

TO : CUSTOMER

DATE : 2008.03.13

GREEN C&C TECH CO.,LTD

682-1 NEUNG-DONG HWASEONG CITY,KOREA

TEL : 82-31-233-3620,3621,3622

FAX : 82-31-233-3616

DOCUMENTATION FOR APPROVAL

PRODUCT : CCFL BACKLIGHT INVERTER

MODEL NAME : GH025A(A3)(RoHS INVERTER)

GCCT NAME : GCCT025AE

APPROVAL	CHECKED	WRITTEN

PLEASE RETURN ONE DOCUMENT AFTER APPROVED SIGN.

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GREEN C&C TECH	INVERTER SPECIFICATION (GH025A(A3))	R&D DATE : 2009.06.22
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NO	DATE	REVISION	PAGE
1	2008.05.06	- ADD PART VENDOR D2,3,4,5,7 : MMDL914 (ONSEMI) ZD1,2 : MM3Z5V6 (ONSEMI)	6
	2009.06.22	- PCB Vendor Changed WONKYUNG, SOOJOO, RAMI, JOONGWON, SEENDUCK → WONKYUNG, JOONGWON, SEOKANG, SONGDO, BACKSONG	7, 13
		- FUSE Vendor Changed KMS20, KE20 : DAITO → KMS20 : DAITO, CCP2B40 : KOA, CC12H2A : COOPERBUSSMANN	7, 13
		- FET Vendor Changed AO4606 : AOS, AP4503GM, AP4509GM : APEC, STM8405 : SAMHOP, SP8M3 : ROHM, P2803NVG : NIKO-SEMI → AO4614B, AO4606 : AOS, AP4506GEM : APEC, APM4548AK : ANPEC	6
REVISION HISTORY			

REV.											
Page											
REV.	0	1									
Page	12	13									
REV.	2	0	0	0	0	1	1	0	0	0	0
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1. APPLICATION

This Document Specified The Detailed Product Requirements of Inverter
GH025A(A3)

2. SUITABLE LOAD

LCD MODULE : 5" ~15" 1 LAMP TFT LCD

3. ELECTRICAL CHARACTERISTICS

3-1. Absolute Maximum Ratings

ITEM	SYMBOL	SPEC	UNIT	REMARKS
INPUT VOLTAGE1	Vin1	10.8~13.2	V	
INPUT VOLTAGE2	Vin2	4.9~5.1	V	
OPERATING TEMPERATURE	Top	-30~80	℃	
STORAGE TEMPERATURE	Tstg	-30 ~ 80	℃	
RELATIVE HUMIDITY	RH	80	%	

3-2. Control Signal

PIN NO.	SYMBOL	STATUS	ACTION	REMARKS
CN1 #3	BKLT_ON	HIGH	LAMP(CCFL)-ON	2.4~5.25V
		LOW	LAMP(CCFL)-OFF	0.8V MAX

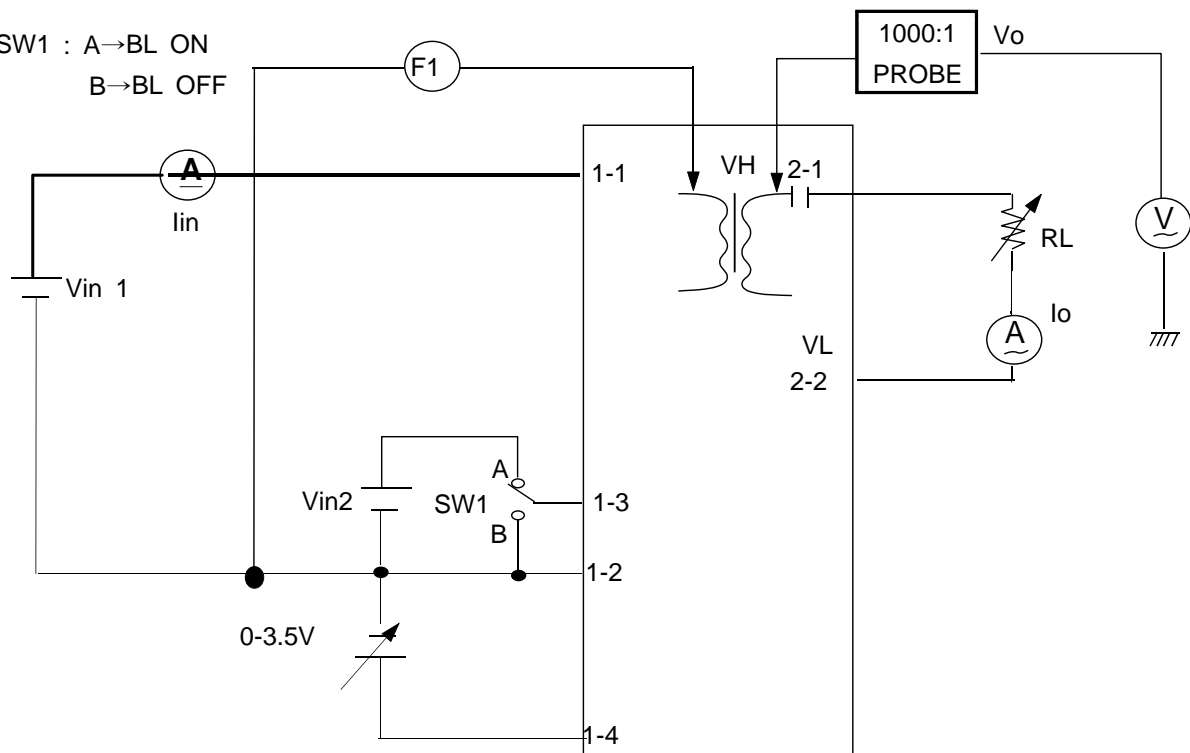
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3-3. Output Characteristics

ITEM	SYMBOL	CONDITION			SPECIFICATION			UNIT
		Vin1(V) (DC-IN)	BRT- ADJ	LAMP	MIN	TYP	MAX	
OUTPUT CURRENT	Io(max)	12	0V	LAMP	4.5	5.0	5.5	mArms
	Io(min)	12	3.5V	LAMP	2.5	3.0	3.5	
INPUT CURRENT	Iin	12	0V	LAMP	0.2	0.3	0.4	ADC
FREQUENCY	F	12	0V	LAMP	44	51	58	KHz
OPEN OUTPUT VOLTAGE	Vo	12	0V	∞	1.2	-	1.9	kVrms

3.4 Test Circuit

-SW1 : A→BL ON
B→BL OFF



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4. INTERFACE

4.1 CN1 CONNECTOR :12505WR-05A00(P)(YEONHO) or equivalent

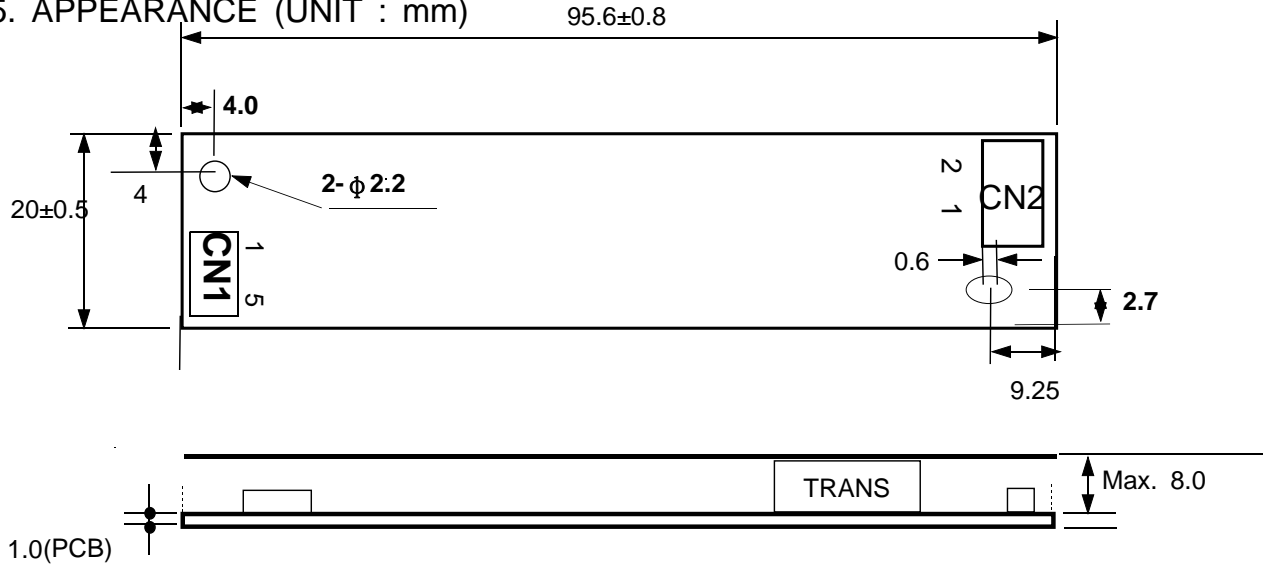
PIN NO	SYMBOL	REMARK
1	DC-IN(Vin)	DC INPUT Power (12V)
2	GND	GND
3	BL ON/OFF	CCFL Drive SIGNAL(Active HIGH)
4	BRT_ADJ	0 ~ 3.5V
5	N.C	

4.2 CN2 CONNECTOR : 20015WR-05A00(P)(YEONHO) or Equivalent

PIN NO.	SYMBOL	REMARK
1	HOT	HIGH
2	COLD	LOW

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5. APPEARANCE (UNIT : mm)



6. NOTATION OF LOT NUMBER

MARKING : BOTTOM OF PCB.



GH025A(A3)	: USER MODEL CODE
G	: MANUFACTURER CODE (GREEN C&C TECH.)
7	: YEAR OF PRODUCT 7 → 2007 , 8 → 2008 , ... , 11 → 2011
04	: WEEK OF PRODUCT 01,02,03,04,...52
0001	: SERIAL NUMBER 0001,0002.....9998,9999
AE	: GCCT MODEL CODE (GCCT025AE)

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7.PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE NO	MAKER	TYPE NO	MAKER
U1	I.C	BD9883FV	ROHM		
U2,3	FET	AO4614B	AOS	AO4606	AOS
		AP4506GEM	APEC	APM4548AK	ANPEC
Q1	TR	SST2907A	ROHM	MMBT2907A	DIODES
		SBT2907A	AUK	KTN2907AS	KEC
		MMBT2907A	ONSEMI		
D2,3,4,5,7	DIODE	1SS355	ROHM	1N4148WS	DIODES
		SDS511	AUK	KDS160	KEC
		1N4148WS	PANJIT	MMDL914	ONSEMI
D6	DIODE	BAV99	DIODES	DAN217	ROHM
		SDS7000	AUK	KDS226	KEC
		BAV99	PANJIT	BAV99	ONSEMI
ZD1,2	ZENER	UDZS 5.6B	ROHM	UDZ5V6B	DIODES
		SDZ5V6	AUK	KDZ5.6V	KEC
		BZX84B5V6W	PANJIT	MM3Z5V6	ONSEMI
C5,6	MLCC	CL10B103KA	SEMCO	EQUIVALENT	
C4		CL10B222KA	"	"	
C7		CL10F334ZO	"	"	
C8		CL10B333KA	"	"	
C9,12		CL10B473KA	"	"	
C10,11		CL10F105ZA	"	"	
C2,13,20		CL32F106ZA	"	"	
C15		CL10C221JA	"	"	
C18		CL10B392KA	"	"	
R3	CHIP-R	RC1608J154	"	"	
R4		RC1608J563	"	"	
R5,6		RC1608J274	"	"	
R7		RC1608J223	"	"	
R8,16,24		RC1608J102	"	"	
R9,13		RC1608J103	"	"	
R10,11,14,15		RC1608J151	"	"	
R12		RC1608J303	"	"	

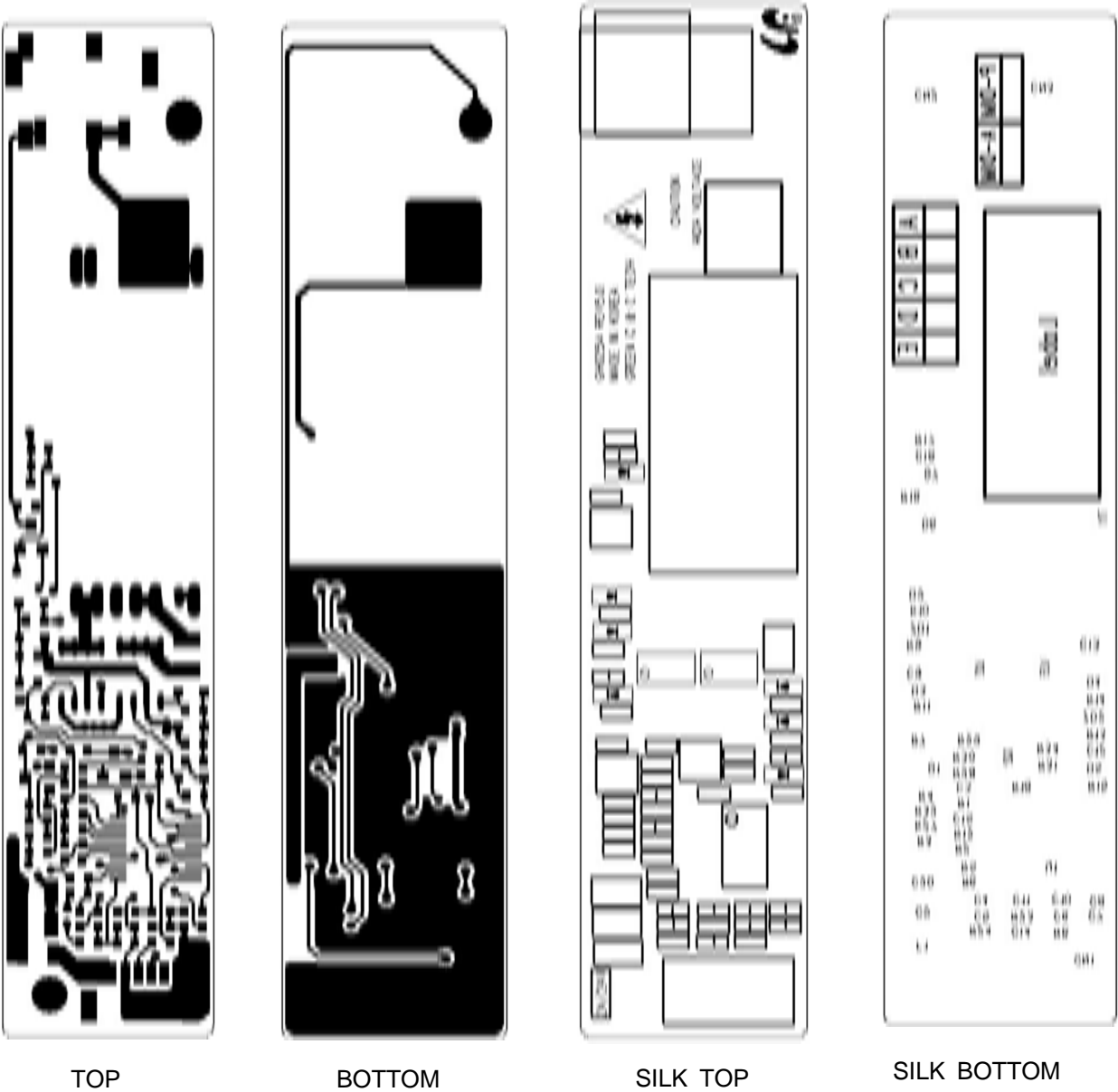
GREEN C&C TECH	INVERTER SPECIFICATION (GH025A(A3))	R&D DATE : 2009.06.22
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7.PART LIST

SYMBOL	NAME	1st		2nd	
		TYPE N0	MAKER	TYPE N0	MAKER
R17	CHIP-R	RC1608J104	SEMCO	EQUIVALENT	
R18		RC1608J513	"	"	
R23		RC1608J105	"	"	
T1	TRANS	GT-806	NAMYANG	GT-806	SEJIN
		GT-806	DONGHEUNG	GT-806	GCCT
		GT-806	ANYON		
F1	FUSE	KMS20	DAITO	CCP2B40	KOA
		CC12H2A	COOPER BUSSMANN		
CN1	CONNECTOR	12505WR-05A(P)	YEON-HO	EQUIVALENT	
CN2	CONNECTOR	20015WR-05A0(P)	YEON-HO	JE206-D1F-02	JAEEUN
		SM02(8.0)B-BHS(P)	JST		
PCB	PCB	GH025A REV5.0	WONKYENG	GH025A REV5.0	JOONGWON
		GH025A REV5.0	SEOKANG	GH025A REV5.0	SONGDO
		GH025A REV5.0	BACKSONG		
INSULATOR	INSULATOR	GI-003SA	YOUIL	EQUIVALENT	

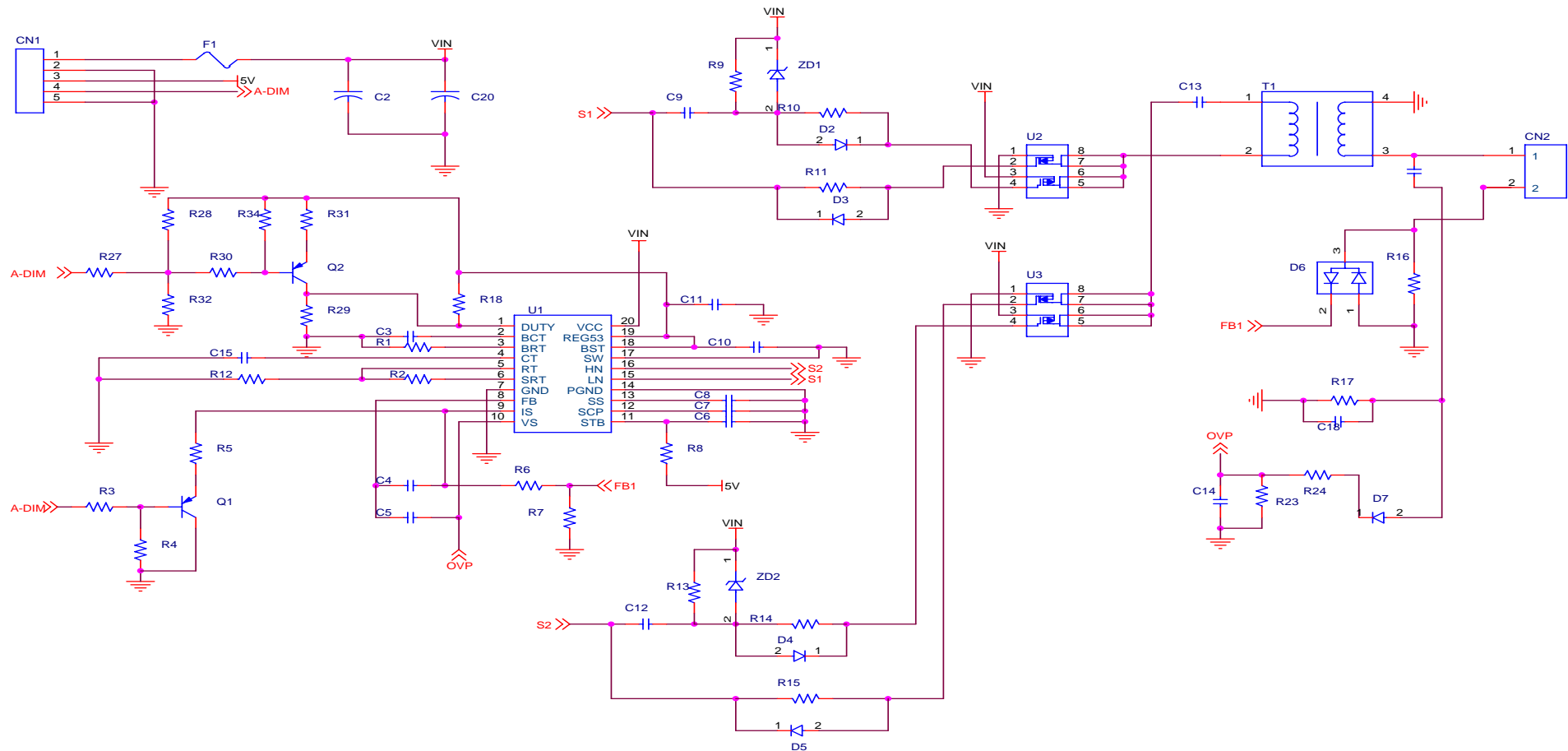
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8. PCB



GREEN C&C TECH	INVERTER SPECIFICATION (GH025A(A3))	R&D DATE : 2008.03.13
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9. CIRCUIT



GREEN C&C TECH			
Title	GH025A(A3)		
Size	Document Number	Rev	
A4	GCCT025AD	4.0	
Date:	Friday, January 25, 2008	Sheet	1 of 1

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10.FLOW CHART

MODEL (TYPE)	(GH025A(A3))			REVISION	0
WRITER	S.H.CHA		(FLOW CHART)		
FLOW CHART	PROCESS	EQUIPMENTS	REFERENCES		
	Raw Material		PART LIST		
	Cream-solder Printing of F-side	Cream-solder Printer			
	Discrete Device Assembly	Low-High Mounter			
	Reflow Soldering	Reflower			
	Visual Inspection	Microscope			
	PCB Marking	Marking Machine			
	Preparing Process				
	Soldering By Hand for Discrete Components				
	Visual Inspection				
	PCB Division	Silicon Dispenser			
	Aging	Power Supply,Aging Box	2H		
	Electrical Characteristic Inspection	Testing SYSTEM,Testing JIG			
	Insulator Attachment Package				
	Outgoing Inspection	Testing SYSTEM,Testing JIG	List of Inspection Inspection		
	Shipping				
Based on standard rule	GCCT025AE				

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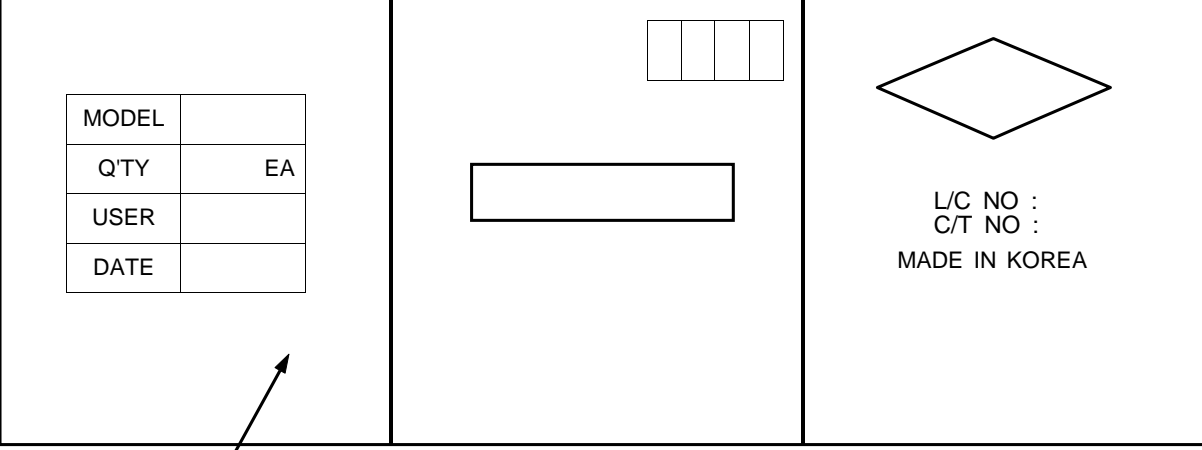
11. RELIABILITY TEST SPEC

NO.	ITEM	CONDITIONS AND METHOD
1	High Temperature Storage Test	Temp : 80℃ Duration 500hrs
2	Low Temperature Storage Test	Temp : -30℃ Duration 500hrs
3	High Temperature High Humidity Storage	Temp : 40℃ Humid 95%RH Duration 500hrs
4	High Temperature High Humidity Operation test	Temp : 40℃ Humid 95%RH Duration 1000hrs
5	Thermal Shock Test	Temp -30℃ ↔ 70℃,250cycle (30min) (30min)
6	Vibration test	Amplitude :1.5mm Frequency :10~55Hz Position : three perpendicular planes Duration 1000hrs
7	High Temperature Operation test	Temp : 80℃ Duration 72hrs
8	Low Temperature Operation test	Temp : -30℃ Duration 72hrs

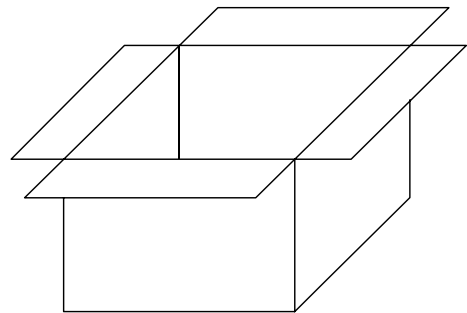
GREEN C&C TECH	INVERTER SPECIFICATION (GH025A(A3))	R&D DATE : 2008.03.13
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12. PACKING

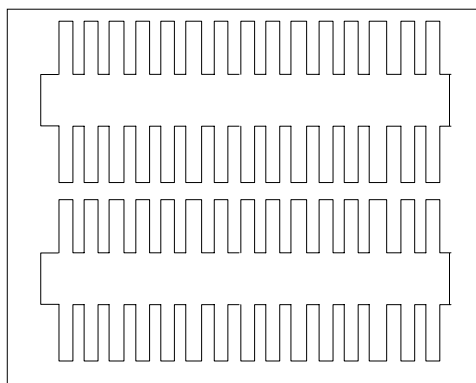
12.1 BOX

<table border="1"> <tr> <td>MODEL</td> <td></td> </tr> <tr> <td>Q'TY</td> <td>EA</td> </tr> <tr> <td>USER</td> <td></td> </tr> <tr> <td>DATE</td> <td></td> </tr> </table>	MODEL		Q'TY	EA	USER		DATE		
MODEL									
Q'TY	EA								
USER									
DATE									

MODEL	GH025A(A3)
Q,TY	000 EA
USER	
DATE	00.00.00



12.2 TRAY



N3151

1 TRAY : 40EA

1 BOX : 11 TRAY (440EA)

SYMBOL	TYPE NO
PACKING-TRAY	383*319*45
PACKING-BOX	393*324*358
PACKING-PAD	393*324*3

GREEN C&C TECH	INVERTER SPECIFICATION (GH025A(A3))	R&D DATE : 2009.06.22
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1. MATERIAL LIST FOR SAFETY GH025A(A3)

1.1 LIST

SYMBOL	NAME	TYPE NO.	MANUFACTURE	DESCRIPTION
F1	FUSE	KMS20	DAITO COMMUNICATION APPARATUS CO LTD	UL FILE NO. E59783
		CCP2B40	KOA	UL FILE NO . E171861
		CC12H2A	COOPER BUSSMANN	UL FILE NO . E19180
PCB	PRINTED WIRING BOARD	FR-4	JOONGWON	UL FILE NO . E111948
			WONKYUNG	UL FILE NO . E202541
			SONGDO	UL FILE NO . E250018
			SEOKANG	UL FILE NO . E150774
			BACK SONG	UL FILE NO . E205233
CN1	CONNECTOR	12505WR-05A00(P)	YEONHO	UL FILE NO . E108706
		53261-0590	MOLEX	UL FILE NO . E29179 NYLON 66 UL94V-0
CN2	CONNECTOR	20015WR-05A00(P)	YEONHO	UL FILE NO . E108706
		SM02B(8.0)B-BHSS	JST	UL FILE NO . E60389 CSA:LR20812
T1	TRANSFORMER	GT-806	NAMYANG ELECTRONICS	CLASS A (105 de.C) SEE TRANS SPEC
			DONGHEUNG ELECTRONICS	CLASS A (105 de.C) SEE TRANS SPEC
			GCCT	CLASS A (105 de.C) SEE TRANS SPEC
			ANYON	CLASS A (105 de.C) SEE TRANS SPEC
			SEJIN	CLASS A (105 de.C) SEE TRANS SPEC

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FILE No.

SPECIFICATIONS

DATE

2004. 10. 13.

PART NAME

TRANS INVERTER

MODEL NAME

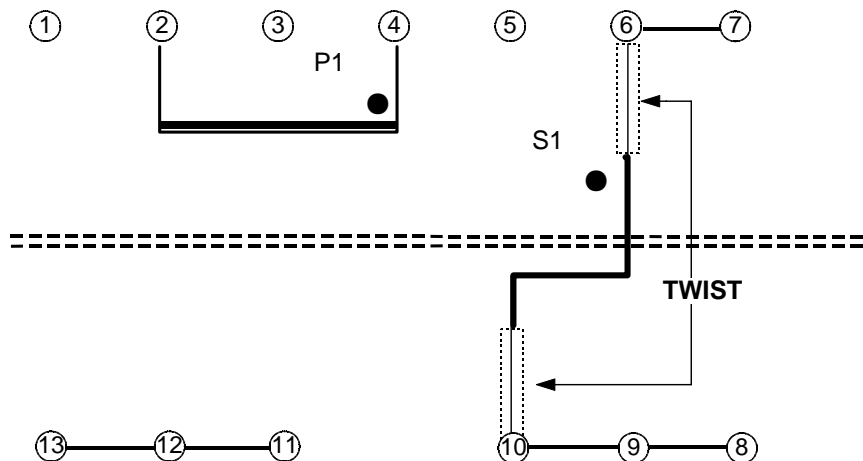
PART No.

GT - 806

SPEC (TYPE)

EFD1322N

7. SCHEMATIC .



※ DOT : START OF WINDING

※ S1 (START, FINISH) : WIRE THREE PLY TWIST

8. WINDING SPECIFICATION.

No.	TERMINAL (S - F)	WIRE	TURNS	WINDING METHOD	INSULATION		
					MATERIAL	T/W (mm)	TURNS
P1	4 - 2	1 UEW 0.28Ø	24	SOLENOID WINDING			
S1	6 - 10	F 2UEW 0.03Ø	2,598 (0+433X6)	C. C. W WINDING	P/I TAPE	0.025X16.5	2.0 MIN
CORE FIXING TAPE					1 P/I TAPE	0.025X4.0	2.5 MIN

NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
1	CORE FIXING TAPE 변경(PET(FR) => POLYIMIDE)	2004.10.13.	D.S. SHIN.			
DRAWING No.						



NAM YANG ELECTRONICS CO., LTD.

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FILE No.

SPECIFICATIONS

DATE

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PART NAME

TRANS INVERTER

MODEL NAME

PART No.


GT - 806

SPEC (TYPE)

EFD1322N

9. ELECTRICAL CHARACTERISTICS

No.	ITEM	TERMINAL	SPECIFICATION	REMARK
4-1	INDUCTANCE (Ls mode)	4 - 2	350 uH MIN	HP - 4284A LCR-METER at <u>1.0</u> KHz. <u>1.0</u> V (25℃)
		7 - 8,9	3.80 H MIN	
4-2	LEAKAGE INDUCTANCE	4 - 2	26.9 uH $\pm 7\%$	at <u>10</u> KHz, <u>1.0</u> V
		7 - 8,9	323 mH $\pm 7\%$	
4-3	Rdc	7 - 8,9	1,380 ohm $\pm 12\%$	at <u>1.0</u> KHz, <u>1.0</u> V
4-4	WITHSTANDING VOLTAGE	BETWEEN <u>PRIMARY</u> TO <u>SECONDARY</u>	AC <u>0.5</u> KV r.m.s 1 MINUTE	CUT OFF CURRENT <u>5</u> mA TOS-8850
		BETWEEN <u>PRIMARY</u> TO <u>CORE</u>	AC <u>1.0</u> KV r.m.s 1 MINUTE	
		BETWEEN <u>SECONDARY</u> TO <u>CORE</u>	AC <u>2.0</u> KV r.m.s 1 MINUTE	
4-5	INSULATION RESISTANCE	PRIMARY TO SECONDARY COIL TO CORE	100 M ohm MIN at DC 500V	TOS-8850
4-6	DC-Current OVERLAP	4 - 2	260 uH MIN	at 1KHz, 1Vrms WITH (130mA) DC

NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
				K203		ny/bwo
				DRAWING No.		



NAM YANG ELECTRONICS CO., LTD.

CUSTOMER : GREEN C & C TECH CO., LTD.

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SPECIFICATIONS

DATE

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TRANS INVERTER

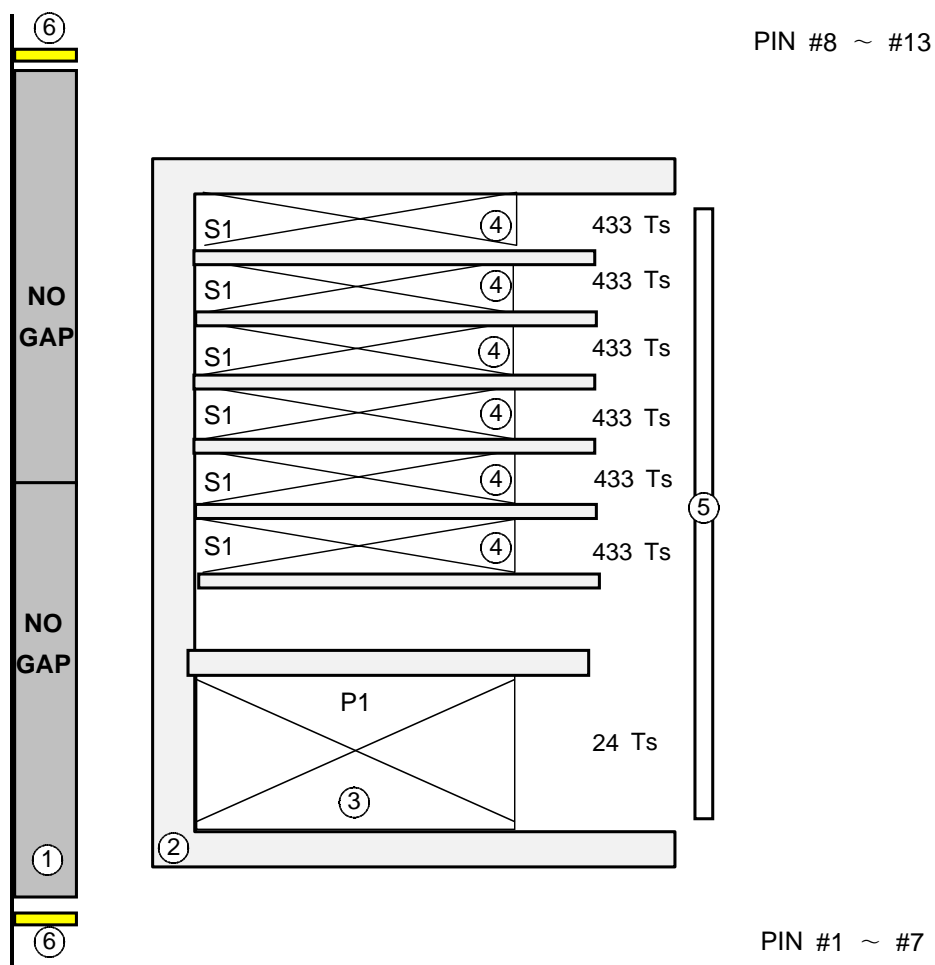
MODEL NAME



PART No.

GT - 806

SPEC (TYPE)

EFD1322N

13. SECTION DIAGRAM

NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
				K203		
				DRAWING No.		



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FILE No.

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PART NAME

TRANS INVERTER

MODEL NAME


PART No.

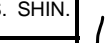


GT - 806

SPEC (TYPE)

EFD1322N

14. MATERIALS LIST

NO.	COMPONENT	MANUFACTURE COMPONENT	NAME OF MATERIAL	UL FILE NO.
1	CORE	SAM WHA ELECTRONICS CO., LTD.	PL-7 EFD 1322N	
		I SU CERAMICS CO., LTD.	PM-7 EFD 1322N	
		YOUNG HWA FERRITE CO., LTD.	YP-2 EFD 1322N	
2	BOBBIN	SUMITOMO CHEMICAL CO., LTD.	(94V-0) LCP E4008 EFD 1322	E54705 (M)
3	WIRE	DONG YANG ELECTRONICS IND CO., LTD.	1UEW 0.28Ø	E102761(S)
		YOUNG WHA SA CO.,LTD.		E141925(S)
4		CHANG JUN CO., LTD. ELEKTRISOLA SDN BHD	F-2UEW 0.03Ø	E93944 E143312
5	INSULATION TAPE	CHANG JO CO LTD.	POLYIMIDE FILM TAPE 0.025 mm X 16.5 mm (Transparent Color)	E231034
6	CORE FIXING TAPE		 POLYIMIDE FILM TAPE 0.025 mm X 4.0 mm (Transparent Color)	
7	ADHESIVE	SUNG MOON TELECOMMUNICATION CO., LTD.	UNI-BOND #812	
		CEMEDINE CORP.	EP-138	
		SE GYE CHEMICAL CO., LTD.	SK - 031F / 015B	
		TORAY DOW CORNING SILICONE	94V-0 SILICONE SE9189L	E55519
		SHIN-ETSU CHEMICAL CO., LTD.	KE-3494	E48923
8	SOLDER	SAM WHA NON-FERROUS METAL IND CO., LTD.	Sn98Cu2	
9	FLUX	KOKI SANEI KOREA CO., LTD.	JS-7000S-1	

NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
1	CORE FIXING TAPE 변경(PET(FR) => POLYIMIDE)	2004.10.13.	D.S. SHIN.			
				DRAWING No.		



NAM YANG ELECTRONICS CO., LTD.

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DATE	2004. 10. 13.
MODEL NAME	
SPEC (TYPE)	EFD1322N

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SPEC (TYPE)	EFD1322N

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MODEL NAME	
SPEC (TYPE)	EFD1322N

PART NAME	TRANS INVERTER	MODEL NAME	
PART No.	GT - 806	SPEC (TYPE)	EFD1322N


PART No.	GT - 806	SPEC (TYPE)	EFD1322N
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BOBBIN **SUMITOMO CHEMICAL CO., LTD.** **E 54705 (M)**
 5-33 KITAHAMA 4-CHOME CHUO-KU, OSAKA
 541-8550 JAPAN

WIRE DONG YANG ELECTRONICS IND CO., LTD. E 102761(S)
660-1 BANWOL-RI TAIAN-EUB HWASUNG-GUN,
KYUNGGI-DO KOREA

Marking : Company name or "E102761" and material designation or marked designation on package or reel. and Recognized Component Mark.

Mtl	Cost	typ	ANSI	T1
Dsg	BC	Overcoat	Typ(+)	
AEW-R	Modified Polyester	Polyamideimide	MW73-C	200
AI-EIW	Modified	Polyamideimide	MW35-C	200
UEW-B	Polyurethane	-	MW75-C	130
UEW-F	Polyurethane	-	MW79-C	155
NPW	Polyester-nylon	Nylon	MW24-C	155
NUW	Polyurethane-nylon	Nylon	MW28-C	130

NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
				K203		m/ bno
				DRAWING No.		

FILE No.

SPECIFICATIONS

DATE _____

2004. 10. 13.

PART NAME

TRANS INVERTER

MODEL NAME

PART No.

GT - 806

SPEC (TYPE)

EFD1322N

UL - LIST

WIRE

CHANG JUN CO LTD
SIHWA GONGDAN 3 NA 309 1279-9 JUNGWANG-DONG SIHEUNG-SI
KYONGGI-DO 429-450. KOREA

E93944

Mtl Dsg	Mark Dsg	Coat Typ		ANSI Type	Temp Class
		BC	OC		
CJ-EIAIW	-	Polyester-imide	Polyamide-imide	MW35	200
CJ-EIW	-	Polyester-imide	-	MW30	185
CJUE-YW	-	Polyurethane	Polyamide	MW28	155
CJPE-YW	-	Polyester	Polyamide	MW24	155
CJ HPE-YW	-	Polyester	Polyamide	MW76	180
CJ UEW	-	Polyurethane	-	MW79	155
				MW75	130

Marking: Company name or trademark , material designation or marked designation on package or reel and Recognized Component Mark.

WIRE

(Systems, Electrical Insulation) Magnet Wire - Component
ELEKTRISOLA (MALAYSIA) SDN BHD
JALAN DAMAI SATU JANDA BAIK 28750 BENTONG
PAHANG DARUL MAKMUR, MALAYSIA

E 143312

Mtl Dsg	Mark Dsg	Coat	Type	OC	ANSI Type	Temp Class
Estersol 180	E180	Polyesterimide (solderable)		-	MW-77	180
Amidester 200	A200	Polyesterimide		-	MW-74	200
Polysol-N 155	PN155	Polyurethane		Nylon	MW-80	155
					MW-28	(+130
Polysol 155	PN155	Polyurethane		-	MW-79	155
					MW-75	(+130
Polysol 155g	Pg155	Polyurethane		-	MW75	130
Polysol 155p	Pp155,Gp155	Polyurethane		-	MW79	155
Polysol 160	P160	Polyurethane		-	MW-79	130
Polysol 180	P180,G180	Polyurethane		-	MW79	(+155
					MW82	180
Polysol 170	P170 or G170	Polyurethane		-	MW79	155
Polysol 180	PN180	Polyurethane		-	MW83	180

Marking: Company name, material designation or marked designation and factory identification on package or reel.

TAPE

OANZ2 October 22, 2002
Insulating Tape - Component
CHANG JO CO LTD.
B7-9 BANWOL INDUSTRIAL COMPLEX 405 MOKNAE-DONG
ANSAN-SI, KYUNGKI-DO KOREA

E231034

Polymide film insulating tape with silicone adhesive, Cat. No. CHJ-205A rated 200°C.


*Complies with the flam Retardant requirements when so marked.

Marking: Company name or "E231034" and catalog designation printed on carton wrapper or core.

See General information Preceding These Recognitions

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

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NO	REVISIONS	DATE	CHECK	DESIGN	CHECK	APPROVAL
				K203		m/ bno
				DRAWING No.		

 **NAM YANG ELECTRONICS CO., LTD.**

