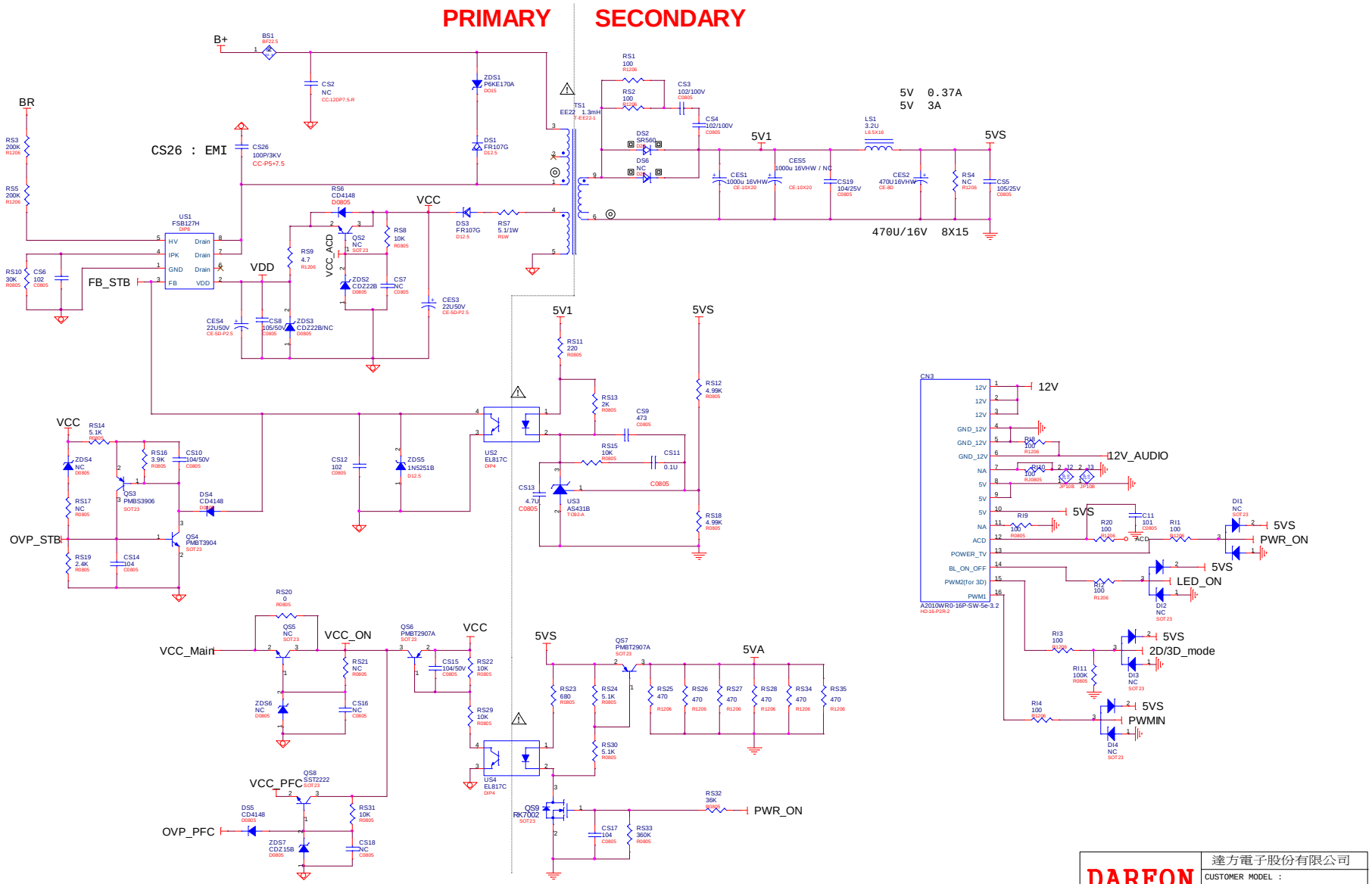


DARFON	達方電子股份有限公司		
	CUSTOMER MODEL :		
	CUSTOMER PART NO :		
	DARFON Model Name : B191-203/204		
2012/12/27	REV. C	Reviewed by	Andy Chang
Prepared by	HY Chao	Approved by	Kelvin Chao



DARFON	達方電子股份有限公司		
	CUSTOMER MODEL :		
	CUSTOMER PART NO :		
	DARFON Model Name : B191-203/204		
2012/12/27	REV.	C	Reviewed by: Andy Chang
Prepared by: HY Chao			Approved by: Kelvin Chao

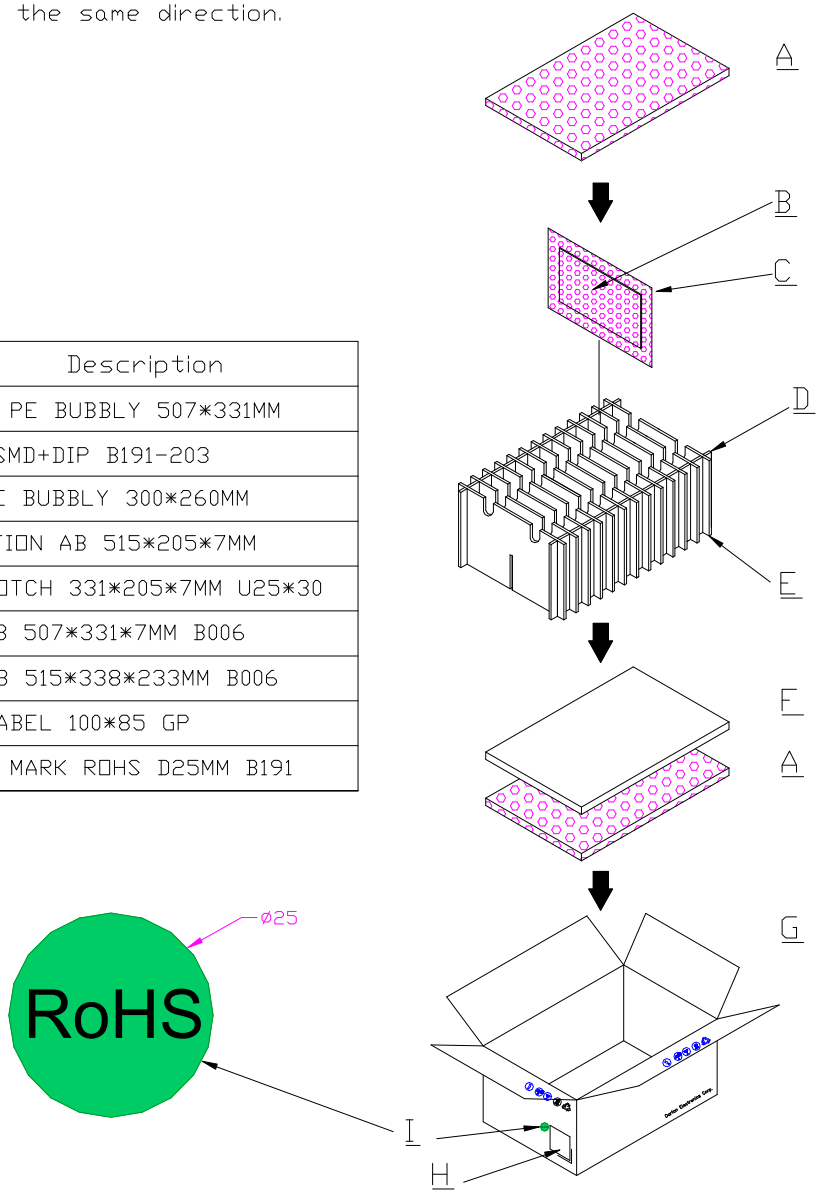

PRIMARY
SECONDARY
B+_LLC
B+
HS1 35X35X9.8
HS2 45X35X9.8
PFC_OK
VCC_Main
OVP_MAIN
12V1
12V_AUDIO
LED-I
12V
5VS
VCC
OVP_STB
OVP Block
L+
Dynamic dummy load
FET MOS PB210BM 100V SOT23
DARFON
達方電子股份有限公司
CUSTOMER MODEL :
CUSTOMER PART NO :
DARFON Model Name : B191-203/204
2012/12/27 REV. C
Prepared by HY Chao
Reviewed by Andy Chang
Approved by Kelvin Chao



DARFON	達方電子股份有限公司	
	CUSTOMER MODEL :	
	CUSTOMER PART NO :	
	DARFON Model Name : B191-203/204	
2012/12/27 REV. C	Reviewed by	Andy Chang
Prepared by HY Chao	Approved by	Kelvin Chao

1. Total 12 PCS finished products in a carton.
2. The Component CN3 on the bottom of the carton.
3. The LIPS should be in the same direction.

	P/N	Description
A	4B+B0949.03A	SHEET PE BUBBLY 507*331MM
B	BA.01191.023	ASSY SMD+DIP B191-203
C	4B+B0167.03A	BAG PE BUBBLY 300*260MM
D	4F+20001.222	PARTITION AB 515*205*7MM
E	4G+B0066.081	PAD NOTCH 331*205*7MM U25*30
F	4G+B0066.031	PAD AB 507*331*7MM B006
G	4D+B0063.011	CTN AB 515*338*233MM B006
H	4E+00003.00A	CTN LABEL 100*85 GP
1 I	4E+30001.211	LABEL MARK ROHS D25MM B191



5		MODEL NAME	B191-203				DARFON Darfon Electronics Corp.	
4		PART No.	-					
3		PART NAME	PACKING DESCRIPTION					
2		UNIT	MM	SCALE	1:1		EXAMINED	
1	客戶要求增加RoHS標籤（2013.2.19）	DATE	11/14/2012	REV	0		DESIGNED	Leny Tseng

H. Carton Label Rule：（P/N：4E+00003.00A　CTN LABEL 100*85 GP ）

Customer P/N:請參照 201文件

Darfon P/N:**,*****,***

DESC : **

Q'TY : ** PCS

WGT : ** KG

Date code : YMMWW Rev:X

Serial NO. : XXXXXXX-XXX

Darfon P/N：BK.01191.203

DESC：LIPS

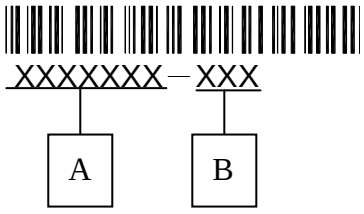
Q'TY：12 PCS

WGT：7.5 KG（此爲計算值，僅供參考。請以第一次量試之實際秤重值爲準。）

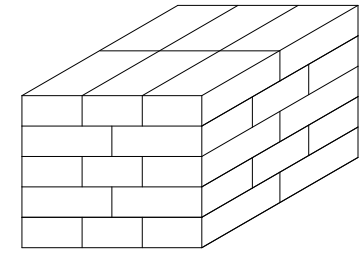
Date code：YMMWW（共5碼）
Y　：1碼--- 年
MM　：2碼--- 月
WW　：2碼--- 週別

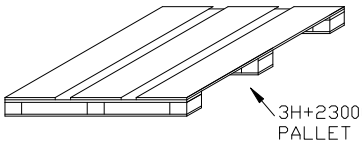
Rev.：請參照201文件

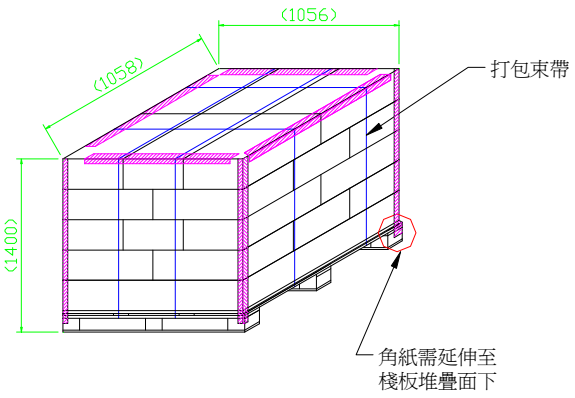
Serial NO：



A：工單號：依工廠實際作業打印
B：箱號：3碼 001~999







海/陸/空運堆疊層數: 5層

(客戶要求海陸運堆疊需1.6米以下)

5		MODEL NAME	FOR CTN 4D+B0063.011			DARFON Darfon Electronics Corp.		
4		PART No.	-					
3		PART NAME	PACKING DESCRIPTION					
2		UNIT	MM	SCALE	1:1	EXAMINED		
1		DATE	1/21/2013	REV	0	DESIGNED	Leny Tseng	