



Approval Sheet

Safety

Description	AC/DC ADAPTOR (24V/4A, DC JACK)
Model No	LA-B271KS-DA
Customer Model Name	
Document number	TD-PA-B271KS-DA-S01

Conditional approval
1.
2.
3.

Approved for the above products.

	Draft	Review	Confirmation
customer Acknowledgment			
	Draft	Review	Confirmation
Supplier Acknowledgment	Internal payment completed		

Company Name	SUNLIN TECH	TEL.	031-428-8082
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1. Product Specification

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preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Product Specification		Model No LA-B271KS			

1. Summary

1.1 A range of application.

This product specification (hereinafter referred to as "specification") is SK Broadband's "B Internet, B Internet phone"

The purpose of this document is to provide functional requirements for terminal equipment power adapters and external

1.2 Scope of application

This product specification shows the standard rated output among the high-speed multimedia service terminals provided by SK Broadband Applies to 24V, 4A adapters.

1.3. criteria to apply

- 1) For the matters not mentioned in this specification, it should conform to the following domestic standard or international recommendation.
- 2) Article 5 (2) "Safety Standards"
- 3) Electrical appliances safety standard "K60950-1"
- 4) Standard for the prevention of electromagnetic interference (Notice by the Korea Communications Commission)
- 5) CISPR(EN55022) Class B limit
- 6) FCC Part15, subpart B, Class B limit
- 7) ISO Standard
- 8) Self-technical standard
- 9) Standby power reduction program operation standard (Ministry of Knowledge Economy notification)
- 10) Efficiency Management Equipment Operation Regulations (Ministry of Knowledge Economy Notice)
- 11) Domestic and overseas laws, regulations, standards, standards, etc.

2. Power Adapter Requirements

2.1. General Information

- 1) The power adapter is safe from electric shock, burn, arc, ignition, mechanical hazard and chemical hazard

Produced under a system that conforms to safety standards and maintains safety in accordance with the provisions of Article 5 (2)

The product is authorized to issue a safety certificate and to use the safety certification mark for the product.

- 2) Insurance and product liability insurance due to fire etc
- 3) The rectification method is an SMPS (Switch Mode Power Supply) type.
- 4) The power adapter is a type approved product.

2.2. Materials and components

- 1) Materials and parts are of quality such as KS standard products that are mechanically robust and satisfy electrical characteristics Ensure reliability
- 2) The coupling of the adapter main body can not be arbitrarily opened and closed by using a fusion type system.
- 3) Outer shape material is made of PC or ABS resin so that the reliability of product can be maintained and pollution prevention and cleaning are possible.

☞ The outer shape of the adapter body and the output terminal connector are made of flame retardant material.

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☞ Adequate treatment was performed to prevent contact and fire caused by foreign substances inside the adapter.

4) All components, including electrolytic capacitors, ensure product reliability using components with good electrical characteristics and sufficient capacitance

☞ The temperature characteristics of the electrolytic capacitor use a product that maintains a life of 5000 hours or more at 105 °C. on the primary (AC input) and secondary (DC output) side.

5) The DC output cable uses AWG # 18 shield type.

6) The fuse used for power input must be ceramic material Time-lag Type, and it uses a safety standard approved product.

☞ Fuse uses a capacity of 6.3A or less.

7) The Varistor used for power input uses a product approved by the safety standard.

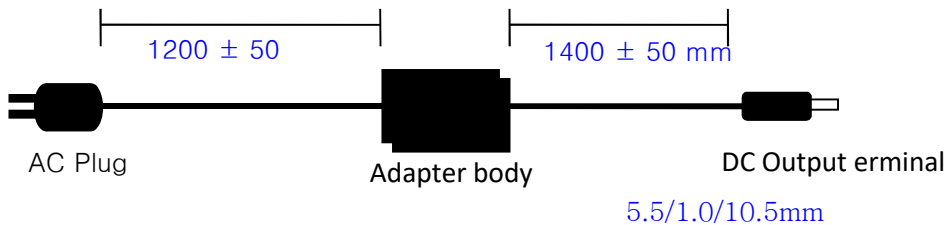
☞ Varisto used less than 14Φ Product.

8) The output protection device uses the foldback method.

3. Structure and form

3.1 Product size and structure

1) Product Appearance



2) Adapter body size

Item	Structure and Standard
Size (W*L*H)	60*138*39 mm
Color	Black

3) AC Input structure

Item	Structure and Standard
Applicable country	Korea
Length	1200±50 mm
Type	Cord Type

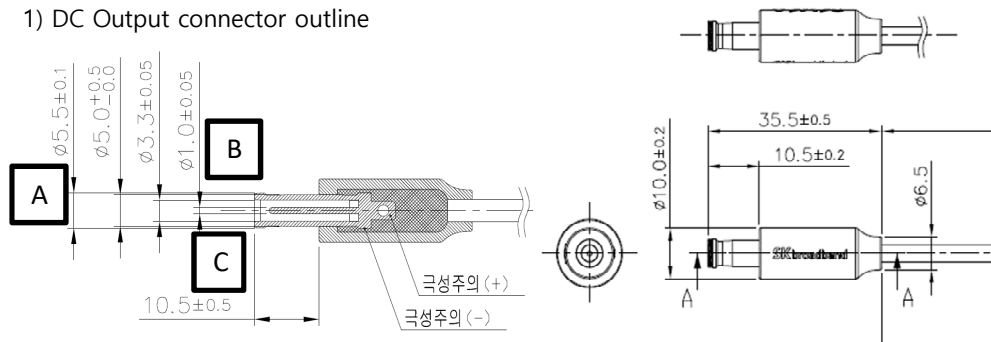
4) DC Output structure

구 분		구조 및 규격
Cable	Kinds	UL 1185, AWG18
	Length	1400±50 mm
	Color	Black

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3.2 DC Output structure

1) DC Output connector outline



2) DC Jack structure

구 분		구조 및 규격
Size	Outer diameter (A)	5.5±0.1 mm
	inner diameter (B)	1.0±0.05 mm
	Length (C)	10.5±0.5 mm
shape		Straight Type

3) DC Jack Terminal power supply

단자 핀	전 원
Internal terminal	+24.0V
External terminal	Ground

4. Electrical characteristic

4.1 AC Input characteristic

Item	Structure and Standard
- AC Input Voltage	AC 200V ~ 240V (-10%, +6%)
- AC Input frequency	50 / 60Hz (57~63Hz)
- AC Input current	220V / 1.5A Max
- Primary side Fuse	250V 6.3A FUSE CERAMIC
- Inrush Current	Normal operation with 220V AC / 50Amax inrush current under rated load conditions
- Power Factor	Rated input voltage, 0.9 or more at 50% or more load

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4.2 DC Output characteristic

Item	Standard and characteristic
- DC Output voltage	DC 24V $\pm$ 5%
- DC Output current	4.0A
- Line Regulation	When the input power varies from 185 to 264 VAC (60 Hz) at the maximum rated load, $\pm$ 2% of output voltage of rated input voltage (220VAC / 60Hz)
- Load Regulation	Within $\pm$ 2% of the output voltage of 50% of the maximum rated load when the output load is changed from no load to the maximum rated load at rated input voltage (220VAC / 60Hz)
- Ripple & Noise	When the input power varies from 185 to 264 VAC (60 Hz) at the maximum rated load, it is measured at 200 mV (P-P) or less (Oscilloscope with a bandwidth of 20 MHz and electrolytic capacitor 47 μ F for prevention of external noise and 0.1 μ F ceramic capacitor in parallel)
- Over current Protection	When the rated input voltage is applied and the load is increased sequentially, the overcurrent protection circuit should be cut off from 120% to 175% (4.8 to 7.0) of the rated load.
- Output short-circuit protection	The rated input voltage is applied to completely shut off the output when the output is shorted, and after eliminating the cause of the short circuit, normal operation (performed 10 times in 10 seconds cycle)

4.3 Insulation characteristic

Item	Standard and characteristic
- 1st and 2nd insulation breakdown	There is no breakdown when applying input and output 3000VAC (Cut Off Current 5mA) for 1 minute, and it operates normally (Measure by shorting the two input wires and the two output wires)
- Leakage current	Less than 0.25mA leakage current under rated input voltage (220V 60Hz)

4.4 Energy efficiency

Item	Standard and characteristic
- Energy efficiency	More than 84.3% (Average efficiency after 30 minutes aging under the conditions of 220V 60Hz input voltage to output current 25%, 50%, 75%, 100%)
- Standby power (no-load power consumption)	less than 0.75W (220V 60Hz input and no-load output conditions)

* Note : Meets the minimum consumption efficiency standards and the standards for standby power reduction program operation rules announced in the Ministry of Knowledge Economy

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5. Environmental condition

5.1 Operation and storage

Item	Standard and characteristic
- Operation temperature / Humidity	Temperature -5°C ~ 50°C, Humidity 20% ~ 85%
- Storage temperature / Humidity	Temperature -5°C ~ 60°C, Humidity 10% ~ 90%

6. Reliability condition

6.1 Othe reliability test

Item	Standard and characteristic
- Surge test	COMBINATION WAVE ± 4000V Normal operation after applying 10 times per phase / polarity in frequency divider

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7. Appearance

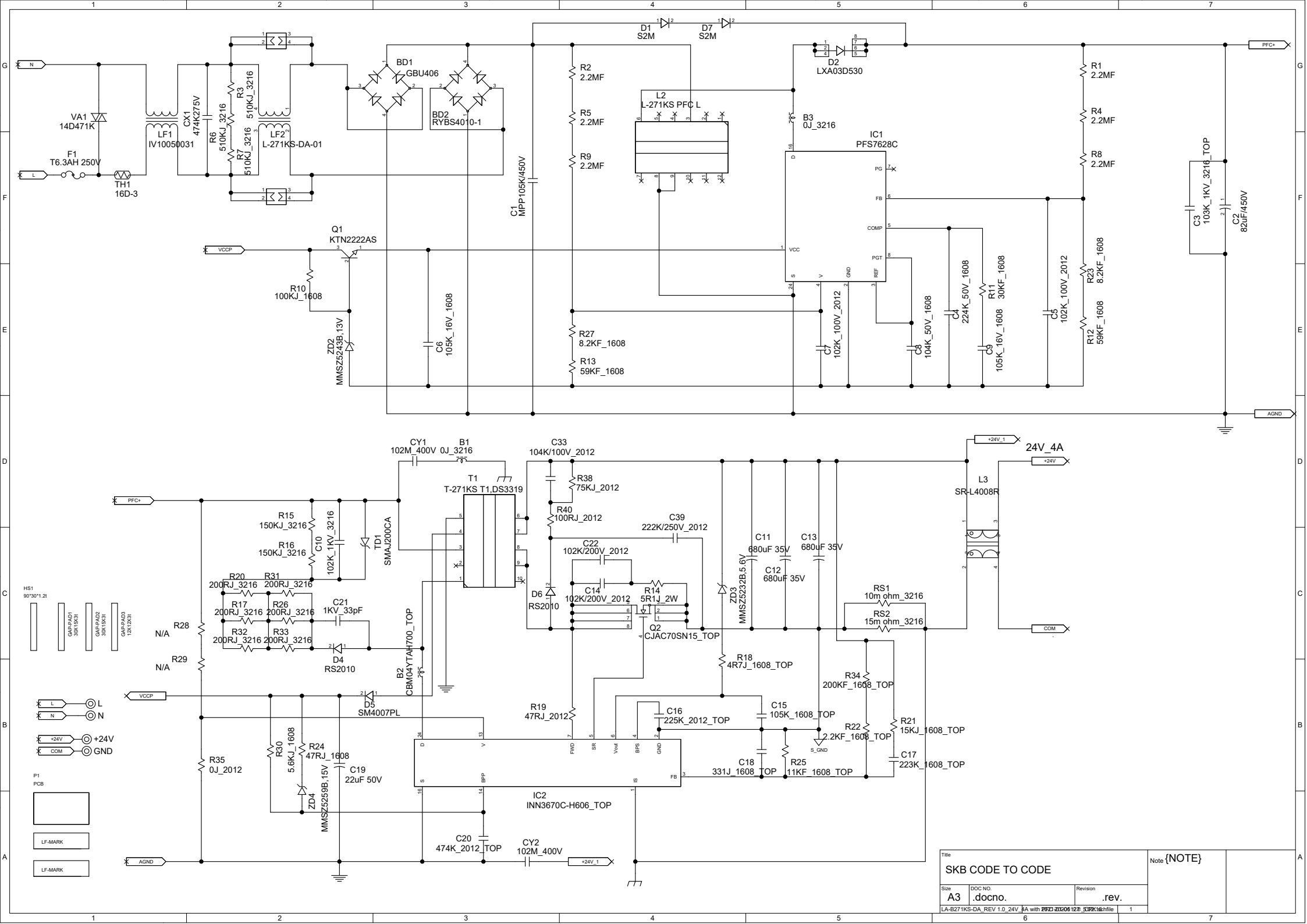
7.1 Notation

- 1) SK Broadband Logo, Product Name, Model Name, Safety Certification Number, Rating Input, Rated Output, Manufacturer Name, Date of Manufacture, A / S Contact List. (See figure below - figure 1)



- 2) The SK Broadband Logo and the list use materials that are not damaged.
- 3) The isolated Plastic part of the DC output terminal uses 24V division index yellow.

2. Schematic



Title			Note {NOTE}	
SKB CODE TO CODE				
Size	DOC NO.	Revision		
A3	.docno.	.rev.		
LA-B271KS-DA, REV 1.0, 24V, 4A with PFC, 20200812, 502K16chfile				

3. Operating Manual & Block Diagram

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preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Operating manual		Model No LA-B271KS			

1. Input section

1.1 Input filter And rectifier circuit

1) The AC voltage input from the input terminal is full-wave rectified via FUSE-> VARISTOR-> BRIDGE DIODE (BD1,2).

2) The full wave rectified voltage is smoothed to a DC voltage (C2).

☞ Varistor(VA1) : Protect the device from SURGE which can go into the input.

☞ Filter circuit : Input Attenuates high frequency NOISE generated by it self and NOISE coming from the input side.

1.2 Switching circuit

1) The voltage that has been smoothed into the DC voltage will be SWITCHING to a high frequency voltage of several tens of KHz by the PWM CONTROLLER (IC1).

2) IC1 PWM CONTROLLER performs the following functions.

1.3 Voltage converter (TRANSFORMER)

1) Transformer(T1) is used to separate the input side of the primary side and the output side of the secondary side

2) The voltage oscillated at high frequency from the switching circuit is transmitted to the secondary side.

1.4 Output rectification/smoothing circuit and stabilization circuit

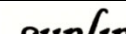
1) Rectifier / smoothing circuit The voltage on the secondary side of the voltage converter T1 is rectified by FET Q2 and smoothed by FILTER. A stable DC voltage (24V) is obtained through smoothing circuits (C11, C12, C13).

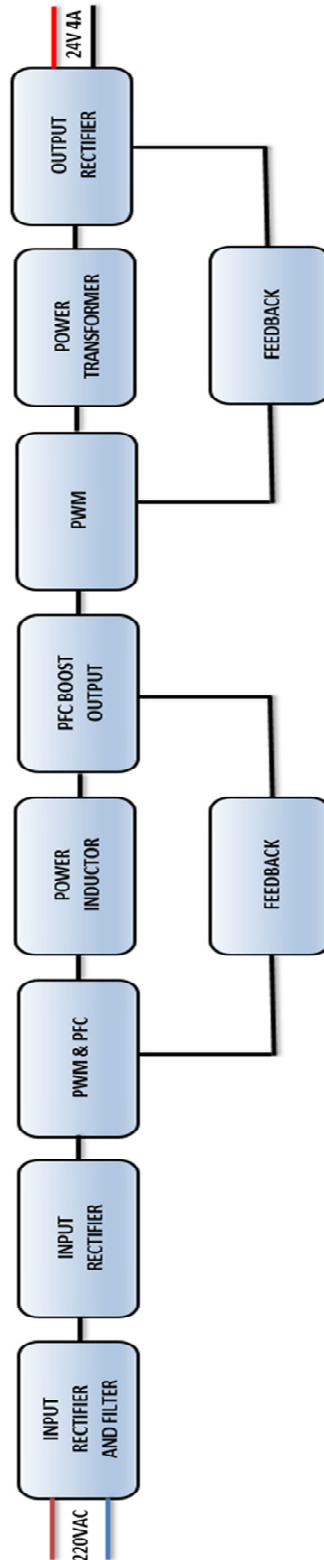
2) Feedback circuit

The output voltage of 24V is monitored and the amount of change is fed back to the SWITCHING circuit to maintain stable output voltage.

Class B (home communication equipment)

This device is mainly for home use as a home (class B) electromagnetic wave compliance device,
and can be used in All regions

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4. PART LIST

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WRITTEN BY				CHECK				APPRO.				DOC ADMIN.			
B. S. LEE				S. Y. CHOI				W. J. HUR				D. H. YOU			
PRODUCT NAME				Hazardous Substance				CUSTOMER PART NO				FILE NAME			
LA-B271KS (24V/4A) BULK				L/F				-				PARTS LIST			
공정	NO	품목 Code	ITEM	SPEC	LOC NO.	UNIT	QTY	MAKER	PART NO.	REMARK					
SMD (TOP)	1		2LA-B271KS-DA1-SMT	LA-B271KS-DA 반제품_SMT	LA-B271KS-DA										
	1		PBDSF4X-271KSDA1A0	PCB, DS FR-4	P-271KS-DA-01 V1.0 ; FR-4 1.6T 129.5X52mm		PCS	1	ONLINK	P-271KS-DA-01					
			PBDSF4X-271KSDA1A0	PCB, DS FR-4	P-271KS-DA-01 V1.0 ; FR-4 1.6T 129.5X52mm		PCS	1	CHIKURITEU	P-271KS-DA-01					
	2		BDSMS6X-7004R0S1V1	BEAD, SMD	3216 70Ω BEAD ; CBM04YTAH700	B2	PCS	1	VIKING	CBM04YTAH700					
	3		CAS2S3X-331H4JS1A0	CAPACITOR, SMD	1608 331J 50V C0G(NP0)	C18	PCS	1	WALSIN TECHNOLOGY	0603N331J500LT					
	4		CAS5S3X-223H4KS1A0	CAPACITOR, SMD	1608 223K 50V X7R	C17	PCS	1	WALSIN TECHNOLOGY	0603B223K500CT					
	5		CAS5S3X-105C4KS1A0	CAPACITOR, SMD	1608 105K 16V X7R	C15	PCS	1	WALSIN TECHNOLOGY	0603B105K160CT					
	6		CAS5S4X-474H4KS1A0	CAPACITOR, SMD	2012 474K 50V X7R	C20	PCS	1	WALSIN TECHNOLOGY	0805B474K500CT					
	7		CAS5S4X-225C4KS1A0	CAPACITOR, SMD	2012 225K 16V X7R	C16	PCS	1	WALSIN TECHNOLOGY	0805B225K160CT					
	8		CAS5S6X-103U4KS1A0	CAPACITOR, SMD	3216 103K 1KV X7R	C3	PCS	1	WALSIN TECHNOLOGY	1206B103K102CT					
	9		RESMS3X-04R70JS1A0	RESISTOR, SMD	1608 4.7 J	R18	PCS	1	VIKING	CR-03JL7---4R7					
			RESMS3X-04R70JS1A0	RESISTOR, SMD	1608 4.7 J	R18	PCS	1	WALSIN TECHNOLOGY	WR06X4R7JTL					
			RESMS3X-04R70JS1A0	RESISTOR, SMD	1608 4.7 J	R18	PCS	1	YAGEO ELEC	RC0603JR-074R7					
	10		RESMS3X-22010FS1A0	RESISTOR, SMD	1608 2.2K F	R22	PCS	1	VIKING	CR-03FL7---2K2					
			RESMS3X-22010FS1A0	RESISTOR, SMD	1608 2.2K F	R22	PCS	1	WALSIN TECHNOLOGY	WR06X2201FTL					
			RESMS3X-22010FS1A0	RESISTOR, SMD	1608 2.2K F	R22	PCS	1	YAGEO ELEC	RC0603FR-072K2					
	11		RESMS3X-01530JS1A0	RESISTOR, SMD	1608 15K J	R21	PCS	1	VIKING	CR-03JL7---15K					
			RESMS3X-01530JS1A0	RESISTOR, SMD	1608 15K J	R21	PCS	1	WALSIN TECHNOLOGY	WR06X153JTL					
			RESMS3X-01530JS1A0	RESISTOR, SMD	1608 15K J	R21	PCS	1	YAGEO ELEC	RC0603JR-0715K					
	12		RESMS3X-11020FS1A0	RESISTOR, SMD	1608 11K F	R25	PCS	1	VIKING	CR-03FL7---11K					
			RESMS3X-11020FS1A0	RESISTOR, SMD	1608 11K F	R25	PCS	1	WALSIN TECHNOLOGY	WR06X1102FTL					
			RESMS3X-11020FS1A0	RESISTOR, SMD	1608 11K F	R25	PCS	1	YAGEO ELEC	RC0603FR-0711K					
	13		RESMS3X-20030FS1A0	RESISTOR, SMD	1608 200K F	R34	PCS	1	VIKING	CR-03FL7---200K					
			RESMS3X-20030FS1A0	RESISTOR, SMD	1608 200K F	R34	PCS	1	WALSIN TECHNOLOGY	WR06X2003FTL					
			RESMS3X-20030FS1A0	RESISTOR, SMD	1608 200K F	R34	PCS	1	YAGEO ELEC	RC0603FR-07200K					
	14		ICPWS2X-INN36701P1	IC, PWM	INN3670C-H606	IC2	PCS	1	PI	INN3670C-H606					
	15		FEMST3X-151700S1C1	FET, MOSFET	CJAC70SN15	Q2	PCS	1	JSCJ	CJAC70SN15					
ITEM 수(SMD TOP)				15 종											
SMD (BOTTOM)	2		2LA-B271KS-DA1-SMB	LA-B271KS-DA 반제품_SMB	LA-B271KS-DA										
	1		CAS5S3X-104H4KS1A0	CAPACITOR, SMD	1608 104K 50V X7R	C8	PCS	1	WALSIN TECHNOLOGY	0603B104K500CT					
	2		CAS5S3X-224H4KS1A0	CAPACITOR, SMD	1608 224K 50V X7R	C4	PCS	1	WALSIN TECHNOLOGY	0603B224K500CT					
	3		CAS5S3X-105C4KS1A0	CAPACITOR, SMD	1608 105K 16V X7R	C6,C9	PCS	2	WALSIN TECHNOLOGY	0603B105K160CT					
	4		CAS5S4X-102K4KS1A0	CAPACITOR, SMD	2012 102K 100V X7R	C5,C7	PCS	2	WALSIN TECHNOLOGY	0805B102K101CT					
	5		CAS5S4X-102M4KS1A0	CAPACITOR, SMD	2012 102K 200V X7R	C14,C22	PCS	2	WALSIN TECHNOLOGY	0805B102K201CT					

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PRODUCT NAME				Hazardous Substance				CUSTOMER PART NO				FILE NAME			
LA-B271KS (24V/4A) BULK				L/F				-				PARTS LIST			
공정	NO	품목 Code	ITEM	SPEC		LOC NO.	UNIT	QTY	MAKER	PART NO.		REMARK			
SMD (BOTTOM)	6	CAS5S4X-222N4KS1A0	CAPACITOR, SMD	2012 222K 250V X7R		C39	PCS	1	WALSIN TECHNOLOGY	0805B222K251CT					
	7	CAS5S4X-104K4KS1A0	CAPACITOR, SMD	2012 104K 100V X7R		C33	PCS	1	WALSIN TECHNOLOGY	0805B104K101CT					
	8	CAS2S6X-330U4KS1A0	CAPACITOR, SMD	3216 330J 1KV C0G(NP0)		C21	PCS	1	WALSIN TECHNOLOGY	1206N330J102LT					
	9	CAS5S6X-102U4KS1A0	CAPACITOR, SMD	3216 102K 1KV X7R		C10	PCS	1	WALSIN TECHNOLOGY	1206B102K102CT					
	10	RESMS3X-04700JS1A0	RESISTOR, SMD	1608 47 J		R24	PCS	1	VIKING	CR-03JL7---47R					
		RESMS3X-04700JS1A0	RESISTOR, SMD	1608 47 J		R24	PCS	1	WALSIN TECHNOLOGY	WR06X470JTL					
		RESMS3X-04700JS1A0	RESISTOR, SMD	1608 47 J		R24	PCS	1	YAGEO ELEC	RC0603JR-0747R					
	11	RESMS3X-05620JS1A0	RESISTOR, SMD	1608 5.6K J		R30	PCS	1	VIKING	CR-03JL7---5K6					
		RESMS3X-05620JS1A0	RESISTOR, SMD	1608 5.6K J		R30	PCS	1	WALSIN TECHNOLOGY	WR06X562JTL					
		RESMS3X-05620JS1A0	RESISTOR, SMD	1608 5.6K J		R30	PCS	1	YAGEO ELEC	RC0603JR-075K6					
	12	RESMS3X-01040JS1A0	RESISTOR, SMD	1608 100K J		R10	PCS	1	VIKING	CR-03JL7---100K					
		RESMS3X-01040JS1A0	RESISTOR, SMD	1608 100K J		R10	PCS	1	WALSIN TECHNOLOGY	WR06X104JTL					
		RESMS3X-01040JS1A0	RESISTOR, SMD	1608 100K J		R10	PCS	1	YAGEO ELEC	RC0603JR-07100K					
	13	RESMS3X-82010FS1A0	RESISTOR, SMD	1608 8.2K F		R23,R27	PCS	2	VIKING	CR-03FL7---8K2					
		RESMS3X-82010FS1A0	RESISTOR, SMD	1608 8.2K F		R23,R27	PCS	2	WALSIN TECHNOLOGY	WR06X8201FTL					
		RESMS3X-82010FS1A0	RESISTOR, SMD	1608 8.2K F		R23,R27	PCS	2	YAGEO ELEC	RC0603FR-078K2					
	14	RESMS3X-30020FS1A0	RESISTOR, SMD	1608 30K F		R11	PCS	1	VIKING	CR-03FL7---30K					
		RESMS3X-30020FS1A0	RESISTOR, SMD	1608 30K F		R11	PCS	1	WALSIN TECHNOLOGY	WR06X3002FTL					
		RESMS3X-30020FS1A0	RESISTOR, SMD	1608 30K F		R11	PCS	1	YAGEO ELEC	RC0603FR-0730K					
	15	RESMS3X-59020FS1A0	RESISTOR, SMD	1608 59K F		R12,R13	PCS	2	VIKING	CR-03FL7---59K					
		RESMS3X-59020FS1A0	RESISTOR, SMD	1608 59K F		R12,R13	PCS	2	WALSIN TECHNOLOGY	WR06X5902FTL					
		RESMS3X-59020FS1A0	RESISTOR, SMD	1608 59K F		R12,R13	PCS	2	YAGEO ELEC	RC0603FR-0759K					
	16	RESMS4X-00000JS1A0	RESISTOR, SMD	2012 0 J		R35	PCS	1	VIKING	CR-05JL7---0R					
		RESMS4X-00000JS1A0	RESISTOR, SMD	2012 0 J		R35	PCS	1	WALSIN TECHNOLOGY	WR08X000JTL					
		RESMS4X-00000JS1A0	RESISTOR, SMD	2012 0 J		R35	PCS	1	YAGEO ELEC	RC0805JR-070R					
	17	RESMS4X-04700JS1A0	RESISTOR, SMD	2012 47 J		R19	PCS	1	VIKING	CR-05JL7---47R					
		RESMS4X-04700JS1A0	RESISTOR, SMD	2012 47 J		R19	PCS	1	WALSIN TECHNOLOGY	WR08X470JTL					
		RESMS4X-04700JS1A0	RESISTOR, SMD	2012 47 J		R19	PCS	1	YAGEO ELEC	RC0805JR-0747R					
	18	RESMS4X-01010JS1A0	RESISTOR, SMD	2012 100 J		R40	PCS	1	VIKING	CR-05JL7---100R					
		RESMS4X-01010JS1A0	RESISTOR, SMD	2012 100 J		R40	PCS	1	WALSIN TECHNOLOGY	WR08X101JTL					
		RESMS4X-01010JS1A0	RESISTOR, SMD	2012 100 J		R40	PCS	1	YAGEO ELEC	RC0805JR-07100R					
	19	RESMS4X-07530JS1A0	RESISTOR, SMD	2012 75K J		R38	PCS	1	VIKING	CR-05JL7---75K					
		RESMS4X-07530JS1A0	RESISTOR, SMD	2012 75K J		R38	PCS	1	WALSIN TECHNOLOGY	WR08X753JTL					
		RESMS4X-07530JS1A0	RESISTOR, SMD	2012 75K J		R38	PCS	1	YAGEO ELEC	RC0805JR-0775K					
	20	RESMS4X-2204FS1A0	RESISTOR, SMD	2012 2.2M F		R1,R2,R4, R5,R8,R9	PCS	6	VIKING	CR-05FL7---2M2					
		RESMS4X-2204FS1A0	RESISTOR, SMD	2012 2.2M F		R1,R2,R4, R5,R8,R9	PCS	6	WALSIN TECHNOLOGY	WR08X2204FTL					
		RESMS4X-2204FS1A0	RESISTOR, SMD	2012 2.2M F		R1,R2,R4, R5,R8,R9	PCS	6	YAGEO ELEC	RC0805FR-072M2					
	21	RESMS6X-00000JS1A0	RESISTOR, SMD	3216 0 J		B1,B3	PCS	2	VIKING	CR-06JL7---0R					
		RESMS6X-00000JS1A0	RESISTOR, SMD	3216 0 J		B1,B3	PCS	2	WALSIN TECHNOLOGY	WR12X000JTL					
		RESMS6X-00000JS1A0	RESISTOR, SMD	3216 0 J		B1,B3	PCS	2	YAGEO ELEC	RC1206JR-070R					
	22	RESMS6X-02010JS1A0	RESISTOR, SMD	3216 200 J		R17,R20,R26, R31,R32,R33	PCS	6	VIKING	CR-06JL7---200R					
		RESMS6X-02010JS1A0	RESISTOR, SMD	3216 200 J		R17,R20,R26, R31,R32,R33	PCS	6	WALSIN TECHNOLOGY	WR12X201JTL					
		RESMS6X-02010JS1A0	RESISTOR, SMD	3216 200 J		R17,R20,R26, R31,R32,R33	PCS	6	YAGEO ELEC	RC1206JR-07200R					
	23	RESMS6X-01540JS1A0	RESISTOR, SMD	3216 150K J		R15,R16	PCS	2	VIKING	CR-06JL7---150K					
		RESMS6X-01540JS1A0	RESISTOR, SMD	3216 150K J		R15,R16	PCS	2	WALSIN TECHNOLOGY	WR12X154JTL					
		RESMS6X-01540JS1A0	RESISTOR, SMD	3216 150K J		R15,R16	PCS	2	YAGEO ELEC	RC1206FR-07150K					
	24	RESMS6X-05140JS1A0	RESISTOR, SMD	3216 510K J		R3,R6,R7	PCS	3	VIKING	CR-06JL7---510K					
		RESMS6X-05140JS1A0	RESISTOR, SMD	3216 510K J		R3,R6,R7	PCS	3	WALSIN TECHNOLOGY	WR12X514JTL					
		RESMS6X-05140JS1A0	RESISTOR, SMD	3216 510K J		R3,R6,R7	PCS	3	YAGEO ELEC	RC1206FR-07510K					
	25	RESMS6X-0R010FS1A0	RESISTOR, SMD	3216 0.01 F		RS1	PCS	1	WALSIN TECHNOLOGY	WW12WR010FTL					
	26	RESMS6X-R0150FS1A0	RESISTOR, SMD	3216 0.015 F		RS2	PCS	1	WALSIN TECHNOLOGY	WW12WR015FTL					

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B. S. LEE				S. Y. CHOI				W. J. HUR				D. H. YOU					
PRODUCT NAME				Hazardous Substance				CUSTOMER PART NO				FILE NAME					
LA-B271KS (24V/4A) BULK				L/F				-				PARTS LIST					
공정	NO	품목 Code	ITEM	SPEC	LOC NO.	UNIT	QTY	MAKER	PART NO.	REMARK							
	27	ICPFS2X-PFS76281P1	IC, PFC	PFS7628C	IC1	PCS	1	PI	PFS7628C								
	28	DIBRD6X-1024R0S1S1	DIODE, BRIDGE SMD	1000V 4A ; RYBS4010-1	BD2	PCS	1	SUNGHO SEMI	RYBS4010-1								
	29	DIGED3X-1021R0S1N2	DIODE, GP SMD	1000V 1A SOD-123FL ; SM4007PL	D5	PCS	1	NANJING INTERNATIONAL	SM4007PL								
		DIGED3X-1021R0S1S1	DIODE, GP SMD	1000V 1A SOD-123 ; A7	D5	PCS	1	SUNGHO SEMI	A7								
	30	DIGED2X-1022R0S1S1	DIODE, GP SMD	1000V 2A SMB ; S2M	D1,D7	PCS	2	SUNGHO SEMI	S2M								
		DIGED2X-1022R0S1N2	DIODE, GP SMD	1000V 2A SMB ; S2M	D1,D7	PCS	2	NANJING INTERNATIONAL	S2M								
	31	DIFRD2X-1022R0S1S1	DIODE, FR SMD	1000V 2A SOD-123FL ; RS2010	D4,D6	PCS	2	SUNGHO SEMI	RS2010FL								
		DIFRD2X-1022R0S1N2	DIODE, FR SMD	1000V 2A SOD-123FL ; RS2MW	D4,D6	PCS	2	NANJING INTERNATIONAL	RS2MW								
	32	DIFRD30-5313R0S1P5	DIODE, QSPEED SMD	530V 3A SO-8C ; LXA03D530	D2	PCS	1	PI	LXA03D530								
	33	DITVD2X-201401S1S1	DIODE, TVS SMD	200V 400W SMA ; SMAJ200CA	TD1	PCS	1	SUNGHO SEMI	SMAJ200CA								
		DITVD2X-201401S1N2	DIODE, TVS SMD	200V 400W SMA ; SMAJ200CA	TD1	PCS	1	NANJING INTERNATIONAL	SMAJ200CA								
	34	DI2ND3X-5R6R50S1N2	DIODE, ZENER SMD	5.6V 0.5W SOD123 ; MMSZ5232B	ZD3	PCS	1	NANJING INTERNATIONAL	MMSZ5232B								
		DI2ND3X-5R6R50S1S1	DIODE, ZENER SMD	5.6V 0.5W SOD123 ; LMSZ5232BT1H	ZD3	PCS	1	SUNGHO SEMI	LMSZ5232BT1H								
35	DI2ND3X-130R50S1N2	DIODE, ZENER SMD	13V 0.5W SOD123 ; MMSZ5243B	ZD2	PCS	1	NANJING INTERNATIONAL	MMSZ5243B									
	DI2ND3X-130R50S1S1	DIODE, ZENER SMD	13V 0.5W SOD123 ; LMSZ5243BT1H	ZD2	PCS	1	SUNGHO SEMI	LMSZ5243BT1H									
36	DI2ND3X-150R50S1N2	DIODE, ZENER SMD	15V 0.5W SOD123 ; MMSZ5245B	ZD4	PCS	1	NANJING INTERNATIONAL	MMSZ5245B									
	DI2ND3X-150R50S1S1	DIODE, ZENER SMD	15V 0.5W SOD123 ; LMSZ5245BT1H	ZD4	PCS	1	SUNGHO SEMI	LMSZ5245BT1H									
37	TRTNT3X-750R60S1K1	TRANSISTOR, NPN SMD	75V 600mA SOT-23 ; KTN2222AS	Q1	PCS	1	KEC CORPORATION	KTN2222AS-RTK/P									
ITEM 수(SMD BOTTOM)				37 종													
RD	2	2LA-B271KS-DA1-RD	LA-B271KS-DA 반제품_RADIAL	LA-B271KS-DA													
	1	REMFR5X-05120JF1R3	RESISTOR, RADIAL	MOR 5.1 J 2W Mini Type R-FOR	R14	PCS	1	RP ELEC	SW2J-5R1 RT								
	2	CAE525A-226H3MA1S3	CAPACITOR, ELE	22uF 50V ; NLC50VB22M2.5TP5*11	C19	PCS	1	SAMYONG ELEC	NLC50VB22M2.5TP5*11								
3	CAE542A-687F3MA1S3	CAPACITOR, ELE	680uF 35V ; NXH35VB680M5.0TP10*20	C11,C12,C13	PCS	3	SAMYONG ELEC	NXH35VB680M5.0TP10*20									
ITEM 수				3 종													
IN	4	2LA-B271KS-DA1-IN	LA-B271KS-DA 반제품_수입	LA-B271KS-DA													
	1	DIBRD00-8014R0T1S1	DIODE, BRIDGE	600V 4A IFSM=150A ; GBU406	BD1	PCS	1	SUNGHO SEMI	GBU406								
		DIBRD00-6014R0T1N2	DIODE, BRIDGE	600V 4A IFSM=150A ; GBU406	BD1	PCS	1	NANJING INTERNATIONAL	GBU406								
	2	CAE457A-826Q3M81S3	CAPACITOR, ELE	82uF 450V (LL 105 10KH 18X31.5 LA/B 7.5mm)	C2	PCS	1	SAMYONG ELEC	NFA450VB820M5.0TP10*20								
	3	CAF1P8X-474N3K21Q1	CAPACITOR, FILM	X2-MKP 474K 275VAC S/C P-15mm ; X2-MKP-275VAC474KP15C4	CX1	PCS	1	QIXING CAPACITOR	X2-MKP-275VAC474KP15C4								
		CAF1P8X-474N6K22P2	CAPACITOR, FILM	474K 275V PCX2 337 P=15 ; PCX2 337F11 474	CX1	PCS	1	PILKOR	PCX2 337F11 474								
	4	CAF1P8X-105R2KA1Q1	CAPACITOR, FILM	105K 500V S/C P-15mm ;	C1	PCS	1	QIXING CAPACITOR	CBB22-500V105J P=15								
5	CAC3P6X-102N2M41K1	CAPACITOR, Y1	102M 250V Y1 OUT-FOR 10mm ; CT7-250VAC-Y1-E-102M	CY1,CY2	PCS	2	KEIFAT ELEC	CT7-250VAC-Y1-E-102M K10 3.8									
	CAC3P6X-102N2M41W2	CAPACITOR, Y1	102M 250V Y1 OUT-FOR 10mm ; HJE102ME4B3.5W	CY1,CY2	PCS	2	WANMING ELEC	HJE102ME4B3.5W									

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B. S. LEE				S. Y. CHOI				W. J. HUR				D. H. YOU			
PRODUCT NAME				Hazardous Substance				CUSTOMER PART NO				FILE NAME			
LA-B271KS (24V/4A) BULK				L/F				-				PARTS LIST			
공정	NO	품목 Code	ITEM	SPEC		LOC NO.	UNIT	QTY	MAKER	PART NO.		REMARK			
IN	6	VALDP5X-47145211W1	VARISTOR, 14D	14D 471K OUT-FOR P7.5mm		VA1	PCS	1	WANMING ELEC	WMR14D471KE3B3.5WS					
		VALDP5X-47145211B1	VARISTOR, 14D	14D-471K STRAIGHT P-7.5mm		VA1	PCS	1	BRIGHTKING	BK471KD14-OC4					
	7	FSCEB5X-2516R3A1X2	FUSE, CERAMIC	T6.3AL 250VAC ; 5H SERIES 6.3A/250V		F1	PCS	1	XC ELEC	5H.6300212000R1					
	8	LFACZ9X-2514R0X2S2	LINE FILTER, AC	IV10050031(PITCH : 3.4mm)		LF1	PCS	1	SHINSUNG ELEC	IV10050031(PITCH : 3.4mm)(PITCH : 5.4mm)					
		LFACZ9X-2514R0X1S2	LINE FILTER, AC	IV10050031(PITCH : 5.4mm)		LF1	PCS	1	SHINSUNG ELEC	IV10050031(PITCH : 3.4mm)(PITCH : 5.4mm)					
		LFACZ9X-2514R0X2W1	LINE FILTER, AC	IV10050031(PITCH : 3.4mm)		LF1	PCS	1	WUSONG ELEC	IV10050031(PITCH : 3.4mm)(PITCH : 5.4mm)					
	9	LFACZ9X-28M2R0X1A0	LINE FILTER, AC	L-271KS-DA-01 ; 0.5Φ 66T		LF2	PCS	1	SHINSUNG ELEC	L-271KS-DA-01					
	10	LFDCZ9X-2042R0X1A0	LINE FILTER, DC	SR-L4008R		L3	PCS	1	SHINSUNG ELEC	SR-L4008R					
		LFDCZ9X-2042R0X1A0	LINE FILTER, DC	SR-L4008R		L3	PCS	1	WUSONG ELEC	SR-L4008R					
	11	INEEZCX-6043R0X1A0	INDUCTOR, PQ	L-271KS L2 ; PQ2620		L2	PCS	1	SHINSUNG ELEC	L-271KS L2					
	12	TFFB34X-271KSDA1S2	TRANSFORMER, DS	T-271KS T1 ; DS3319		T1	PCS	1	SHINSUNG ELEC	T-271KS T1					
	13	THNTP5X-7R03R041W1	THERMISTOR, NTC	NTC 15D-03 ; WTR15D030ME3B3.5L		TH1	PCS	1	WANMING ELEC	WTR15D030ME3B3.5L					
	14	HSTRN1X-271KSDA1A0	HEATSINK, PLATE	AL 1.2t ; M-271KS-DA-H6			PCS	1	SAMKWANG	M-271KS-DA-H6					
	15	ISSHR6B-271KSDA1A0	INSULATOR, SHEET	PC-1870A 0.43t BLACK ; M-271KS-DA-I1			PCS	1	TAEHYUN ETS	M-271KS-DA-I1					
	16	PDTHX6X-300150T1A0	PAD, THERMAL	30X15X3t		GAP-PAD1, GAP-PAD2	PCS	2	TAEHYUN ETS	30X15X3t					
ITEM 수				16 종											
AS	5	2LA-B271KS-DA1-AS	LA-B271KS-DA 반제품_조립	LA-B271KS-DA											
	1	AHPFSL-XXX00002A0	ADHESIVE, BOND	SLD6055 ; SILICONE			GR	0.89	SLD	SLD6055					
	2	TUHSX5B-6R0XXX01A0	TUBE, HEAT SHRINK	6Φ, 600V 125℃		FOR F1	MT	0.022	LS CABLE	GSHS-1625G (6Φ)					
	3	TUHSX5B-120XXX01A0	TUBE, HEAT SHRINK	12Φ, 600V 125℃		FOR VA1, TH1	MT	0.05	LS CABLE	GSHS-1625G (12Φ)					
	4	ACKR01B-271KSDA1A0	AC POWER CORD, KOR	C-271KS-DA-10 ; 1.2M			PCS	1	GREEN ELEC	C-271KS-DA-10					
		ACKR01B-271KSDA1A0	AC POWER CORD, KOR	C-271KS-DA-10 ; 1.2M			PCS	1	YUSHENG ENTERPRISE	C-271KS-DA-10					
	5	CYU118B-271KSDA1A0	CABLE ASSY, DC JACK	C-271KS-DA-01			PCS	1	GREEN ELEC	C-271KS-DA-01					
		CYU118B-271KSDA1A0	CABLE ASSY, DC JACK	C-271KS-DA-01			PCS	1	RUNGE ELEC	C-271KS-DA-01					
	6	CSTPR6B-271KSDA1A0	CASE, TOP	M-271KS-DA-C2 ; BLACK			PCS	1	SAMXIN PLASTIC	M-271KS-DA-C2					

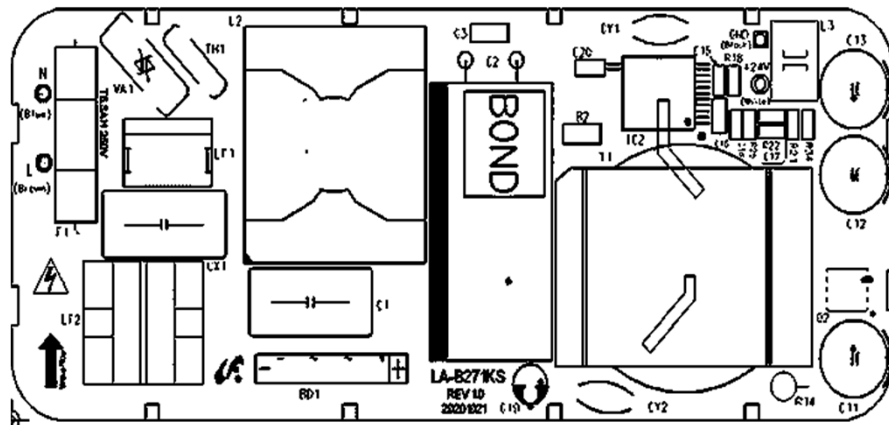
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B. S. LEE				S. Y. CHOI			W. J. HUR			D. H. YOU						
PRODUCT NAME				Hazardous Substance			CUSTOMER PART NO			FILE NAME						
LA-B271KS (24V/4A) BULK				L/F			-			PARTS LIST						
공정	NO	품목 Code	ITEM	SPEC	LOC NO.	UNIT	QTY	MAKER	PART NO.	REMARK						
AS	7	CSBTR6B-271KSDA1A0	CASE, BOTTOM	M-271KS-DA-C1 ; BLACK		PCS	1	SAMXIN PLASTIC	M-271KS-DA-C1							
	8	LBMAKR1-271KSDA1A0	LABEL, MAIN	M-271KS-DA-L1		PCS	1	SEOHAE PACKAGING	M-271KS-DA-L1							
	9	SLCHSNL-XXX00002A0	SOLDER, CREAM	LFM-48W TM-HP.0202-0018330		GR	0.022	HEESUNG METAL	LFM-48W TM-HP.0202-0018330							
	10	SLBASNS-XXX00001A0	SOLDER, PB BAR	HSE-16-B20		GR	2.92	HEESUNG METAL	HSE-16-B20							
	11	SLWRSNS-XXX00001A0	SOLDER, PB WIRE	HSE-04 HGF32 1.0Φ		GR	0.022	HEESUNG METAL	HSE-04 HGF32 1.0Φ							
	12	FXSWFTL-XXX00001A0	FLUX, FLOW	F6810		GR	0.01	CHUNGSOL CHEM	F6810							
ITEM 수			12 종													
PK	6	1LA-B271KS-DA1-00	ADAPTOR, 24V/4A	LA-B271KS-DA												
	1	BXPKP4X-205KWWA1A0	BOX, PACKING	M-205KW-WA-P2		PCS	1/40	JIAMEI PACKING	M-205KW-WA-P2							
	2	BXXSP4X-205KWWA1A0	BOX, PAD	M-205KW-WA-P4		SET	1/40	JIAMEI PACKING	M-205KW-WA-P4		1SET PAD_A : 3EA PAD_B : 6EA PAD_C : 22EA					
	3	VNGEV2X-15125131A0	VINYL, BAG	ML-B185-017		PCS	1	HEZHI ELEC	ML-B185-017							
	4	LBBXKRW-271KSDA1A0	LABEL, BOX	M-271KS-DA-L2		PCS	1/40	SEOHAE PACKAGING	M-271KS-DA-L2							
	5	TPVAV7X-500XXX01A0	TAPE, OPP	OPP TAPE		MM	33	YAWEI	OPP TAPE							
ITEM 수			5 종													
TOTAL ITEM 수			88 종													

5. PCB Layout

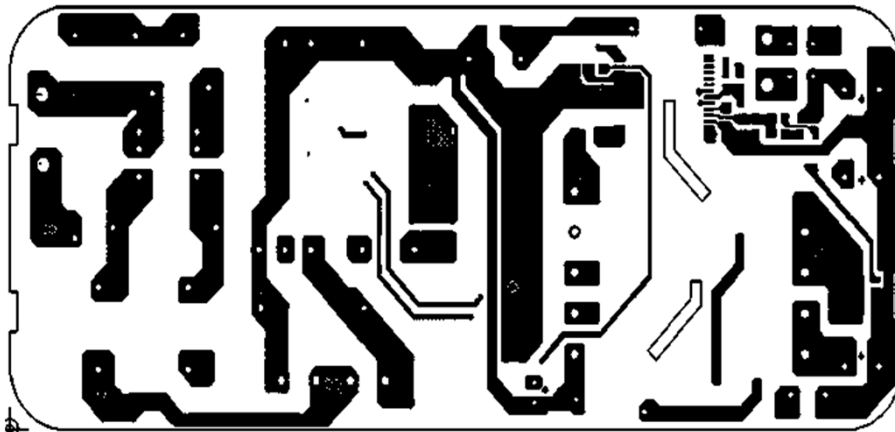
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preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title PCB WORKMANSHIP		Model No LA-B271KS			

1. BARE PCB

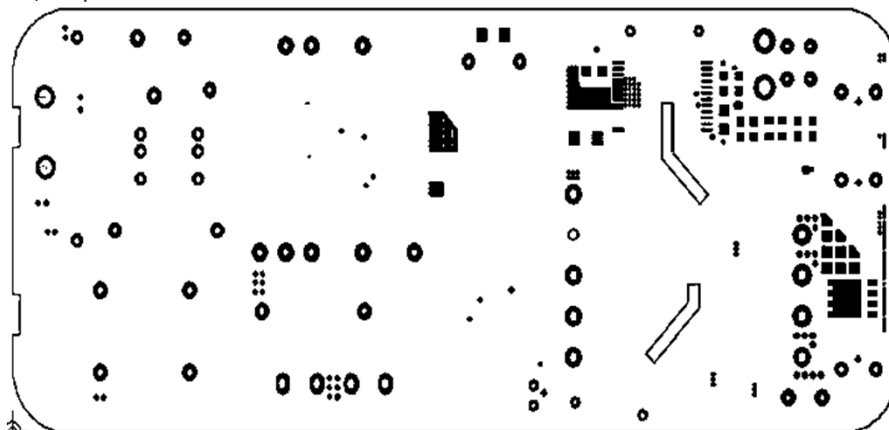
1) Top Silk



2) Top Pattern

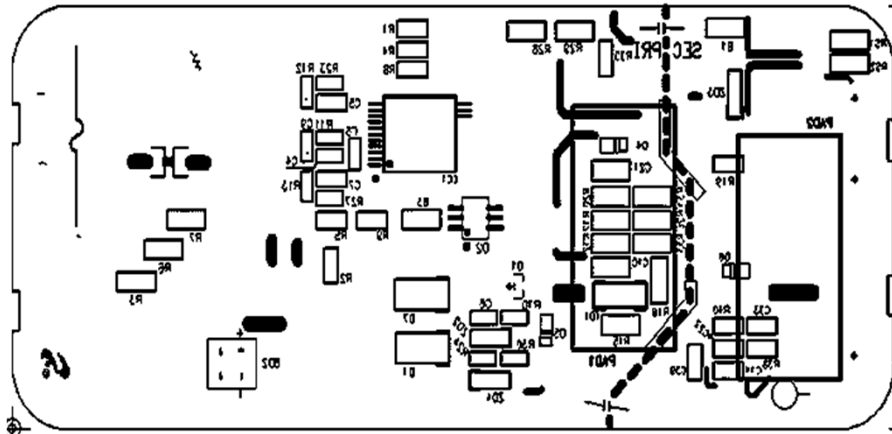


3) Top Solder Mask

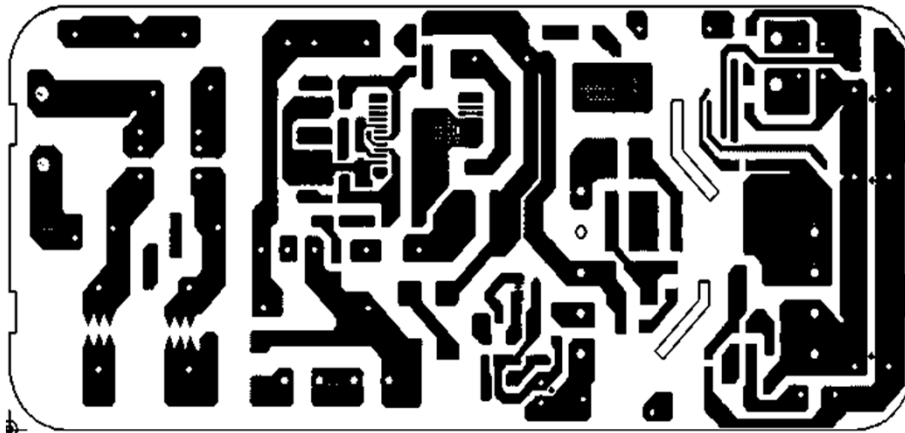


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preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title PCB WORKMANSHIP		Model No LA-B271KS			

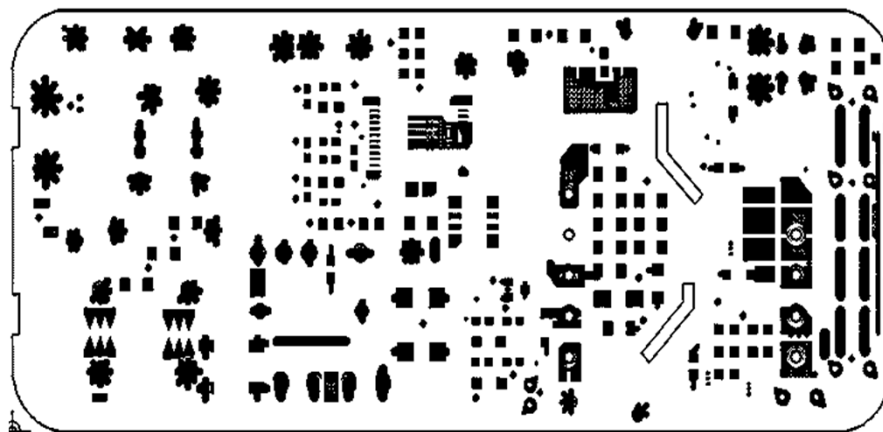
4) Bottom Silk



5) Bottom Pattern



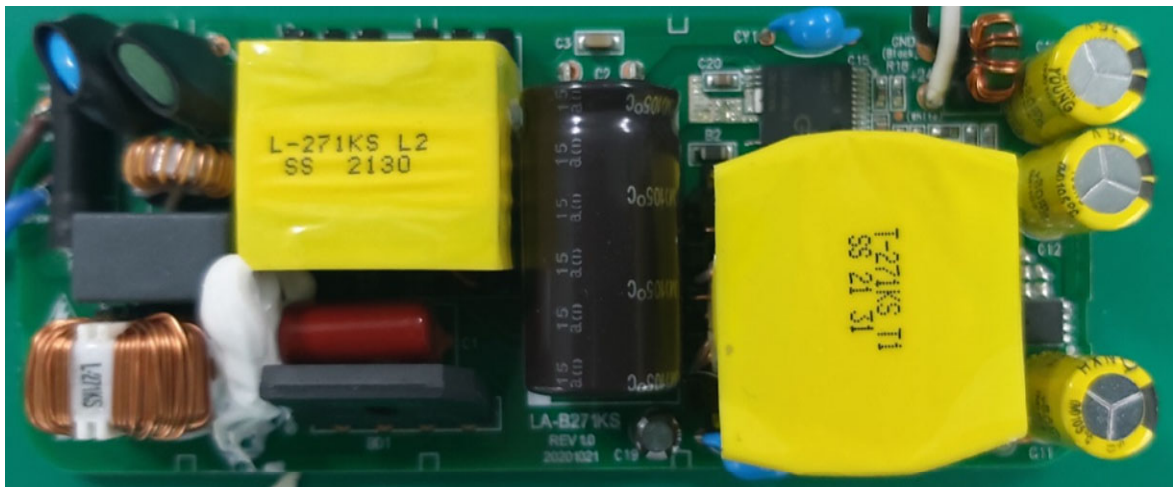
6) Bottom Solder Mask



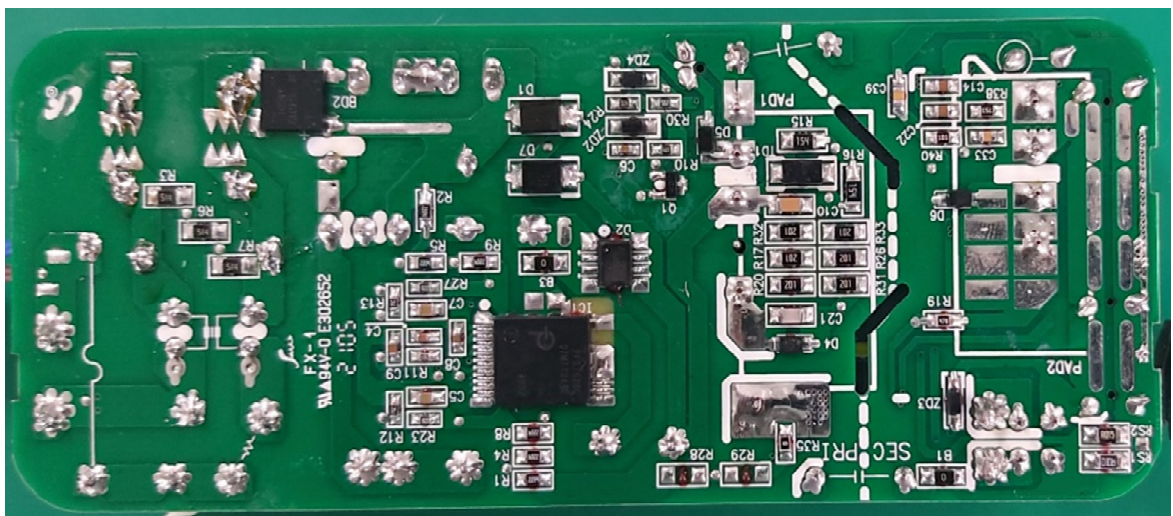
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preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title PCB WORKMANSHIP		Model No LA-B271KS			

2. PCB ASSEMBLY

1) Parts surface(Top)



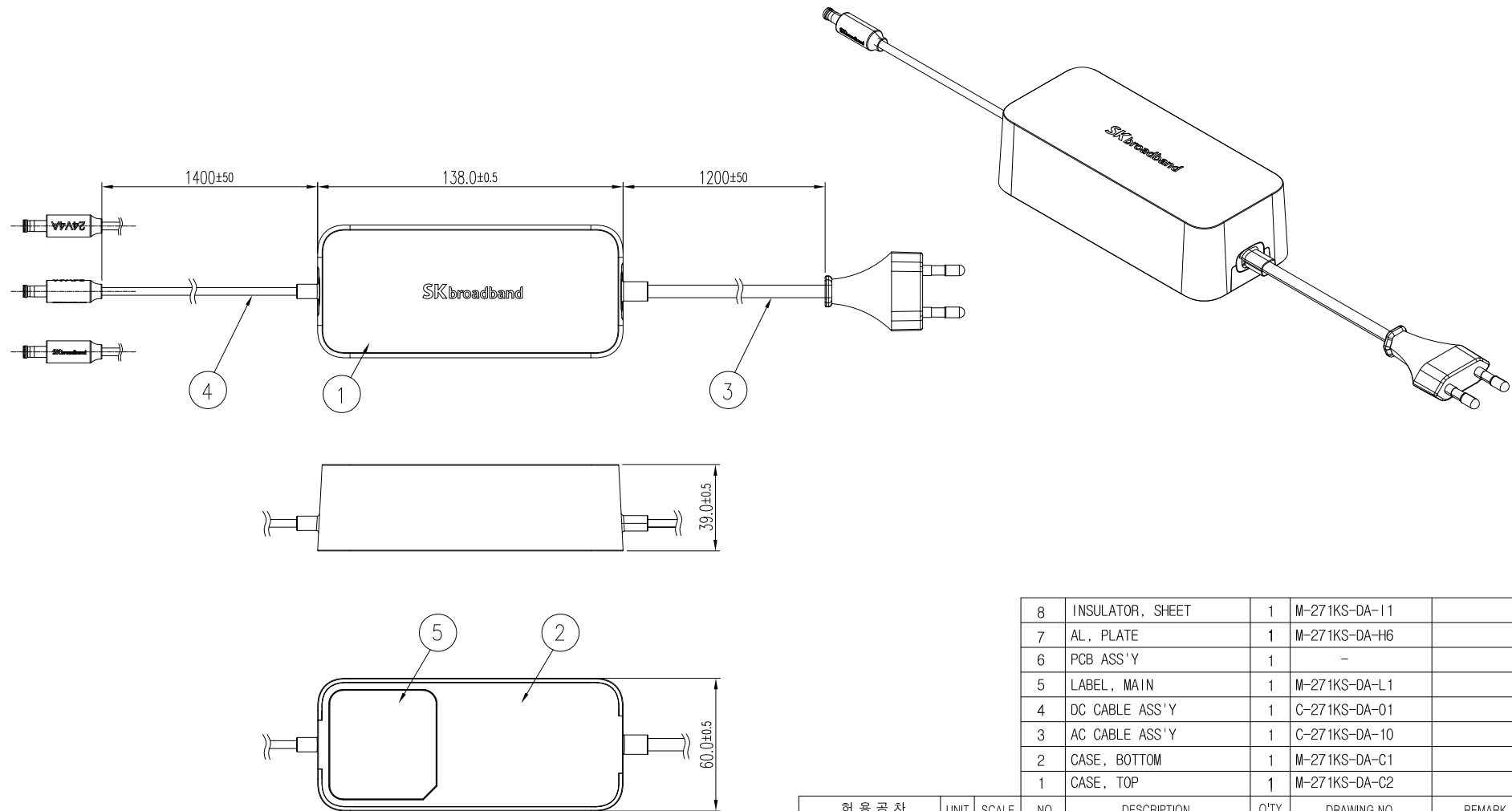
2) Parts surface(Bottom)



6. Mechanical Drawing

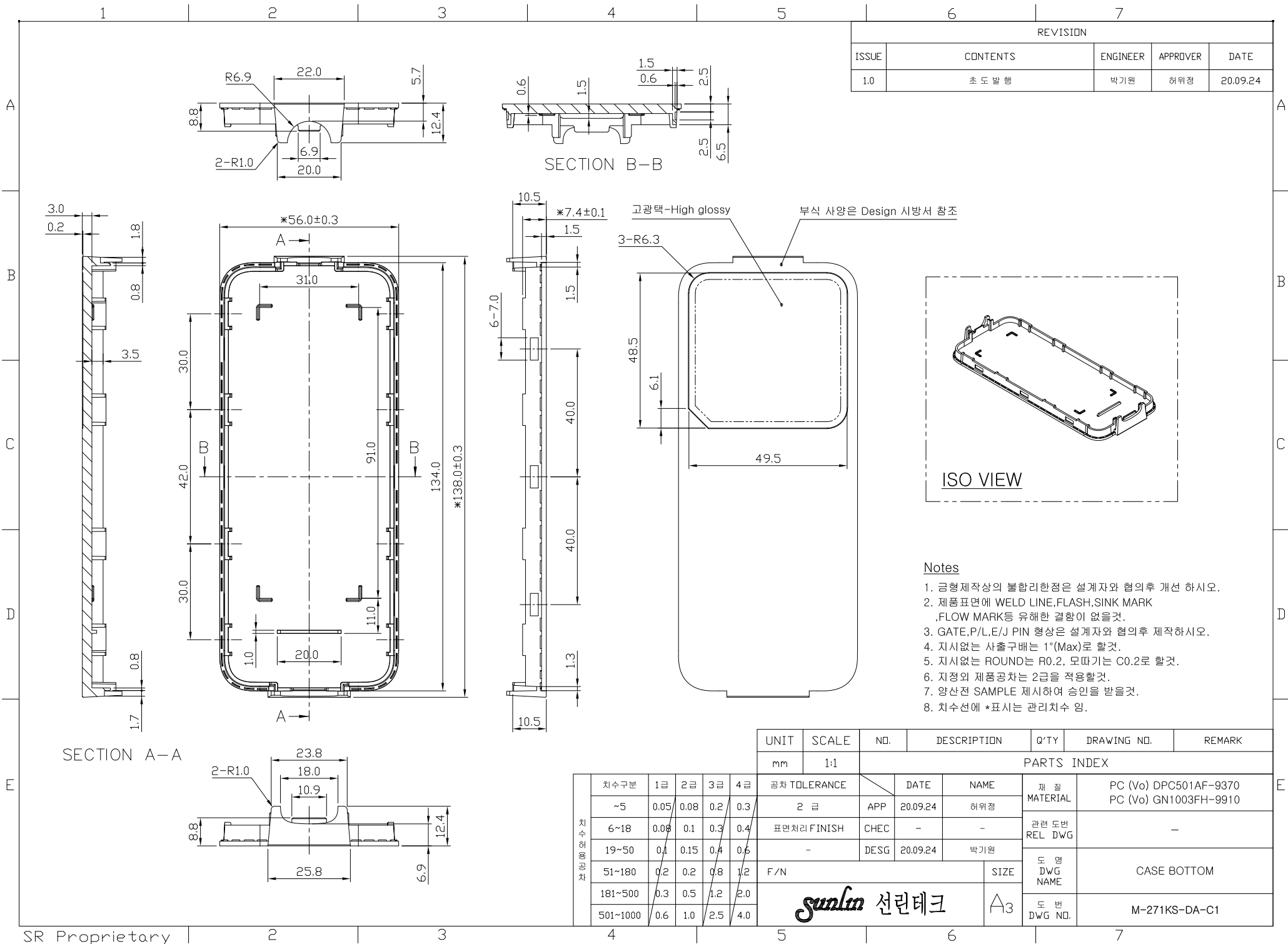
No	Description	Drawing No / Spec	Unit	Q'ty	Remparks
1	ASS'Y DRAWING	M-271KS-DA-00	PCS	1	
2	CASE, BOTTOM	M-271KS-DA-C1	PCS	1	
3	CASE, TOP	M-271KS-DA-C2	PCS	1	
4	AC POWER CORD, KR	C-271KS-DA-10	PCS	1	
5	CABLE ASS'Y, DC	C-271KS-DA-01	PCS	1	
6	LABEL, MAIN	M-271KS-DA-L1	PCS	1	
7	LABEL, BOX	M-271KS-DA-L2	PCS	1/40	
8	BOX, PACKING	M-205KW-WA-P2 M-205KW-WA-P4	PCS	1/40	
9	VINYL, BAG	ML-B185-017	PCS	1	
10	AL PLATE	ML-271KS-DA-H6	PCS	1	
11	INSULATOR SHEET	M-271KS-DA-I1	PCB	1	

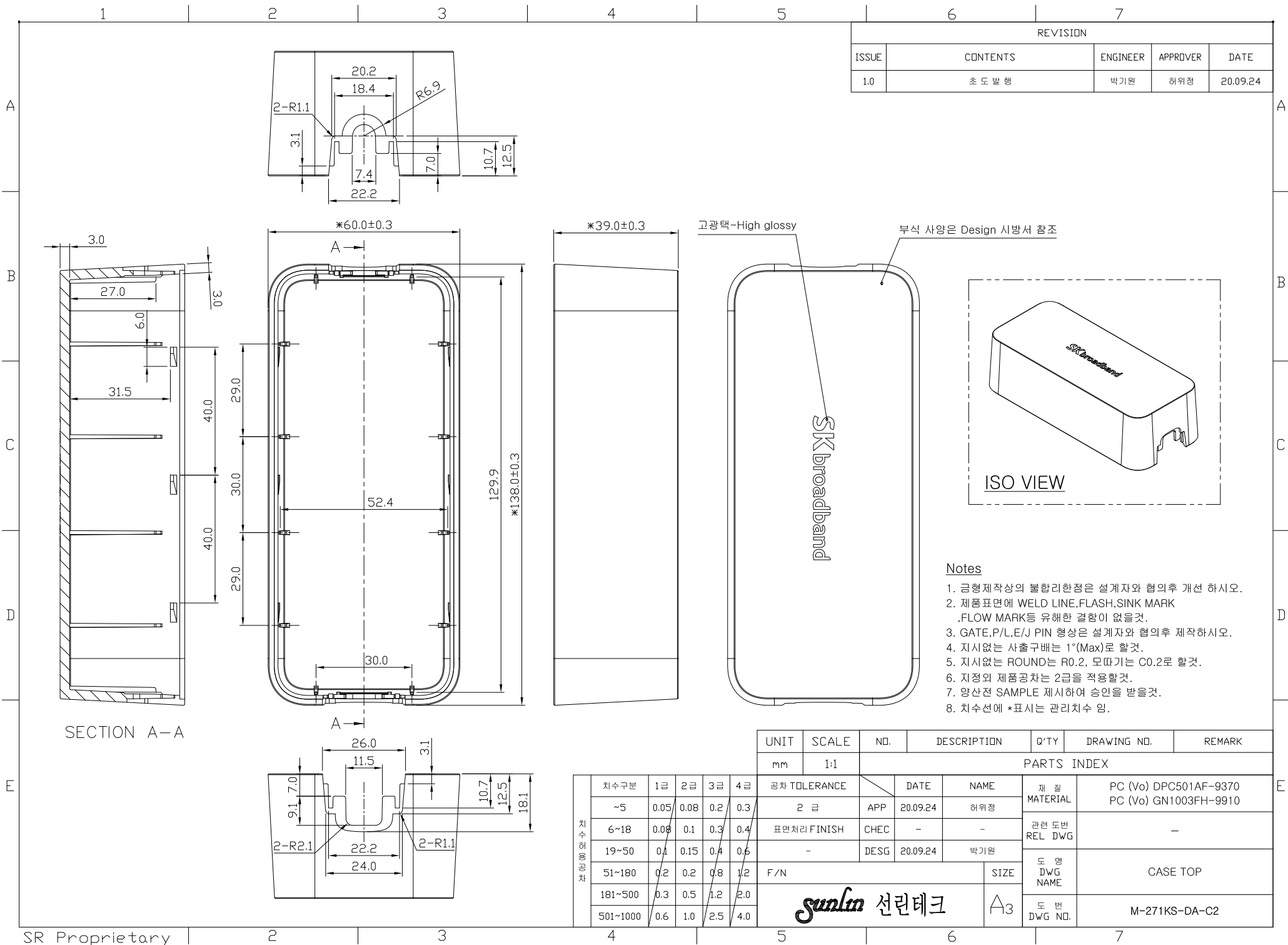
REVISION				
ISSUE	CONTENTS	ENGINEER	APPROVER	DATE
1.0	초도발행	박기원	허위정	20.09.04

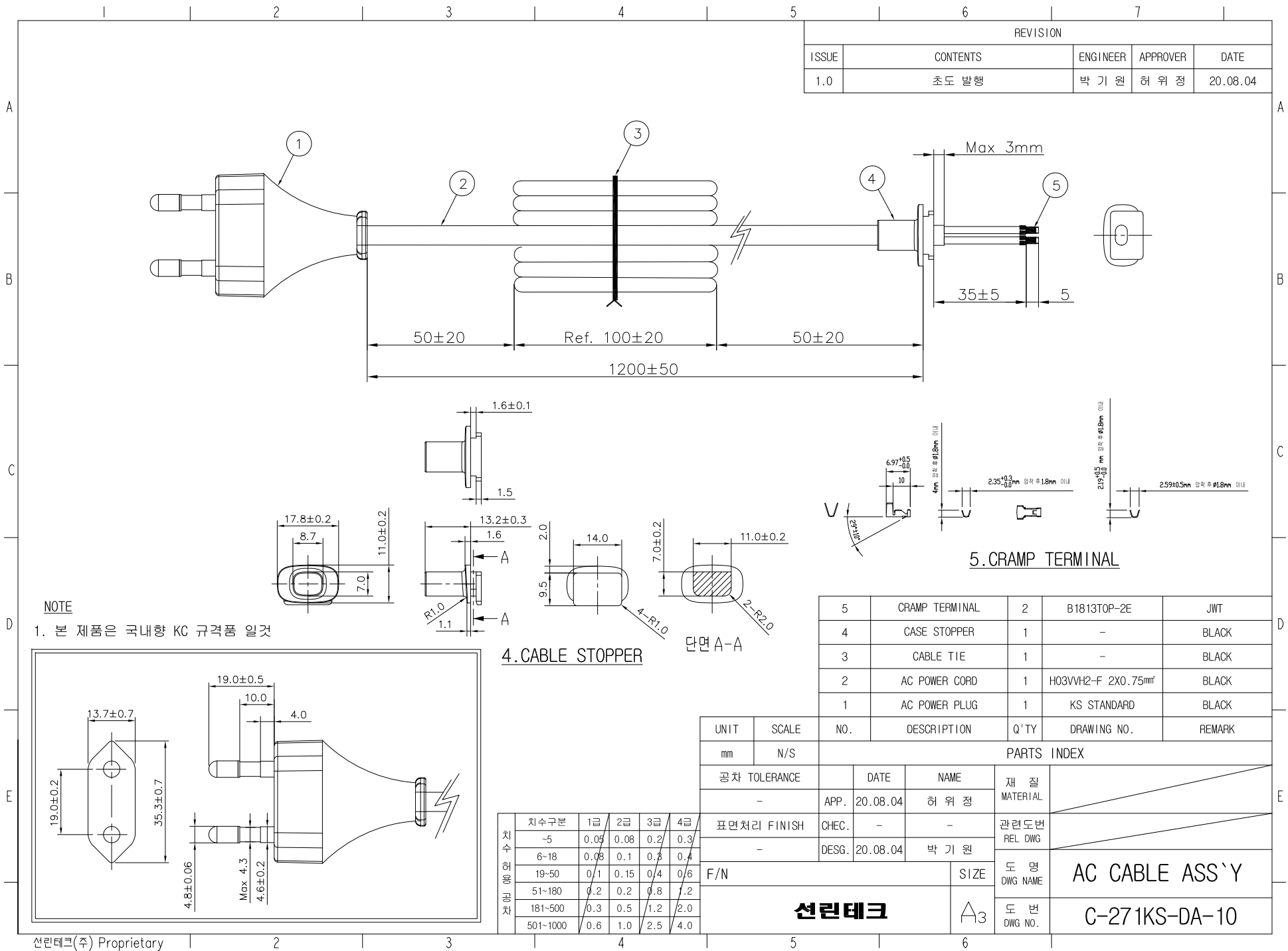


8	INSULATOR, SHEET	1	M-271KS-DA-I1	
7	AL, PLATE	1	M-271KS-DA-H6	
6	PCB ASS'Y	1	-	
5	LABEL, MAIN	1	M-271KS-DA-L1	
4	DC CABLE ASS'Y	1	C-271KS-DA-01	
3	AC CABLE ASS'Y	1	C-271KS-DA-10	
2	CASE, BOTTOM	1	M-271KS-DA-C1	
1	CASE, TOP	1	M-271KS-DA-C2	

허용공차		UNIT	SCALE	NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
치수	공차	mm	1/2	PARTS INDEX				
~10 미만	±0.05	TOLERANCE		DATE	NAME	재질		
10~30 미만	±0.08			APP.	20.09.04	허위정		
30~50 미만	±0.15	FINISH		CHEC.		관련도번		
50~150 미만	±0.2			DESG.	20.09.04	박기원		
각도	0	F/N				SIZE	도명	ADAPTER ASS'Y LA-B271KS-DA
		sunlin 선린테크				A ₃	도번	
							DWG NO.	M-271KS-DA-00







REVISION				
ISSUE	CONTENTS	ENGINEER	APPROVER	DATE
1.0	초도발행	박기원	허위정	20.12.21



SCALE = 1:1



SCALE 2:1

Note

- 바탕면 색상 : PMS BLACK / PMS WHITE (Barcode Print 부)
- 문자 색상 : PMS WHITE
- 문자 Font : 윤고딕330 or 본고딕
- MATERIAL : 유포지 80g
표면처리 : OPP 라미네이팅 0.02mm
- 바코드 및 제조년월 기입 방법
 - 04 : 제조사
(예시 - 04 : 선린테크)
 - 24 : 출력 전압 (예시 - 24 : 24V)
 - 40 : 전류 용량 (예시 - 40 : 4A)
 - YY : 제조년도 표시
 - MM : 제조월 표시 (예시 - 01,02,03,.....12)
- 주위온도 70℃ 에서 Label 변형이 없도록 접착력이 좋아야 할 것.
- 반드시 AI파일 기준으로 작업할 것.

치수구분	1급	2급	3급	4급
~5	0.05	0.08	0.2	0.3
6~18	0.08	0.1	0.3	0.4
19~50	0.1	0.15	0.4	0.6
51~180	0.2	0.2	0.8	1.2
181~500	0.3	0.5	1.2	2.0
501~1000	0.6	1.0	2.5	4.0

UNIT	SCALE	NO.	DESCRIPTION		Q'TY	DRAWING NO.	REMARK
mm	1:1	PARTS INDEX					
公差 TOLERANCE			DATE	NAME	재 질 MATERIAL	유포지 80g	
-		APP	20.12.21	허 위 정	관련도번 REL DWG		
표면처리 FINISH		CHEC					
OPP 라미네이팅 0.02mm		DESIG	20.12.21	박 기 원	도 명 DWG NAME	MAIN LABEL	
F/N				SIZE			
선린테크				A 3	도 번 DWG NO.	M-271KS-DA-L1	

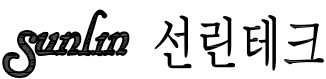
1		2		3		
	REVISION					
	ISSUE	CONTENTS		ENGINEER	APPROVER	DATE
	1.0	초도 발행		박기원	허위정	20.09.18

B	120	공급사명	선린테크(주)
		품목코드	LA-B271KS (Bulk)
		품 명	전원 어댑터 (24V 4A)
		수 량	40EA
	24	DATA CODE	
C		30	90

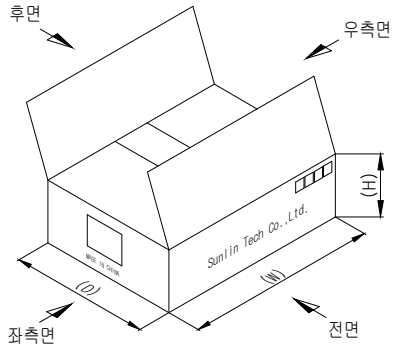
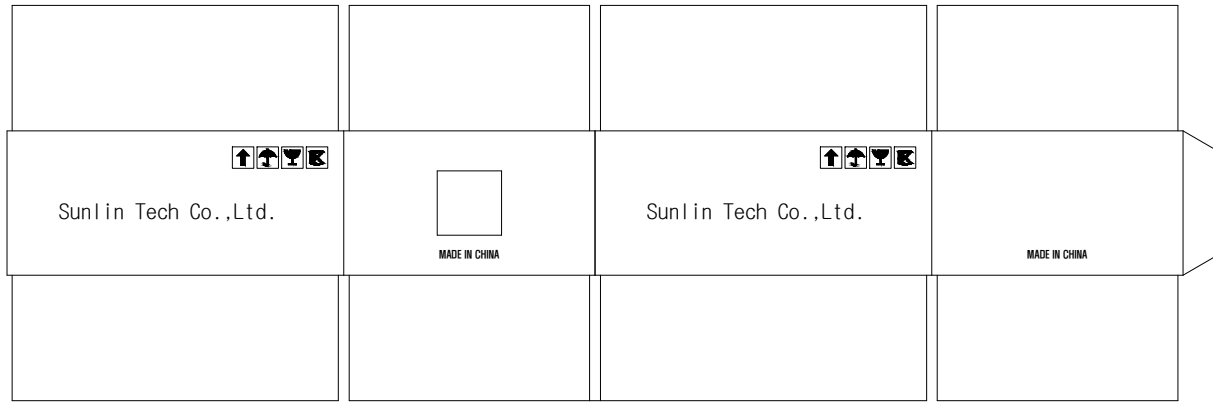
Notes

- 바탕면 색상 : PMS WHITE
- 문자 색상 : PMS Black
Font : Gothic
- Material : 아드지 0.025mm
- 인쇄 내용은 위 내용을 참조 할것

치 수 허 용 공 차	치수구분	1급	2급	3급	4급
	~5	0.05	0.08	0.2	0.3
	6~18	0.08	0.1	0.3	0.4
	19~50	0.1	0.15	0.4	0.6
	51~180	0.2	0.2	0.8	1.2
	181~500	0.3	0.5	1.2	2.0
	501~1000	0.6	1.0	2.5	4.0

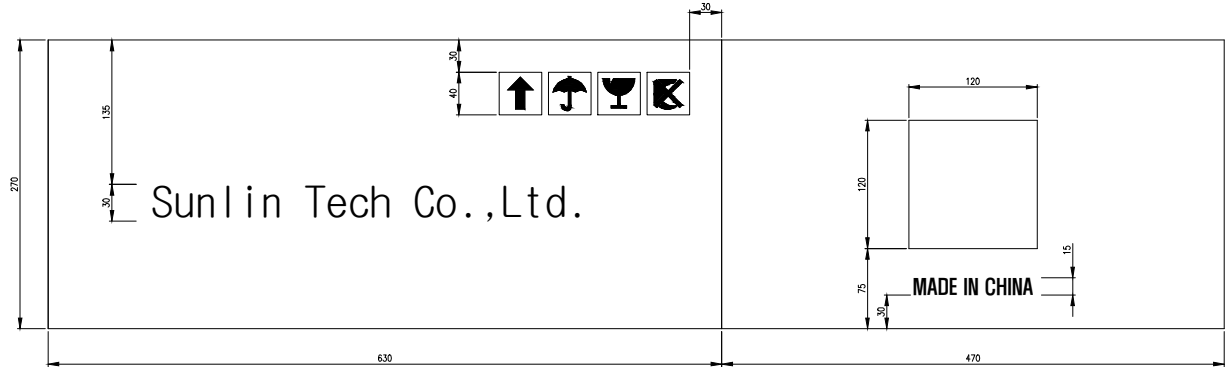
UNIT	SCALE	NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
mm	-	PARTS INDEX				
공차 TOLERANCE		DATE	NAME	재 질 MATERIAL	아드지 0.025mm	
-		APP. 20.09.18	허 위 정			
표면처리 FINISH		CHEC.		관련도번 REL DWG		
-		DESG. 20.09.18	박 기 원			
F/N			SIZE	도 명 DWG NAME	LABEL, BOX	
			A4	도 번 DWG NO.	M-271KS-DA-L2	

REVISION				
ISSUE	CONTENTS	ENGINEER	APPROVER	DATE
1.0	초도발행	박기원	허위정	18.05.28



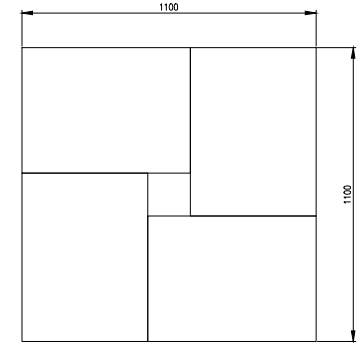
구 분	W	D	H
OUTER SIZE	630	470	270
INNER SIZE	615	455	255

전면 및 후면



좌/우 측면

[PALLET SIZE]
1100*1100 (1단 4BOX 적재)



인쇄 사양

문 자 체 : 굴림체
문자높이 : 도면치수 참조
문자색상 : 흑색

주 기

1. 표기된 Dimensions은 가공 치수임.
2. 인쇄는 설계에서 지급하는 DATA에 준할 것.
3. Box 가공 후 가공면이 깨끗하고 손상이 없을 것.
4. 도면 지정 공차는 일반 공차 5등급 적용.
5. 양산 전 Sample을 제시하여 승인을 득할 것.

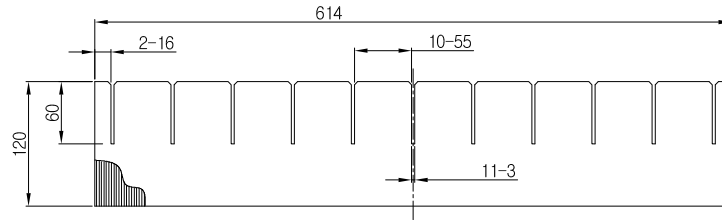
UNIT	SCALE	NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
mm	N/S	PARTS INDEX				
공차 TOLERANCE		DATE	NAME	재 질 MATERIAL	DW-1(t=7.0)	
표면처리 FINISH	CHEC.	18.05.28	허위정	관련도번 REL DWG		
	DESIG.	18.05.28	박기원	도 명 DWG NAME	PACKING BOX	
F/N			SIZE	도 번 DWG NO.	M-205KW-WA-P2	

sunlin 선린테크

A3

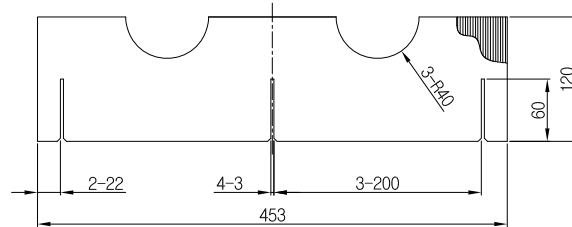
1. CROSS PAD A (6 EA)

Material : Single wall 3.0T



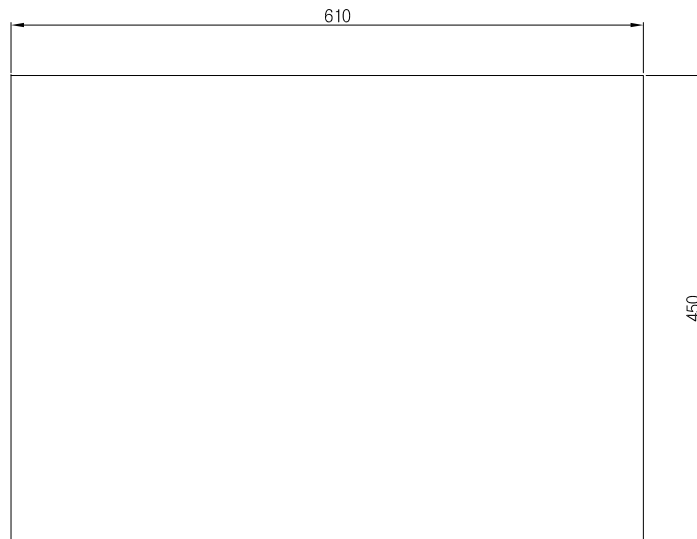
2. CROSS PAD B (22 EA)

Material : Single wall 3.0T



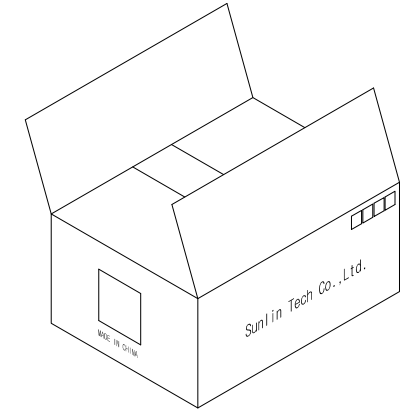
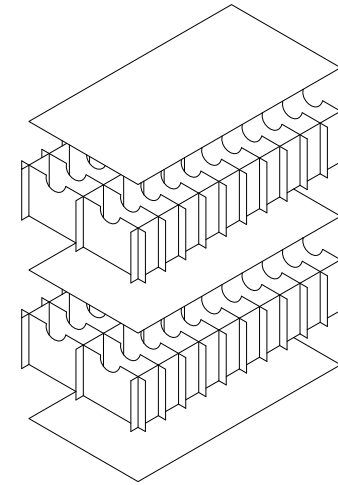
3. PAD (3 EA)

Material : Single wall 3.0T



REVISION

ISSUE	CONTENTS	ENGINEER	APPROVER	DATE
1.0	초도발행	박기원	허위정	18.05.28
1.1	포장 공간 부족에 따른 BOX PAD 변경	박기원	허위정	18.10.16



[Set 포장방법]

1단 : 1칸(2 Set) * 20칸 = 40 Set

1Box : 2단 * 40 Set = 80 Set 포장

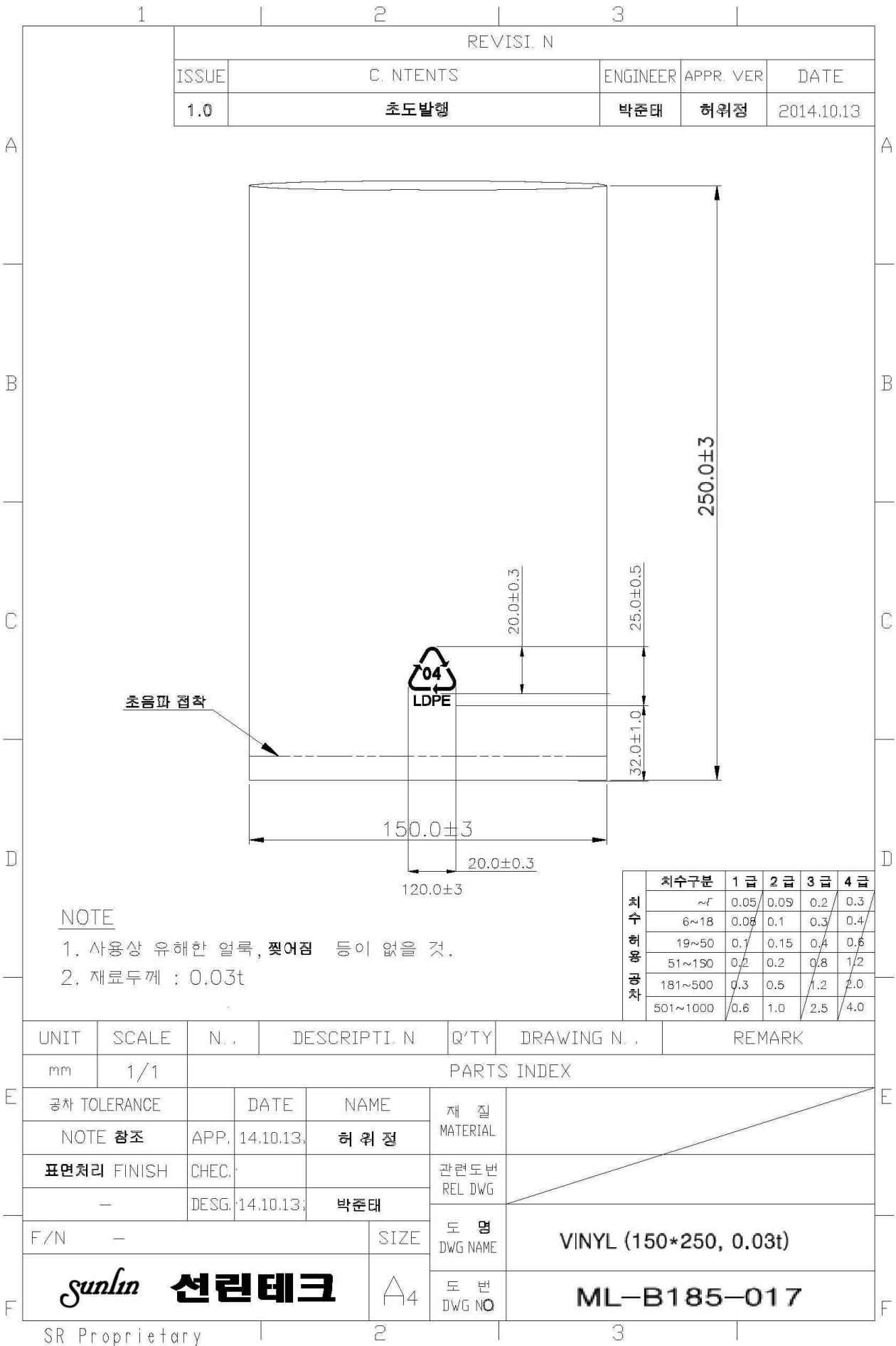
주 기

- 1BOX = 1단(40SET) * 2단 포장.
- 표기된 Dimensions은 가공 치수임.
- Box 가공 후 가공면이 깨끗하고 손상이 없을 것.
- 도면 지정 공차는 일반 공차 5등급 적용.
- 양산 전 Sample를 제시하여 승인을 득할 것.

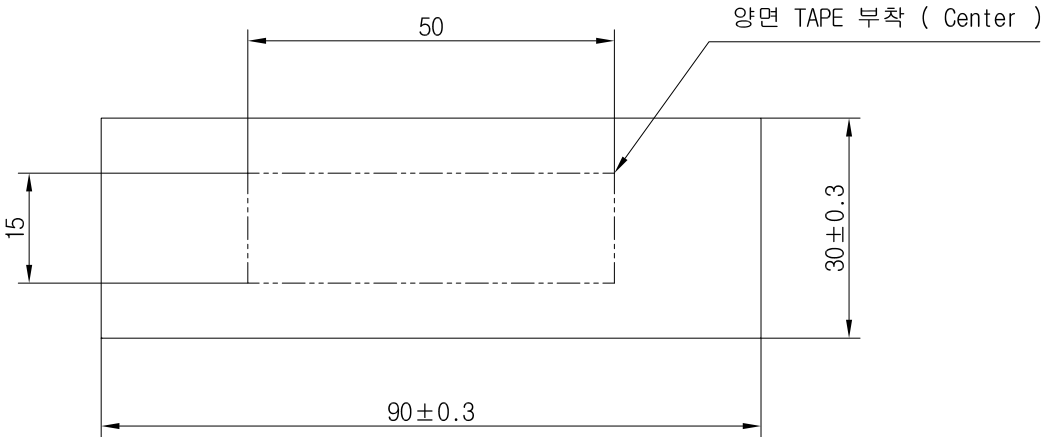
3	PAD	3	-	SW-1(t=3.0)
2	CROSS PAD B	22	-	SW-1(t=3.0)
1	CROSS PAD A	6	-	SW-1(t=3.0)

UNIT	SCALE	NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
mm	N/S	PARTS INDEX				
공차 TOLERANCE		DATE	NAME	재 질 MATERIAL	-	
표면처리 FINISH	APP.	18.05.28	허위정	관련도면 REL. DWG		
	DESG.	18.05.28	박기원	도 명 DWG NAME		
F/N			SIZE	도 번 DWG NO.	BOX PAD (MAIN PBA)	
sunlin 선린테크				A3	M-205KW-WA-P4	

GSIC<20>-B-4003.1



1		2		3		
	REVISION					
	ISSUE	CONTENTS		ENGINEER	APPROVER	DATE
	1.0	초도발행		박 기 원	허 위 정	20.10.22



< 주 기 >

1. 재 질: AL 1.2T (양면 TAPE 부착)
2. 절단, HOLE가공 후 세정 진행 할 것.
3. 가공 후 BURR, 흠집, 오물 등의 유해한 결함이 없을 것.
4. 절단 가공 후 절단부 BURR 높이는 0.2mm 이며, 절단면의 흠집 정도는 한도 견본에 준함.
5. 기타 의문사항은 개발 담당자와 협의할 것.

치수 허용 공차	치수구분	1급	2급	3급	4급
	~5	0.05	0.08	0.2	0.3
	6~18	0.08	0.1	0.3	0.4
	19~50	0.1	0.15	0.4	0.6
	51~180	0.2	0.2	0.8	1.2
	181~500	0.3	0.5	1.2	2.0
	501~1000	0.6	1.0	2.5	4.0

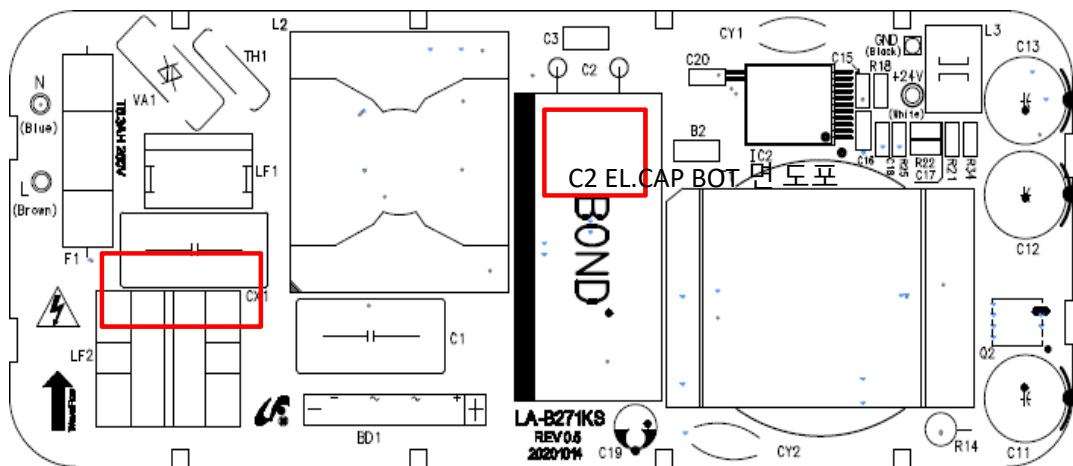
UNIT	SCALE	NO.	DESCRIPTION		Q' TY	DRAWING NO.	REMARK
mm	1:1	PARTS INDEX					
공 차 TOLERANCE			DATE	NAME	재 질 MATERIAL	AL 1.2T	
-		APP.	20.10.22	허 위 정			
표면처리 FINISH		CHEC.	-	-	관련도번 REL DWG		
-		DESG.	20.10.22	박 기 원			
F/N				SIZE	도 명 DWG NAME	AL PLATE	
sunlin 선린테크				A ₄	도 번 DWG NO.		

7. Works Manual

No	Title	Page	Remparks
1	Bond application	40	
2	Top Case Assembly method	41	
3	Bottom Case Assembly method	42	
4	Packing Method	43	

 선린테크(주)		Date of preparation 2021.01.17	Document number TD-PA-B271KS-07	ISSUE 1.0	PAGE 1/4
preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title 1. Bond application		Model No LA-B271KS			

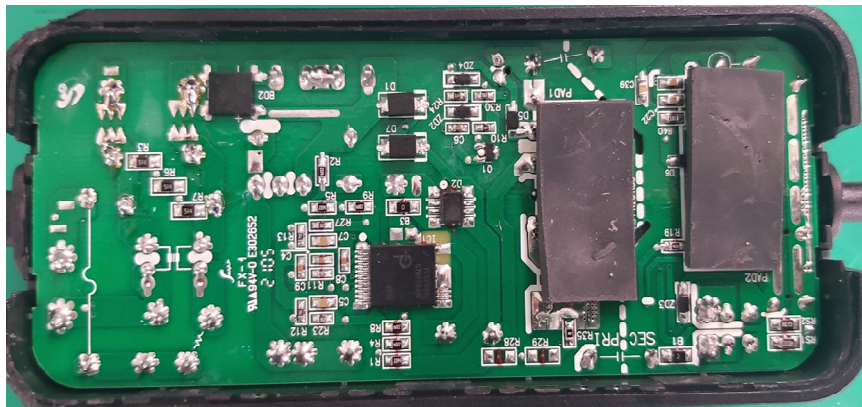
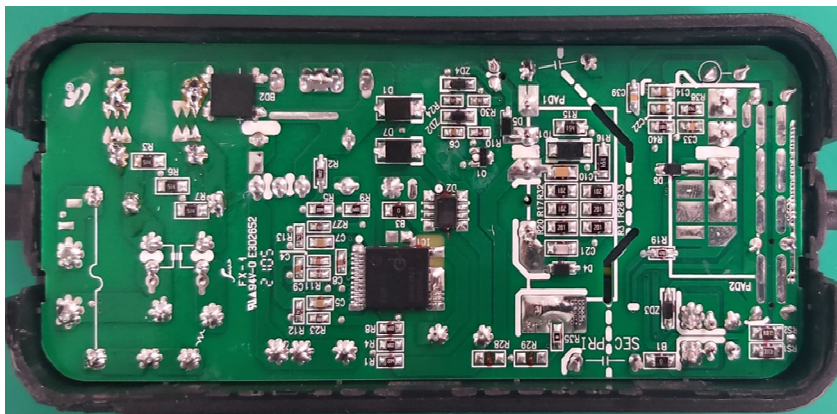
1. Apply SILICONE on the marked part of RED BOX



 선린테크(주)		작성년월일 2021.01.17	문서번호 TD-PA-B271KS-07	변경코드 1.0	페이지 2/4
작성자 B. S. LEE	검토자 S. Y. CHOI	승인자 W. J. HUR	문서관리자 D. H. YOU		
제목 2. Top Case Assembly method		품번 LA-B271KS			

2. Top Case Assembly method

1-1 Assembly method 1



GAP PAD1, 2 Attach (30X15X3t)

<i>Sunlin</i>	선린테크(주)	작성년월일 2021.01.17	문서번호 TD-PA-B271KS-07	변경코드 1.0	페이지 3/4
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작성자 B. S. LEE	검토자 S. Y. CHOI	승인자 W. J. HUR	문서관리자 D. H. YOU
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제목 3. Bottom Case Assembly method	품번 LA-B271KS
--------------------------------------	-----------------

2. Bottom Case Assembly method

1-1 Assembly method 2

AL PLATE
M-271KS-DA-H6 Attach



Insulator Sheet
M-271KS-DA-I1 Attach



 선린테크(주)		작성년월일 2021.01.17	문서번호 TD-PA-B271KS-07	변경코드 1.0	페이지 4/4
작성자 B. S. LEE	검토자 S. Y. CHOI	승인자 W. J. HUR	문서관리자 D. H. YOU		
제목 4. Packing method		품번 LA-B271KS			

1. Packing method : BULK TYPE

1-1 Materials required

Item	Drawing No. / Standard	Remarks
VINYL, BAG	ML-B185-017	
BOX, PACKING	M-205KW-WA-P2 M-205KW-WA-P4	1/40
TAPE, OPP	OPP TAPE	

1-2 Packing method

Division	Packing method
Individual packing	1) Put product in Vinyl Bag
PACKING BOX	1) Put the product in the Packing Box. 2) Horizontal / vertical = 5 * 6, total 2 steps (total water volume 40EA) 3) Sealed to OPP TAPE

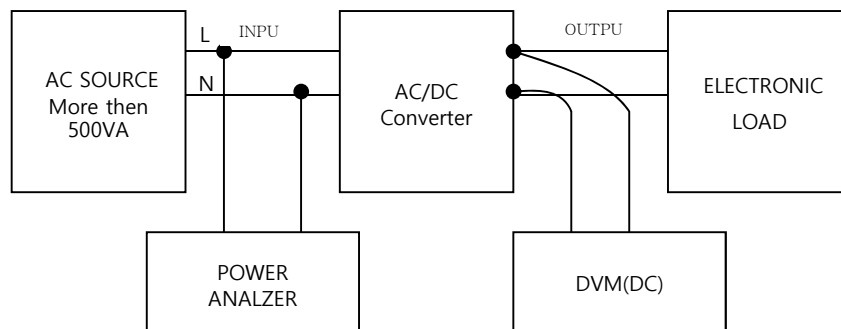
* 총 포장 수량 40EA

8. Test Procedure Manual

 선린테크(주)		Date of preparation 2021.01.17	Document number TD-PA-B271KS-08	ISSUE 1.0	PAGE 1/4
preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Test Procedure Manual		Model No LA-B271KS			

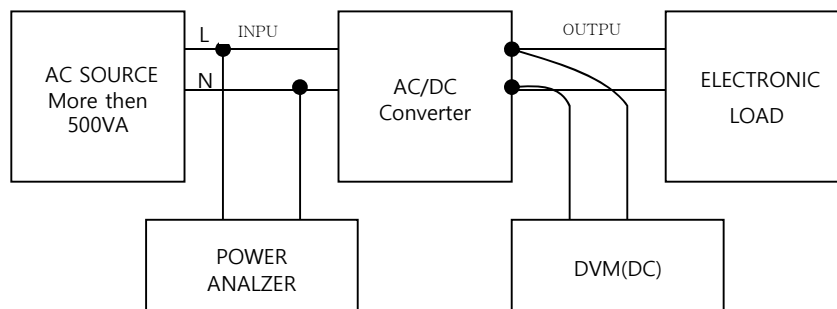
The electrical property test is a test after aging for 5 minutes at a rated load.

1. Output Voltage



- 1) Set AC Source to 220V
 - 2) Apply a load of 0.0A to the output terminal.
 - 3) Verify that the output voltage is within the $24V \pm 1.2V$ range.
 - 4) Apply a load of 4.0A to the output terminal.
 - 5) Verify that the output voltage is within the $24V \pm 1.2V$ range.
- ※ Measuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD

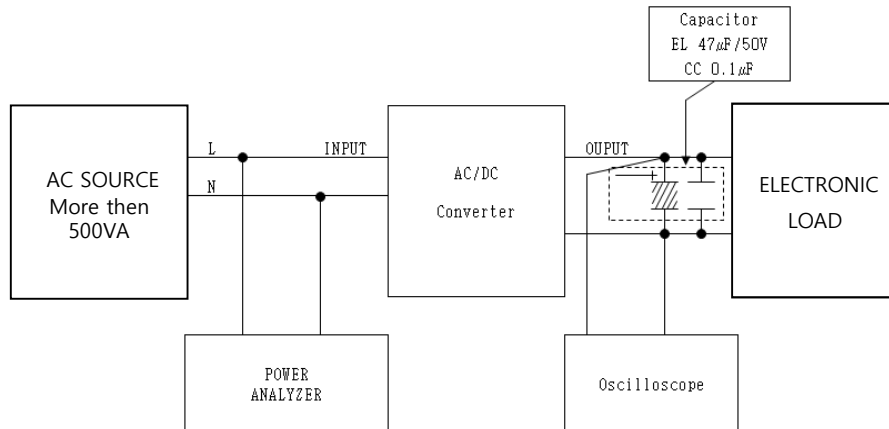
2. Line Regulation



- 1) Set AC source to 185V
 - 2) Apply a load of 4.0A to the output terminal.
 - 3) Verify that the output voltage is within the $24V \pm 1.2V$ range.
 - 4) Set AC source to 220V
 - 5) Apply a load of 4.0A to the output terminal.
 - 6) Verify that the output voltage is within $24V \pm 1.2V$ range.
- ※ Mesuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD

 선린테크(주)		Date of preparation 2021.01.17	Document number TD-PA-B271KS-08	ISSUE 1.0	PAGE 2/4
preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Test Procedure Manual		Model No LA-B271KS			

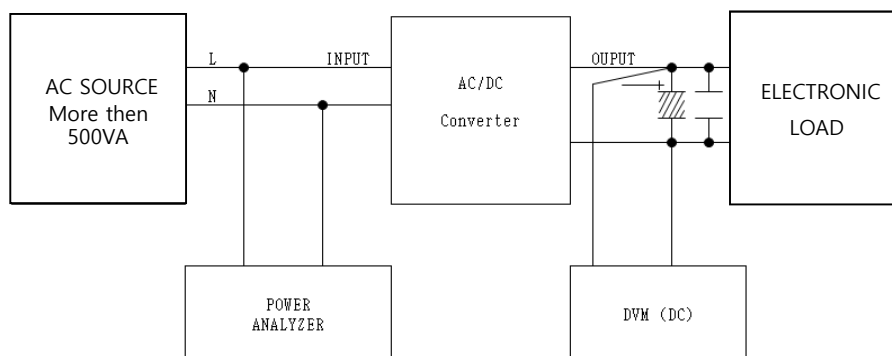
3. Ripple & Noise



- 1) Set AC Source to 220V
- 2) Apply a load of 4.0A to the output terminal.
- 3) Ripple & Noise Check (less than 200mVp-p)
 - Electrolytic Capacitor 47uF and Ceramic Capacitor 0.1uF are connected in parallel to the output terminal, and Oscilloscope Bandwidth is 20Mhz

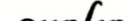
※ Measuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD, OSCILLOSCOPE

4. Over current Protection

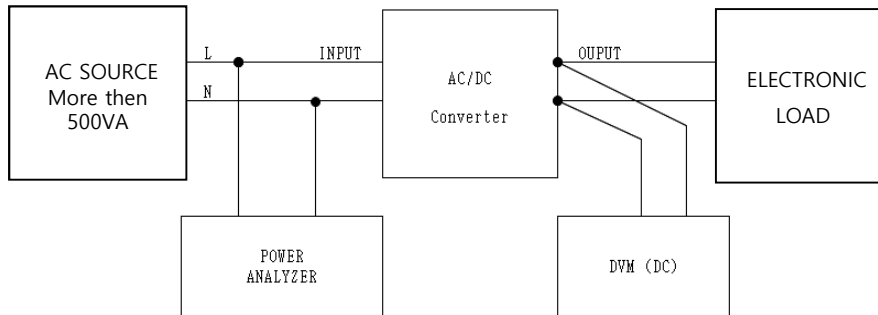


- 1) Set AC Source to 220V
- 2) Continue to increase the load on the output terminal so that the voltage is 0V.
- 3) Check that the output current is 4.8A to 7.0A.

※ Measuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD

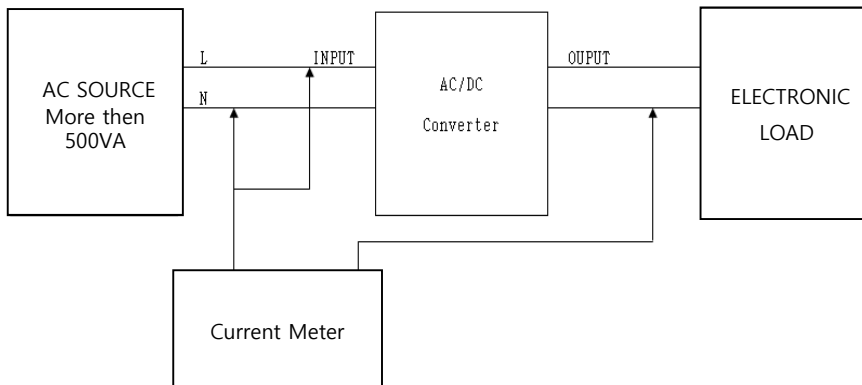
 선린테크(주)		Date of preparation 2021.01.17	Document number TD-PA-B271KS-08	ISSUE 1.0	PAGE 3/4
preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Test Procedure Manual		Model No LA-B271KS			

5. efficiency



- 1) Set AC Source to 220V
 - 2) Apply a load of 4.0A to the output terminal.(aging for 30 minutes)
 - 3) Check by Input and output efficiency.(84.3% MIN)
- ※ Mesuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD

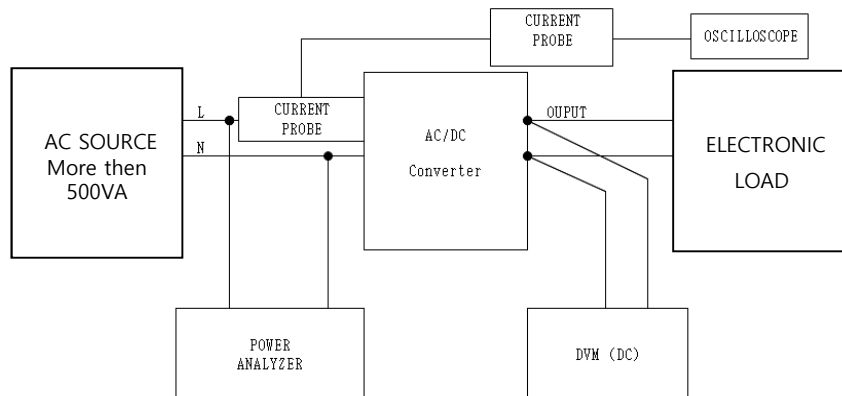
6. Leakage current



- 1) Set AC source to 220V
 - 2) Connect to each AC input terminal and output side GND with a leakage current meter.
 - 3) Check the indication value of the leak current meter.(0.25mA MAX)
- ※ Mesuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD,CURRENT METER

 선린테크(주)		Date of preparation 2021.01.17	Document number TD-PA-B271KS-08	ISSUE 1.0	PAGE 4/4
preparing person B. S. LEE	staff S. Y. CHOI	grantor W. J. HUR	document manager D. H. YOU		
Title Test Procedure Manual		Model No LA-B271KS			

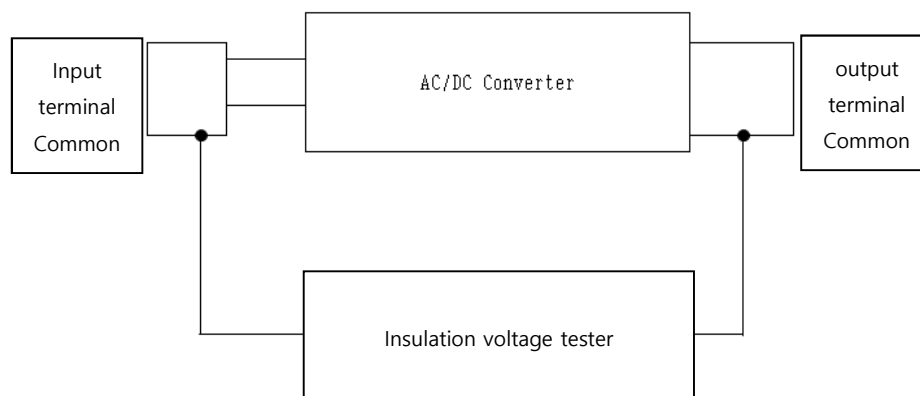
7. Inrush current



- 1) Set AC Source to 220V
- 2) Apply a load of 4.0A to the output terminal.
- 3) Connect Current Probe to AC source live or neutral line.
- 4) When the power is applied, check the Inrush Current detected by Current Probe with an oscilloscope (50A MAX)

※ Measuring Instruments : AC SOURCE, POWER ANALYZER, DVM, ELE LOAD, OSCILLOSCOPE

8. Isolation Voltage



- 1) Connect each input AC Line to the output terminal.
- 2) Connect to both sides of the Insulation Withstand Voltage meter.
- 3) After applying an insulation voltage of 3.0KV, the voltage is maintained for 1 minute to check if there is any abnormality.

※ Measuring Instruments : Insulation voltage tester

9. Test Report

Electrical Characteristics Test

MODEL		LA-B271KS-DA										PAGE		1	
ITEM		Electrical characteristics										DATE		2021-01-15	
												Tested by		B.S.LEE	
ITEM			SPEC		DATA										RESULT
					#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	
Line & Load Regulation	240VAC	0	22.8V ~ 25.2V		24.46V	24.66V	24.50V	24.33V	24.47V	24.59V	24.27V	24.48V	24.50V	24.47V	PASS
		4A			23.58V	23.86V	23.74V	23.41V	23.65V	23.69V	23.32V	23.67V	23.74V	23.65V	
	220VAC	0	22.8V ~ 25.2V		24.46V	24.65V	24.50V	24.37V	24.48V	24.59V	24.26V	24.48V	24.50V	24.48V	
		4A			23.58V	23.87V	23.73V	23.41V	23.65V	23.68V	23.32V	23.66V	23.73V	23.65V	
	200VAC	0	22.8V ~ 25.2V		24.46V	24.65V	24.50V	24.33V	24.47V	24.59V	24.26V	24.48V	24.50V	24.47V	
		4A			23.58V	23.86V	23.74V	23.41V	23.65V	23.68V	23.31V	23.66V	23.74V	23.65V	
Power Factor	220VAC	4A	0.9 More than		0.98	0.97	0.96	0.98	0.98	0.98	0.98	0.98	0.96	0.98	
Frequency Regulation		47Hz	22.8V ~ 25.2V		24.46V	24.66V	24.50V	24.34V	24.47V	24.60V	24.27V	24.49V	24.50V	24.47V	
		63Hz			24.46V	24.66V	24.50V	24.34V	24.47V	24.59V	24.27V	24.49V	24.50V	24.47V	
RIPPLE & NOISE		Max Load	200mVp-p	220V 60Hz	88.0mV	88.0mV	84.0mV	88.0mV	88.0mV	88.0mV	84.0mV	88.0mV	84.0mV	88.0mV	
Over Current Protection		220V 60Hz	4,800mA ~ 7,000mA		5.3A	5.3A	5.4A	5.1A	5.4A	5.3A	5.5A	5.2A	5.4A	5.4A	
Efficiency		220V 60Hz	84.3% More than (25%, 50%, 75%, 100% AVG)		86.64%	86.50%	86.51%	86.21%	86.21%	86.37%	85.83%	86.38%	86.51%	86.21%	
Stand-by power			0.5W Max		60mW	59mW	63mW	58mW	58mW	60mW	58mW	61mW	63mW	58mW	
Short Test			-		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
Inrush Current			50A Max		28.2A	21.8A	28.2A	23.7A	25.6A	28.2A	21.8A	28.2A	23.7A	25.6A	
Leakage Current			0.25mA Max (No load)		0.186mA	0.185mA	0.185mA	0.185mA	0.186mA	0.186mA	0.185mA	0.185mA	0.185mA	0.186mA	
REMARK :															

10. Quality Guarantee

1. A/S

This product is free for 2 years after service.

2. A/S Tel

Company : Sunlin Tech co.,Ltd.

Tel : (031)428-8087

11. Quality Certification

No	제 목	Page	비 고
1	KC Safety certificate	54	
2	Electromagnetic wave certificate	56	
3	Energy efficiency report	57	

접 수 번 호 : 20-073121-01-1
(Receipt No.)



안 전 인 증 서

Safety Certificate

안 전 인 증 번 호 : SU10334-20003
(Certificate No.)

제 조 업 자/수 입 업 자 명 : 선린테크 주식회사
(Manufacturer/importer)

주 소 : 경기도 안양시 동안구 경수대로721번길 44-41(호계동)
(Address)

제 품 명 : 직류전원장치
(Product) (AC/DC adapter)

기 본 모 델 명 : LA-B271KS
(Basic Model)

파 생 모 델 명 : 없음
(Series Model)

정격/안전기준상의 모델구분 : AC 200-240 V, 50/60 Hz, 1.5 A (Output: DC 24 V, 4 A)
(Rating)

시 험 기 준 : K60950-1(2011-12)
(Standard)

본 인증서는 제 조 국 명 : 중국
제 조 업 자 명 : Weihai Sunlin Electronics Co., Ltd
제조공장의 주소 : Economic Technology Development Zone, Gushan Road NO.526
-2 264207 Weihai People's Republic of China
다수 공장의 명 : “이면기재” 의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항, 제4항, 제10조제2항 또는 제15조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2), 9(4), 10(2) or 15(2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2020 년 12 월 30 일
Year month day

한국산업기술시험원
KOREA TESTING LABORATORY



* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류

1. 전기용품의 안전관리부품 및 재질목록(List of Critical Components)
2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model)
3. 안전인증의 변경 현황 (Revisions Status)

다수 공장의 현황
(The status of Multiple Factories)

No	현 황	
1	다수 공장의 명 (Name)	SUNLIN VIETNAM ELECTRONICS CO., LTD
	주소 (Address)	Plot D4, Chau Son Industrial Zone, Chau Son Commune 401309 Phu Ly City, Ha Nam Province VIETNAM
	제조국명 (Origin)	베트남

방송통신기자재등의 적합등록 필증

Registration of Broadcasting and Communication Equipments

상호 또는 성명 Trade Name or Registrant	선린테크 주식회사
기자재명칭(제품명칭) Equipment Name	직류전원장치
기기부호/추가 기기부호 Equipment code /Additional Equipment code	IMI
기본모델명 Basic Model Number	LA-B271KS
파생모델명 Series Model Number	
등록번호 Registration No.	R-R-S1T-LA-B271KS
제조사/제조국가 Manufacturer/Country of Origin	Weiha Sunlin Electronics Co.,Ltd, SUNLIN VIETNAM ELECTRONICS CO., LTD / 중국, 베트남
등록연월일 Date of Registration	2020-12-24
기타 Others	

위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다.
It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.

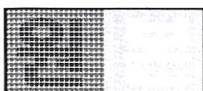
2020년(Year) 12월(Month) 24일(Day)

국립전파연구원장



Director General of National Radio Research Agency

※ 적합등록 방송통신기자재는 반드시 "적합성평가표시" 를 부착하여 유통하여야 합니다.
위반시 과태료 처분 및 등록이 취소될 수 있습니다.



효율관리기자재 신고 확인서

접 수 번 호	: 125210005
품 목 명	: 어댑터
업 체 명	: 선린테크(주)
업 체 대 표 번 호	: 138-81-39755
모 델 명	: LA-B271KS
효 율 등 급	: 최저소비효율기준만족
명판표시출력전력(W)	: 96
동작효율(%)	: 90
무부하모드 소비전력(W)	: 0.25
동작효율 MEPS(%)	: 84

『에너지이용합리화법』 및 "효율관리기자재 운용규정"
(산업통상자원부 고시)에 따라 상기 효율관리기자재가 신고되었음을
확인합니다.

효율관리기자재 신고확인서에 기재된 제품사양 및 효율 등의 내용은 신고업체의 책임
하에 기재된 사항이오니, 신고내용에 대한 문의는 해당업체에 문의하시기 바랍니다.

2021년01월05일

한국에너지공단 이 사 장

