

L 53

SERVICE MANUAL

MAY 2005

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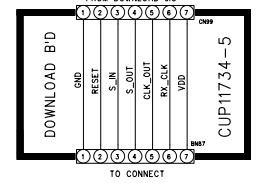
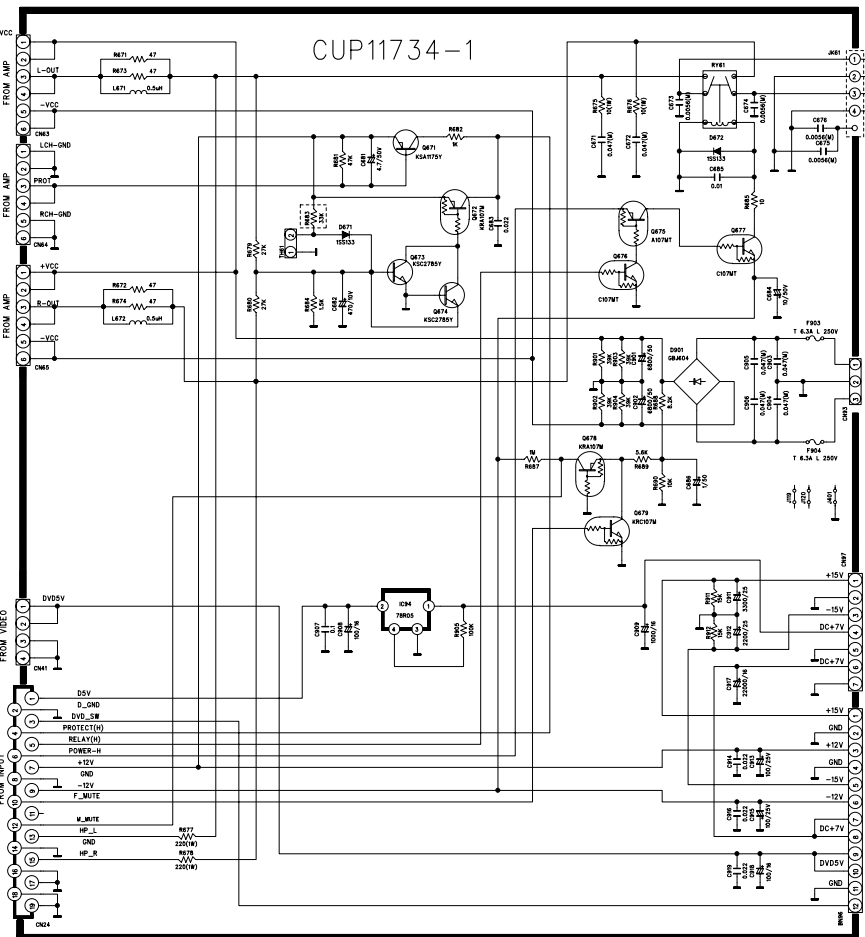
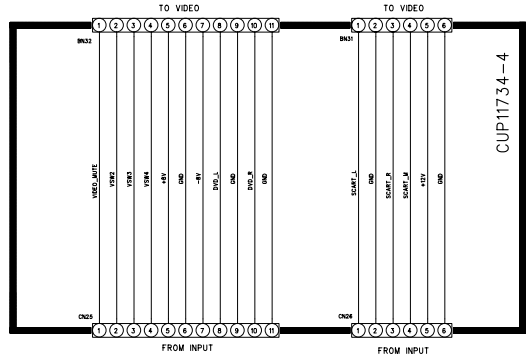
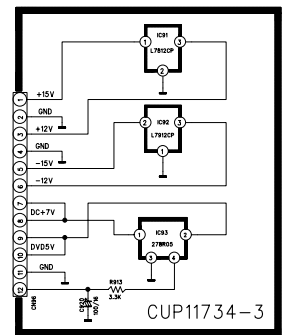
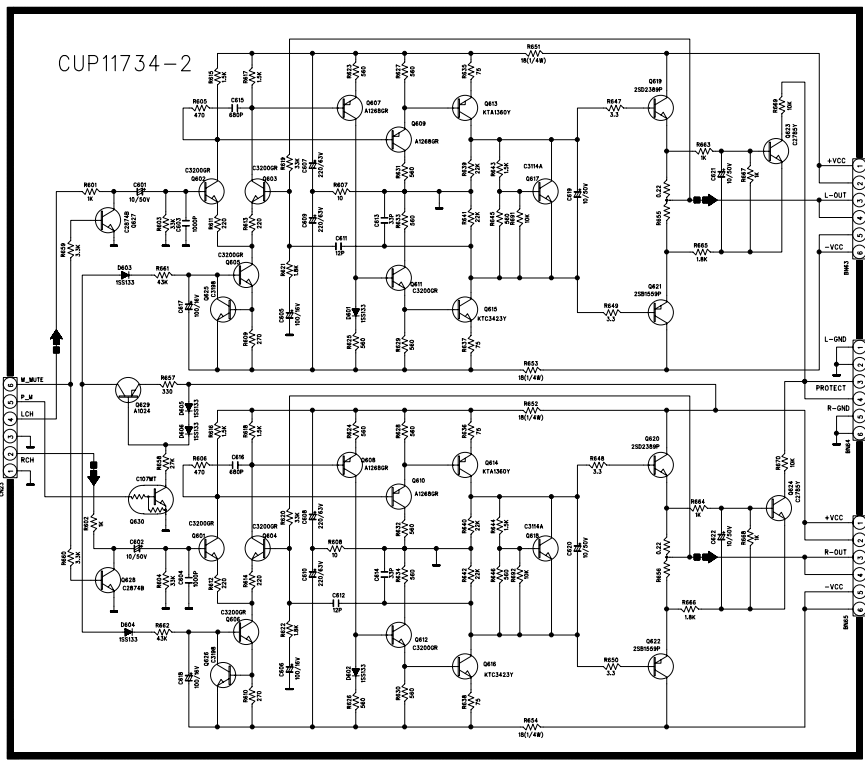
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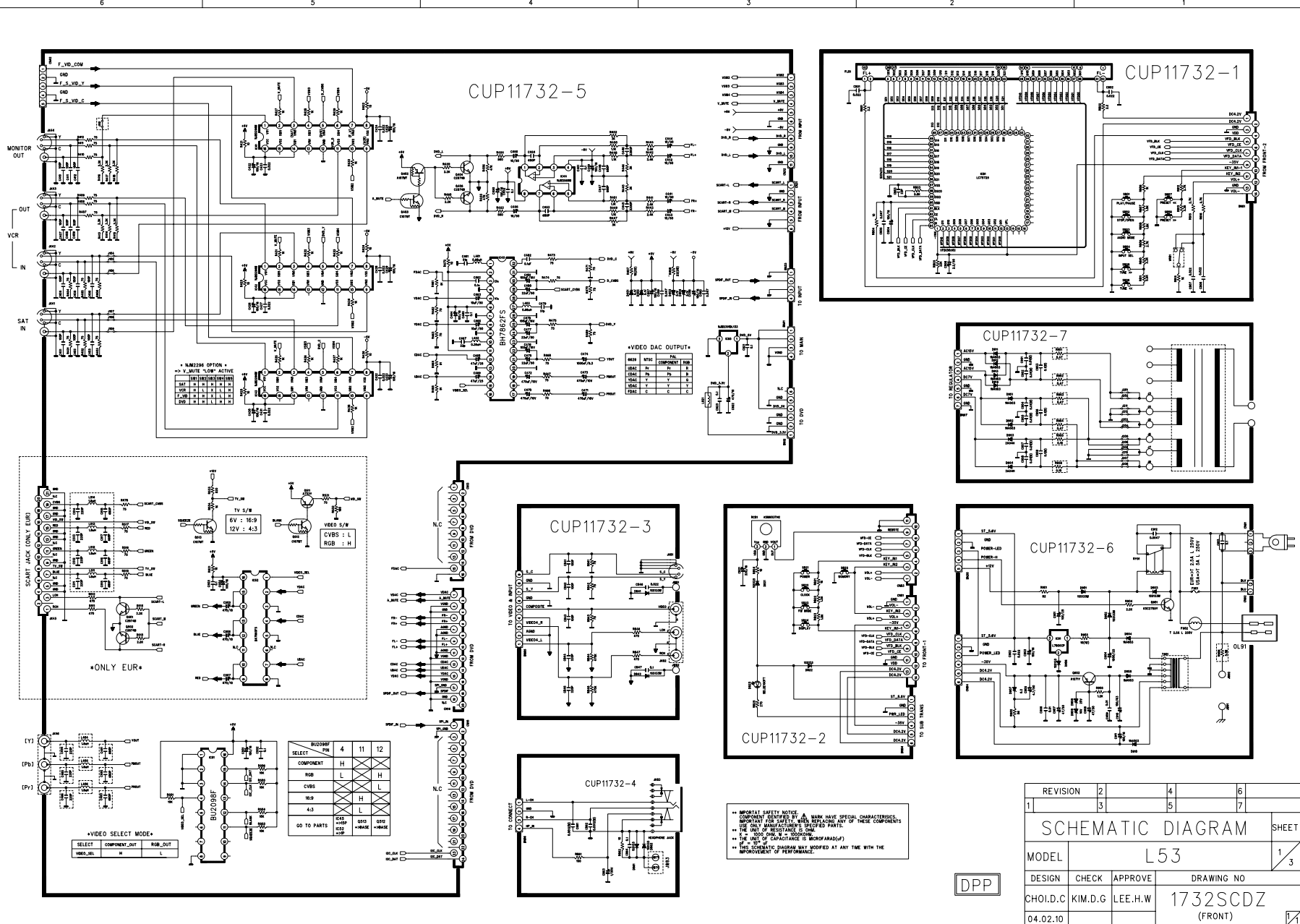
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REVISION	2	4	6
	3	5	7
SCHEMATIC DIAGRAM			
MODEL	L53		
DESIGN	CHECK	APPROVE	DRAWING NO
CHOI.D.C	KIM.D.G	LEE.H.W	1734SCDZ
04.03.01			



6 5 4 3 2 1

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VIDEO SELECT MODE

SELECT	COMPONENT_OUT	RGB_OUT
VMD_SEL	H	L
	L	H

SELECT	BUZZERF	TV	12
COMPONENT	H	X	X
RGB	L	X	X
CVBS	X	X	X
RGB	X	X	X
4:3	X	X	X

GO TO PARTS

030	031	032
030	031	032
030	031	032

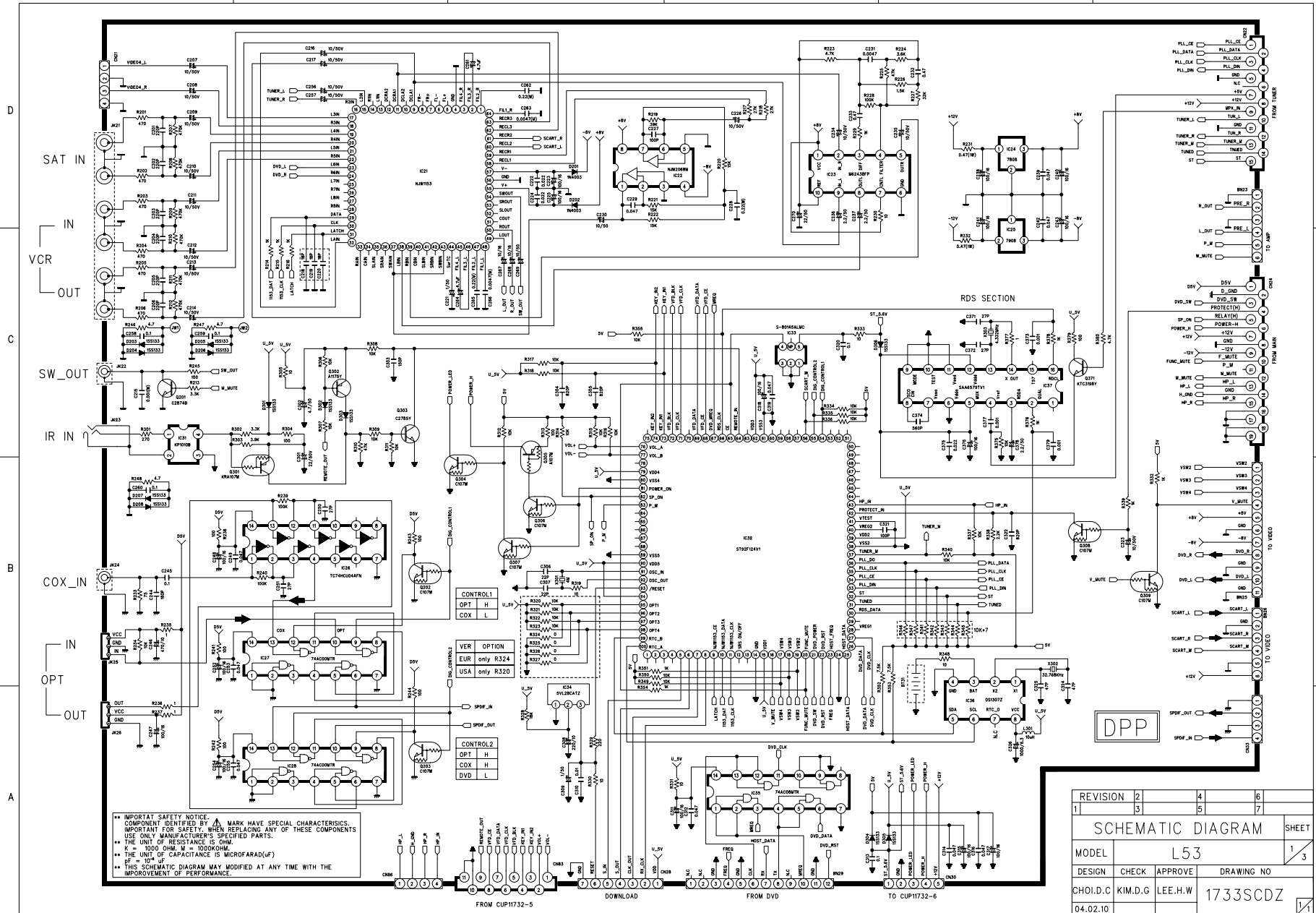
****IMPORTANT SAFETY NOTICE****
 THE USER MUST BE ADVISED THAT THESE COMPONENTS MAY HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, THE USER MUST USE THE MANUFACTURER'S SPECIFIED PARTS.
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REVISION	2	4	6
1	3	5	7

SCHEMATIC DIAGRAM SHEET 1/3

MODEL	L53		
DESIGN	CHECK	APPROVE	DRAWING NO
CHOI.D.C	KIM.D.G	LEE.H.W	1732SCDZ
04.02.10			(FRONT)

DPP



*** IMPORTANT SAFETY NOTICE ***
 COMPONENT IDENTIFIED BY MARK HAVE SPECIAL CHARACTERISTICS.
 IMPORTANT FOR SAFETY, WHEN REPLACING ANY OF THESE COMPONENTS
 USE ONLY MANUFACTURER'S SPECIFIED PARTS.
 * THE UNIT OF RESISTANCE IS OHM.
 * K = 1000 OHM, M = 10000 OHM.
 * THE UNIT OF CAPACITANCE IS MICROFARAD(μF)
 * IF = 10% UP
 * THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
 IMPROVEMENT OF PERFORMANCE.

REVISION	2	4	6
	3	5	7
SCHEMATIC DIAGRAM			
MODEL	L53		
DESIGN	CHECK	APPROVE	DRAWING NO
CHOI.D.C	KIM.D.G	LEE.H.W	1733SCDZ
04.02.10			

SUBWOOFER MUTING

Install diode on the main board (component side), solder to resistor R689 (figure 1) with a long wire connected to resistor R903 on the standby power-supply board (foil side), see figure 2

NEW DIODE 1N4148 CATHODE FACING R689

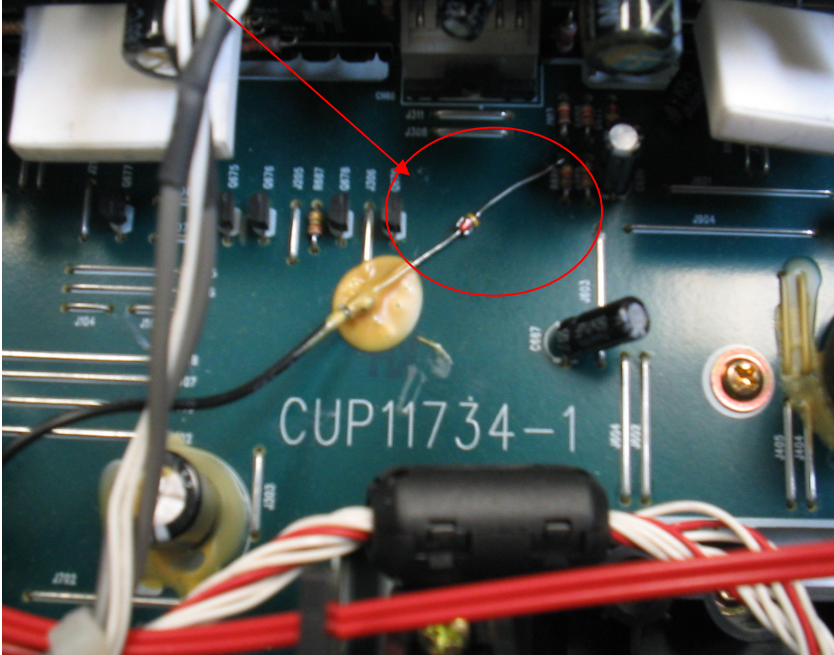


Figure 1 CUP11734-1

WIRE FROM DIODE ANODE

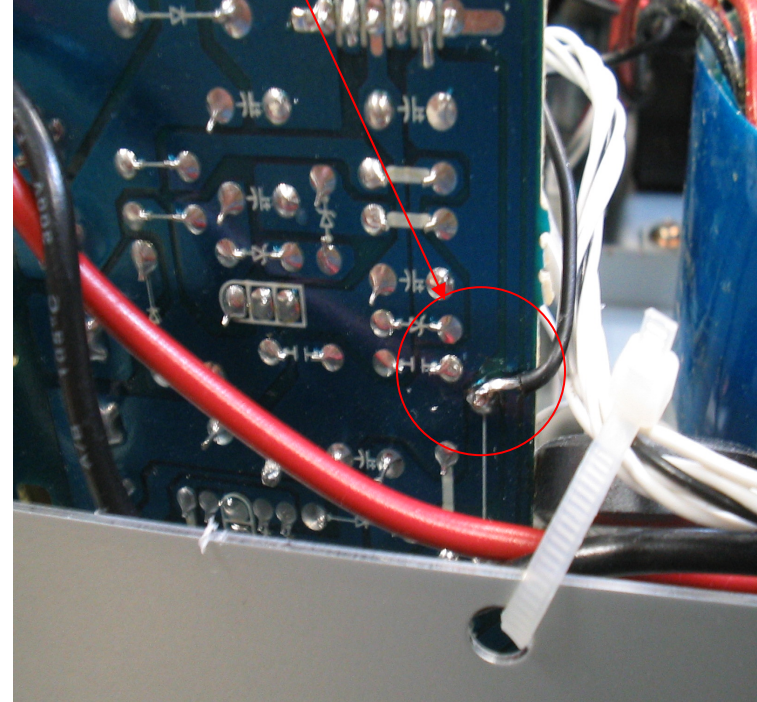
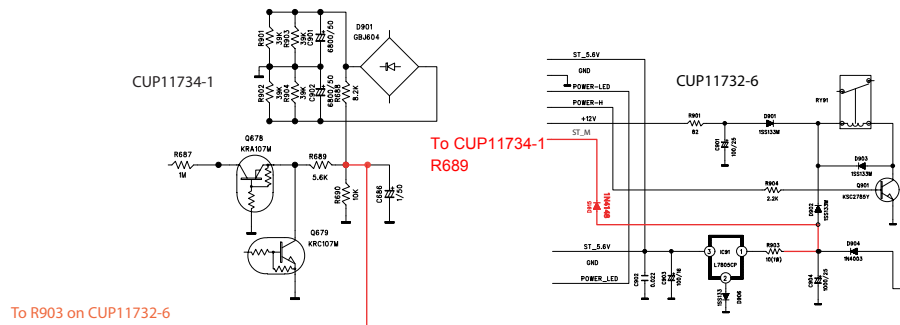


Figure 2 CUP11732-6



ELECTRICAL PARTS LIST

■ RESISTORS AND CAPACITORS

Notes : • Parts numbers are indicated for most mechanical parts.

Please use this part number for parts order.

• IMPORTANT SAFETY NOTICE.

Components identified by ! mark have special characteristics important for safety.

When replacing any of these components, use only manufacture's specified parts.

• The unit of resistance is OHM (Ω)

k=1000 (Ω) , M=1000 (k Ω)

• The unit of capacitance is MICROFARAD (μ F)

P=10-6 μ F

■ Numbering System of Resistor

Example

CRD 25 F J 101
Type Wattage Shape Tolerance Value

Resistor Type	Wattage	Tolerance
K[C]RD : Carbon	20 : 1/5W	F : $\pm 1\%$
K[C]RG : Metal Oxide	25 : 1/4W	J : $\pm 5\%$
	50 : 1/2W	K : $\pm 10\%$
	1 : 1W	
	2 : 2W	
	3 : 3W	
K[C]RJ : Carbon, Chip	10 : 1/10w	
	14 : 1/4w	

■ Numbering System of Capacitor

Example

HCKR 1H 101 K B
Type voltage Value Tolerance Peculiarity

Capacitor Type	Voltage		Tolerance
	HCEA Type	Other	
HCB : Ceramic	0J: 6.3V	1H : 50V DC	C : $\pm 0.25\text{pF}$
CCC : Ceramic	1A: 10V	1 : 125V DC	G : $\pm 2\%$
CCK : Ceramic	1C:16V	KC : 400V AC	J : $\pm 5\%$
HCQI : Polyester	1E: 25V		K : $\pm 10\%$
HCQP : Polypropylene	1V: 35V		Z : +80% , -20%
HCQS : Polystyrol	1H: 50V		
HCUS : Ceramic	1J: 63V		
HCEA : ELECT			

LOAD NO.	PART NO.	DESCRIPTION	SPECIFICATION
	CUP11732Y	PCB, FRONT	
	CUP11732-1	V.F.D PCB	
BN81	CJP14GB190ZC	PIN HEADER	
BK83,BK84	CMD1A374	BRACKET , FLT	
C801,C802	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C803	HCBS1H220JCT	CAP , CERAMIC	22PF 50V J
C804	CCEA1CKS101T	CAP , ELECT	100UF 16V KS
C805	HCBS1H473ZFT	CAP , CERAMIC	0.047UF 50V Z
C806	CCEA1HKS2R2T	CAP , ELECT	2.2UF 50V KS
C807,C808,C812	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C813	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
FL81	HFL11BT230GNK	V.F.D	11-BT-230GNK

IC81	HVILC75725E	IC , VFL DRIVER	
JW81	CWE8202070RV	WIRE ASS'Y	
R801,R802	CRD20TJ2R2T	RES , CARBON	2.2 OHM 1/5W J
R803	CRD20TJ562T	RES , CARBON	5.6K OHM 1/5W J
R804	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R805	CRD20TJ223T	RES , CARBON	22K OHM 1/5W J
R806	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R807	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J
R808	CRD20TJ182T	RES , CARBON	1.8K OHM 1/5W J
R809	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J
R810	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J
R811	CRD20TJ562T	RES , CARBON	5.6K OHM 1/5W J
R812	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J
R813	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J
R814	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R815,R816	CRD20TJ272T	RES , CARBON	2.7K OHM 1/5W J
S801~S808	CST1A012ZT	SW , TACT	SKHV10910G
VR81	HSR2A031Z	VR , ENCODER	
	CUP11732-2	REMOTE PCB	
BN84	CWB2B906300EN	WIRE ASS'Y	
C809~C811	HCBS1H271KBT	CAP , CERAMIC	
C821	CCEA1CH331T	CAP , ELECT	330UF 16V
CN81	CJP14GB191ZC	DIP SOCKET	
CN83	CJP11GB113ZY	WAFER , CARDCABLE	
D821,D822	HVD1SS133MT	DIODE	1SS133T-77
D823	BVDSEL2E10CFT	L.E.D , BLUE	
R817~R819	CRD20TJ151T	RES , CARBON	150 OHM 1/5W J
R821	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R822	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J
R823	CRD20TJ182T	RES , CARBON	1.8K OHM 1/5W J
R824	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R825	CRD20TJ271T	RES , CARBON	270 OHM 1/5W J
RC81	HRVKSM603TH2	REMOCON SENSER	CN KSM-603TH2
S821~S825	CST1A012ZT	SW , TACT	SKHV10910G
	CUP11732-3	VIDEO 4 A/V PCB	
BN85	CWZL53BN85	WIRE ASS'Y	
C841,C842,C843	HCBS1H101KBT	CAP , CERAMIC	100PF 50V K
C844,C845	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K
C846,C847,C864	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
D841,D842,D861,D862	HVD1SS133MT	DIODE	1SS133T-77
JK81	CJJ9M003Y	JACK , S-VIDEO(GOLD)	
JK82	KJJ4S027Z	RCA JACK(3P) WITH SWITCH	
L801	KLZ9H001Z	BEAD , CORE	
R841~R843	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R844,R845	CRD20TJ474T	RES , CARBON	470K OHM 1/5W J
R846,R847	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J
R848,R862	CRD20TJ4R7T	RES , CARBON	4.7 OHM 1/5W J
	CMC1A214	PLATE , EARTH	
	CUP11732-4	HEADPHONE PCB	
BK81	CMD1A387	BRACKET , PCB	
BN86	CWZL53BN86	WIRE ASS'Y	
C861,C862	HCQI1H122JZT	CAP , MYLAR	1200PF 50V J
C863	CCEA1HKS1R0T	CAP. ELECT	1UF 50V

JK83	CJJ2E020Z	JACK	
JW83	CWZAVR2550JW82	WIRE , ASS'Y	
L802~L804	KLZ9H001Z	BEAD , CORE	
R861	CRD20TJ101T	RES , CARBON	100 OHM 1/5W J
	CUP11732-5	VIDEO PCB	
BN12	CWB1C906070GN	WIRE ASS'Y	
BN33	CWZL53BN33	WIRE ASS'Y	
BN41	CWB1C904050BM	WIRE ASS'Y	
CN42	CJP05GA19ZY	WAFER, STRAIGHT, 5PIN	
CN31	KJP06GA98ZM	WAFER	MOLEX35336-0610
CN32	KJP11GA98ZM	WAFER	
CN13	CJP16GA147ZY	DUAL WAFER	
CN14	CJP20GA147ZY	20P DUAL WAFER	YEONHO YDW20020
CN15	CJP24GA147ZY	DUAL WAFER	
C401~C412	HCBS1H101KBT	CAP , CERAMIC	100PF 50V K
C422	CCEA1CH101T	CAP , ELECT	100UF 16V
C423,C424	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C425,C426	CCEA1CH101T	CAP , ELECT	100UF 16V
C427,C428	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C429,C430	CCEA1CH101T	CAP , ELECT	100UF 16V
C431,C432	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C433	CCEA1CH101T	CAP , ELECT	100UF 16V
C441~C444	CCEA1HH100T	CAP. ELECT	10UF 50V
C445,C446	HCBS1C222MXT	CAP , CERAMIC	2200PF 16V M
C447,C448	HCBS1H681KBT	CAP , CERAMIC	680PF 50V K
C449,C450	CCEA1CH101T	CAP , ELECT	100UF 16V
C451,C452	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C453,C454	HCBS1H681KBT	CAP , CERAMIC	680PF 50V K
C455,C456	CCEA1HH100T	CAP. ELECT	10UF 50V
C457,C458	CCEA1CKS101T	CAP , ELECT	100UF 16V
C459,C460	HCBS1H473ZFT	CAP , CERAMIC	0.047UF 50V Z
C461	HCBS1H510JT	CAP , CERAMIC	51PF 50V J
C462	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C463	CCEA1HH100T	CAP. ELECT	10UF 50V
C464	CCEA1CH101T	CAP , ELECT	100UF 16V
C465	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C466	CCEA1HH100T	CAP. ELECT	10UF 50V
C467	HCBS1H220JCT	CAP , CERAMIC	22PF 50V J
C468, C469	CCEA1EH470T	CAP , ELECT	47UF 25V
C470~C473	CCEA1AH471T	CAP , ELECT	470UF 10V
C474	CCEA0JH102T	CAP , ELECT	1000UF 6.3V
C475	CCEA1HH220T	CAP. ELECT	22UF 50V
C476	CCEA1CH101T	CAP , ELECT	100UF 16V
C477	CCEA1HH220T	CAP. ELECT	22UF 50V
C478	CCEA1CH101T	CAP , ELECT	100UF 16V
C479	HCBS1H510JT	CAP , CERAMIC	51UF 50V J
C480	CCEA1HH220T	CAP. ELECT	22UF 50V
C481	CCEA1CH101T	CAP , ELECT	100UF 16V
C482,C483	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C492,C493	HCBS1H681KBT	CAP , CERAMIC	680PF 50V K
C494	HCBS1H101KBT	CAP , CERAMIC	100PF 50V K
C495,C496	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K
C501	CCEA1CH101T	CAP , ELECT	100UF 16V

C502,C503	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C504	CCEA1CH101T	CAP , ELECT	100UF 16V
C505~C507	CCEA1AH471T	CAP , ELECT	470UF 10V
C511~C513	HCBS1H221KBT	CAP , CERAMIC	220PF 50V K
C514	HCBS1H101KBT	CAP , CERAMIC	100PF 50V K
C515~C517	HCBS1H681KBT	CAP , CERAMIC	680PF 50V K
C921	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
C922	CCEA1AH471T	CAP , ELECT	470UF 10V
C923~C925	HCBS1H104ZFT	CAP , CERAMIC	0.1UF 50V Z
D401~D404	HVDMTZJ5.1BT	DIODE , ZENER	5.1V 1/2W
ET41	CNE75	PLATE , EARTH	
IC41~IC43	HVINJM2296M	I.C , VIDEO SW	NJM2296M
IC44	BVIOPA2134UA	OP AMP	OPA2134
IC45	BVIBH7862FS	IC , 6CH VIDEO DRIVER	ROHM (BH7862FS)
IC51	HVIBU2098F	IC , I2C BUS	ROHM (BU2098F)
IC52	HVIBA7660FS	IC , R.G.B DRIVER	BA7660FS
IC95	HVINJM2391DL133	I.C , CHIP REGULATOR (+3.3V)	NJM2391DL133
JK41~JK44	CJJ9N003Z	JACK , (S-VIDEO+VHS)	
JK45	KJP21GA118ZP	SCART CONNECTOR	
JK46	CJJ4S040Z	JACK, BOARD	
L401	HLQ02CR68KT	COIL , AXAIL	0.68UH,K
L402	HLQ02CR39KT	COIL , AXAIL	0.39UH,K
L403	HLQ02CR68KT	COIL , AXAIL	0.68UH,K
L405,L406,L511~L513	HLQ02C1R8KT	COIL	1.8UH,K
L921	KLZ9H001Z	BEAD , CORE	
Q402	HVTKRA107MT	T.R	KRA107M
Q403	HVTKRC107MT	T.R	KRC107M
Q404,Q405,Q501,Q502	HVTKTC2874BT	T.R , MUTE	KTC2874B
Q511	HVTKSA733CYT	T.R	KSA733CY
Q512,Q513	HVTKRC107MT	T.R	KRC107M
R401~R412	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R413~R418	CRD20TJ332T	RES , CARBON	3.3K OHM 1/5W J
R421~R426	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R427~R438	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R441~R444	CRD20TJ242T	RES , CARBON	2.4K OHM 1/5W J
R445~R447	CRD20TJ302T	RES , CARBON	3K OHM 1/5W J
R448~R451	CRD20TJ112T	RES,CABON	1.1K OHM 1/5W J
R452	CRD20TJ302T	RES , CARBON	3K OHM 1/5W J
R453, R454	CRD20TJ561T	RES , CARBON	560 OHM 1/5W J
R455, R456	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J
R457	CRG2ANJ100H	RES , METAL OXIDE FILM	10 OHM 2W J
R458	CRG2ANJ220H	RES , METAL OXIDE FILM	22 OHM 2W J
R459,R460	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R461	CRD20TJ910T	RES , CARBON	91 OHM 1/5W J
R462,R463	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R464,R465	CRD20TJ910T	RES , CARBON	91 OHM 1/5W J
R466~R471	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R472	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R473~R475	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R501,R503~R506	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R511,R512	CRD20TJ471T	RES , CARBON	470 OHM 1/5W J
R513,R514	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R515~R518	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J

R521	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R531	CRD20TJ750T	RES , CARBON	75 OHM 1/5W J
R532	CRD20TJ181T	RES , CARBON	180 OHM 1/5W J
R533	CRD20TJ821T	RES , CARBON	820 OHM 1/5W J
R534	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
	CUP11732-6	SUB TRANS PCB	
BN30	CWB2B906100EN	WIRE ASS'Y	
C901	CCEA1EH101T	CAP , ELECT	100UF 25V
C902	HCBS1H223ZFT	CAP , CERAMIC	0.022UF 50V Z
C903	CCEA1CH101T	CAP , ELECT	100UF 16V
C904	CCEA1EH102E	CAP , ELECT	1000UF 25V
C905	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V
C906	HCBS1H103ZFT	CAP , CERAMIC	0.01UF 50V Z
C907,C908	CCEA1HH470T	CAP , ELECT	47UF 50V
C909	HCBS1H103ZFT	CAP , CERAMIC	0.01UF 50V Z
C910	CCEA1JH101E	CAP , ELECT	100UF 63V
C911	CCEA1CH101T	CAP , ELECT	100UF 16V
C912	KCKDKS472ME	CAP , CERAMIC(X1/Y2/SC)	0.0047UF/2.5KV
C913	BCQE2E104KDE	CAP , LINE ACROSS	0.1UF 250V KD
CN84	CJP06GA19ZY	WAFER, STRAIGHT, 6PIN	
CN91	KJP02KA060ZY	WAFER	7.92MM(YUNHO)
CN92	KJP02GA89ZM	WAFER	MOLEX35328-02
D901~D903	HVD1SS133MT	DIODE	1SS133T-77
D904,D905	KVD1N4003ST	DIODE	1N4003
D906	HVD1SS133MT	DIODE	1SS133T-77
D907	HVDMTZJ6.2BT	DIODE , ZENER	
D908	HVDMTZJ20BT	DIODE , ZENER	
D909	HVDMTZJ16BT	DIODE , ZENER	16V 1/2W
D910	KVD1N4003ST	DIODE	1N4003
D915	HVD1SS133MT	DIODE	1SS133T-77
F901	KBA2C2500TLEY	FUSE	5A/250V(EUR)
F902	KBA2D2500TLET	FUSE	
IC91	HVIL7805CP	I.C, REGULATOR	
JW91	CWE8202070RV	WIRE ASS'Y	
OL91	KJJ7A022Z	OUTLET , AC(EUR/1P)	A302D0061P
Q901	KVTKSC2785YT	T.R	KSC2785Y
Q902	HVTKTA1271YT	T.R	KTA1271Y
R901	CRD25TJ820T	RES , CARBON	82 OHM 1/4W J
R902	CRD20TJ560T	RES , CARBON	56 OHM 1/5W J
R903	KRQ1AJ100H	RES , FUSE	10 OHM 1W J
R904	CRD20TJ222T	RES , CARBON	2.2K OHM 1/5W J
R905	CRD20TJ122T	RES , CARBON	1.2K OHM 1/5W J
RY91	HSL1A008ZE	RELAY	SDT-S-112DMR
T902	CLT5L054ZE	TRANS , SUB	
	CUP11732-7	MAIN TRANS PCB	
BN97	CWB1C907300BM	WIRE ASS'Y	
C951,C952	HCQI1H103JZT	CAP , MYLAR	0.01UF 50V J
C953	HCQI1H104JZT	CAP , MYLAR	0.1UF 50V J
C954,C955	HCQI1H103JZT	CAP , MYLAR	0.01UF 50V J
C956	HCQI1H104JZT	CAP , MYLAR	0.1UF 50V J
C957,C958	HCQI1H103JZT	CAP , MYLAR	0.01UF 50V J
C959	HCQI1H104JZT	CAP , MYLAR	0.1UF 50V J
D911~D914,D951,D952	KVD1N4003ST	DIODE	1N4003

D953,D954	HVD2A04H	DIODE , RECT(2A)	
R951~R954	KRQ1AJR47H	RES , FUSE	0.47 OHM 1W J
R955,R956	KRQ1AJR15H	RES , FUSE	0.15 OHM , 1W J
T901	CLT5R036ZE	TRANS , POWER	
	CUP11733X	PCB, INPUT	
BN23	CWZL53BN23	WIRE ASS'Y	
BN25	KJP11GB99ZM	CONNECTOR	MOLEX35237-1110
BN26	KJP06GB99ZM	CONNECTOR	MOLEX35237-0610
C201~C206	HCUS1H221JA	CAP , CHIP	220PF 50V J
C207~C214	CCEA1HH100T	CAP. ELECT	10UF 50V
C215	HCQI1H102JZT	CAP , MYLAR	1000PF 50V Z
C216,C217	CCEA1HH100T	CAP. ELECT	10UF 50V
C218~C220	HCUS1H180JC	CAP,CHIP	18PF 50V J
C221	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C222	HCUS1H223KC	CAP , CHIP	0.022UF 50V K
C223	CCEA1CH101T	CAP , ELECT	100UF 16V
C224	HCUS1H223KC	CAP , CHIP	0.022UF 50V K
C225	CCEA1CH101T	CAP , ELECT	100UF 16V
C226	CCEA1HH100T	CAP. ELECT	10UF 50V
C227	HCUS1H101JA	CAP , CHIP	100PF 50V J
C228	KCQE1J224KXT	CAP , METAL POLYESTER	63V 0.22UF
C229	HCQI1H473JZT	CAP , MYLAR	0.047UF 50V Z
C230	CCEA1HH100T	CAP. ELECT	10UF 50V
C231	HCUS1H472KC	CAP , CHIP	0.0047UF 50V K
C232,C233	HCUS1C474ZF	CAP , CHIP	0.47UF 16V Z
C234,C245	CCEA1HH100T	CAP. ELECT	10UF 50V
C236,C237	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V
C238	CCEA1CH101TS	CAP ELE 100UF/16V/-55~+105	100UF 16V
C239	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C240,C241	CCEA1CH101TS	CAP ELE 100UF/16V/-55~+105	100UF 16V
C242	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C243	CCEA1CH101TS	CAP ELE 100UF/16V/-55~+105	100UF 16V
C244	HCUS1H181JA	CAP , CHIP	180PF 50V J
C245	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z
C246	CCEA1AH471T	CAP , ELECT	470UF 10V
C247,C248	CCEA1CH101T	CAP , ELECT	100UF 16V
C249	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C250,C251	HCUS1H270JA	CAP , CHIP , 27PF JA	1608 SIZE
C252	CCEA1CH101T	CAP , ELECT	100UF 16V
C253	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C254	CCEA1CH101T	CAP , ELECT	100UF 16V
C255	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C256,C257	CCEA1HH100T	CAP. ELECT	10UF 50V
C258~C260	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z
C261	HCEA1HN4R7T	CAP , ELECT	4.7UF 50V
C262	KCQE1J224KXT	CAP , METAL POLYESTER	63V 0.22UF
C263	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J
C264	HCEA1HN4R7T	CAP , ELECT	4.7UF 50V
C265	KCQE1J224KXT	CAP , METAL POLYESTER	63V 0.22UF
C266	HCQI1H472JZT	CAP , MYLAR	4700PF 50V J
C267,C268	CCEA1CKS100T	CAP , ELECT	10UF 16V KS
C269	CCEA1HH100T	CAP. ELECT	10UF 50V
C270	CCEA1HH220T	CAP. ELECT	22UF 50V

C271,C272	HCUS1H151JA	CAP , CHIP , 150PF JA	150PF 50V J
C273,C274	CCEA1HH100T	CAP. ELECT	10UF 50V
C275,C276	HCUS1H103KC	CAP , CHIP	0.01UF 50V K
C301	CCEA1HH220T	CAP. ELECT	22UF 50V
C302	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V
C303	HCUS1H151JA	CAP , CHIP , 150PF JA	150PF 50V J
C304,C305	HCUS1H821JA	CAP , CHIP	820PF 50V J
C306,C307	HCUS1H220JA	CAP , CHIP	22PF 50V J
C308	CCEA1HH100T	CAP. ELECT	10UF 50V
C309	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C310	HCUS1H103KC	CAP , CHIP	0.01UF 50V K
C311	CCEA1CH101T	CAP , ELECT	100UF 16V
C312	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C313	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z
C314	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C315	CCEA1CH101T	CAP , ELECT	100UF 16V
C316	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C317	CCEA1CH101T	CAP , ELECT	100UF 16V
C318	CCEA1CH101T	CAP , ELECT	100UF 16V
C319	HCUS1H473ZF	CAP , CHIP	0.047UF 50V Z
C320	HCUS1H104ZF	CAP , CHIP	0.1UF 50V Z
C321	HCUS1H101JA	CAP , CHIP	100PF 50V J
C322	HCUS1H821JA	CAP , CHIP	820PF 50V J
C323	CCEA1HH100T	CAP. ELECT	10UF 50V
C371,C372	HCUS1H270JA	CAP , CHIP , 27PF JA	27PF 50V J
C373	HCUS1H102KC	CAP , CHIP	1000PF 50V K
C374	HCUS1H561JA	CAP , CHIP	560PF 50V J
C375	HCUS1H223KC	CAP , CHIP	0.022UF 50V K
C376	CCEA1CH101T	CAP , ELECT	100UF 16V
C377	HCUS1H102KC	CAP , CHIP	1000PF 50V K
C378	CCEA1HH2R2T	CAP , ELECT	2.2UF 50V
C379	HCUS1H102KC	CAP , CHIP	1000PF 50V K
CN21	CJP04GA19ZY	WAFER, STRAIGHT, 4PIN	
CN22	CJP15GA115ZY	WAFER , CARD CABLE	
CN24	CJP19GA117ZY	CARD CABLE , WAFER	
CN28	CJP07GA19ZY	WAFER, STRAIGHT, 7PIN	
CN29	CJP10GA19ZY	WAFER, STRAIGHT, 10PIN	
CN30	CJP06GA19ZY	WAFER, STRAIGHT, 6PIN	
CN33	CJP04GA19ZY	WAFER, STRAIGHT, 4PIN	
CN83	CJP11GA117ZY	WAFER	
CN86	CJP04GA19ZY	WAFER, STRAIGHT, 4PIN	
CN92	KJP02GA68ZG	WAFER	
D201,D202	KVD1N4003ST	DIODE	1N4003
D203~D208,D301~D306	HVD1SS133MT	DIODE	1SS133T-77
JK21	CJJ4R020W	JACK , BOARD	
JK22	CJJ4M056W	JACK , BOARD	
JK23	CJJ2D008Z	JACK , STEREO	
JK24	CJJ4M044Z	JACK, BOARD	GOLD PLATE
JK25	HJSTORX179L	MODULE , OPTICAL(RX)	TORX179L
JK26	HJSTOTX179L	MODULE , OPTICAL(TX)	TOTX179L
IC21	HVINJW1153FG1	I.C	VOL+FUNC.I.C
IC22	BVIOPA2134UA	OP AMP	OPA2134UA
IC23	BVIM62438FP	IC , SRS	

IC24	HVIL7808CP	I.C , REGULATOR (+8V)	
IC25	HVINJM7908FA	I.C REGULATOR	
IC26	HVITC74HCU04AFN	IC , INVERTER	TC74HCU04AFN
IC27,IC28	HVI74AC00MTR	IC , NAND GATE	
IC29	BVIOPA2134UA	OP AMP	OPA2134UA
IC31	BVIKP1010B	IC, PHOTO COUPLER	
IC32	HVIST92F124V1T6	I.C , MCU (FLASH 128K,TQFP100)	ST92F124V1T6
IC33	HVIS-80145ALMC	I.C RESET	S-80145ALMC
IC34	HVIRE5VL28CATZ	IC , RESET	
IC35	HVI74AC08MTR	IC , AND GATE	
IC37	BVISAA6579TV1	I.C , RDS FILTER TW	SAA6579T/V1
Q201	HVTKTC2874BT	T.R , MUTE	KTC2874B
Q202,Q203	HVTKRC107MT	T.R	KRC107M
Q301	HVTKRA107MT	T.R	KRA107M
Q302	KVTKSA1175YT	T.R	KSA1175Y
Q303	KVTKSC2785YT	T.R	KSC2785Y
Q304	HVTKRC107MT	T.R	KRC107M
Q305	HVTKRA107MT	T.R	KRA107M
Q306~Q309	HVTKRC107MT	T.R	KRC107M
Q371	HVTKTC3198YT	T.R	KTC3198Y
R201~R206	CRJ10DJ471T	RES , CHIP	1608 SIZE
R207~R212	CRJ10DJ474T	RES, CHIP	1608 SIZE
R213	CRJ10DJ332T	RES , CHIP	1608 SIZE
R214~R216	CRJ10DJ102T	RES , CHIP	1608 SIZE
R217,R218	CRJ10DJ273T	RES , CHIP	1608 SIZE
R219	CRJ10DJ333T	RES , CHIP	1608 SIZE
R220~R222	CRJ10DJ153T	RES , CHIP	1608 SIZE
R223	CRJ10DJ472T	RES , CHIP	1608 SIZE
R224	CRJ10DJ362T	RES , CHIP	1608 SIZE
R225	CRJ10DJ473T	RES , CHIP	1608 SIZE
R226	CRJ10DJ152T	RES , CHIP	1608 SIZE
R227	CRJ10DJ333T	RES , CHIP	1608 SIZE
R228	CRJ10DJ104T	RES , CHIP	1608 SIZE
R229	CRJ10DJ102T	RES , CHIP	1608 SIZE
R230	CRJ10DJ100T	RES , CHIP	1608 SIZE
R231	KRQ1AJR47H	RES , FUSE	0.47 OHM 1W J
R232	KRQ1AJR47H	RES , FUSE	0.47 OHM 1W J
R233	CRJ10DJ750T	RES , CHIP	1608 SIZE
R234	CRJ10DJ103T	RES , CHIP	1608 SIZE
R235~R237	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R238	CRJ10DJ100T	RES , CHIP	1608 SIZE
R239,R240	CRJ10DJ104T	RES , CHIP	1608 SIZE
R241,R242	CRJ10DJ100T	RES , CHIP	1608 SIZE
R243~R245	CRJ10DJ101T	RES , CHIP	1608 SIZE
R246~R248	CRJ10DJ4R7T	RES , CHIP	1608 SIZE
R249	CRJ10DJ151T	RES , CHIP	1608 SIZE
R301	CRJ10DJ271T	RES , CHIP	1608 SIZE
R302	CRJ10DJ332T	RES , CHIP	1608 SIZE
R303	CRJ10DJ392T	RES . CHIP	1608 SIZE
R304	CRJ10DJ101T	RES , CHIP	1608 SIZE
R305	CRJ10DJ100T	RES , CHIP	1608 SIZE
R306~R309	CRJ10DJ103T	RES , CHIP	1608 SIZE
R310	CRJ10DJ473T	RES , CHIP	1608 SIZE

R311,R312	CRJ10DJ103T	RES , CHIP	1608 SIZE
R313	CRJ10DJ101T	RES , CHIP	1608 SIZE
R314~R318	CRJ10DJ103T	RES , CHIP	1608 SIZE
R319	CRJ10DJ100T	RES , CHIP	1608 SIZE
R324	CRJ10DJ0R0T	RES , CHIP	1608 SIZE
R328	CRJ10DJ332T	RES , CHIP	1608 SIZE
R329	CRJ10DJ221T	RES , CHIP	1608 SIZE
R330,R331	CRJ10DJ100T	RES , CHIP	1608 SIZE
R332	CRJ10DJ102T	RES , CHIP	1608 SIZE
R333	CRJ10DJ100T	RES , CHIP	1608 SIZE
R334~R337	CRJ10DJ103T	RES , CHIP	1608 SIZE
R338	CRJ10DJ222T	RES , CHIP	1608 SIZE
R339	CRJ10DJ102T	RES , CHIP	1608 SIZE
R340~R347,R349,R350	CRJ10DJ103T	RES , CHIP	1608 SIZE
R351,R354	CRJ10DJ102T	RES , CHIP	1608 SIZE
R355,R375	CRJ10DJ103T	RES , CHIP	1608 SIZE
R376	CRJ10DJ102T	RES , CHIP	1608 SIZE
R377	CRJ10DJ1R0T	RES , CHIP	1608 SIZE
R378	CRJ10DJ102T	RES , CHIP	1608 SIZE
R379	CRJ10DJ101T	RES , CHIP	1608 SIZE
R380	CRJ10DJ472T	RES , CHIP	1608 SIZE
R381,R382	CRJ10DJ102T	RES , CHIP	1608 SIZE
R383,R384	CRJ10DJ471T	RES , CHIP	1608 SIZE
R385,R386	CRJ10DJ473T	RES , CHIP	1608 SIZE
R387	CRJ10DJ102T	RES , CHIP	1608 SIZE
R388	CRJ10DJ222T	RES , CHIP	1608 SIZE
R389	CRJ10DJ102T	RES , CHIP	1608 SIZE
R390	CRJ10DJ222T	RES , CHIP	1608 SIZE
X301	HOX04000E150C	CRYSTAL , 4MHZ	
X303	HOX04332E200C	CRYSTAL	
	CUP11734X	PCB, MAIN	
	CUP11734-1	MAIN PCB	
BK91	CMD1A387	BRACKET , PCB	
BN96	CWB1C912100BM	WIRE ASS'Y	
C671, C672	HCQI1H473JZT	CAP , MYLAR	0.047UF 50V J
C673~C676	HCQI1H562JZT	CAP , MYLAR	5600PF 50V J
C681	CCEA1HH4R7T	CAP , ELECT	4.7UF 50V
C682	CCEA1AH471T	CAP , ELECT	470UF 10V
C683	CCKT1H223ZF	CAP , CERAMIC	0.022UF 50V ZF
C684	CCEA1HH100T	CAP. ELECT	10UF 50V
C685	HCBS1H103ZFT	CAP , CERAMIC	0.01UF 50V Z
C686, C687	CCEA1HH1R0T	CAP , ELECT	1UF 50V
C901, C902	CCET50VKL4682NK	CAP , ELECT	6800UF/50V
C903~C906	HCQI1H473JZT	CAP , MYLAR	0.047UF 50V J
C907	CCFT1H104ZF	CAP , SEMICONDUCTOR	0.1UF 50V ZF
C908	CCEA1CH101T	CAP , ELECT	100UF 16V
C909	CCEA1CH102E	CAP , ELECT	1000UF 16V
C911	CCEA1EH332E	CAP , ELECT	3300UF 25V
C912	CCEA1EH222E	CAP. ELECT.	2200UF 25V
C913	CCEA1EH101T	CAP , ELECT	100UF 25V
C914, C916	CCKT1H223ZF	CAP , CERAMIC	0.022UF 50V ZF
C915	CCEA1EH101T	CAP , ELECT	100UF 25V
C917	CCEA1CH123E	CAP , ELECT	12000UF/16V

C918	CCEA1CH101T	CAP , ELECT	100UF 16V
C919	CCKT1H223ZF	CAP , CERAMIC	0.022UF 50V ZF
CN63~CN65	BJP06GA130ZK	CONNECTOR(SOCKET)	TAC-L06X-A3
CN41	CJP04GA01ZY	WAFER, STRAIGHT, 4PIN	
CN24	CJP19GA117ZY	CARD CABLE , WAFER	
CN97	CJP07GA01ZY	WAFER, STRAIGHT, 7PIN	
CN93	KJP03GA90ZM	WAFER	MOLEX35313-0310
CN66	CJP02GA19ZY	WAFER, 2PIN	CJP02GA19ZY
D671, D672	HVD1SS133MT	DIODE	1SS133T-77
D901	HVDGBJ604	DIODE , BRIDGE CN	GBJ604
F903, F904	KBA2C6300TLEY	FUSE	
IC94	HVIKIA78R05PI	REGULATOR (5V OUTPUT LOW DR	KIA78R05PI
JK61	CJJ5P011Y	TERMINAL, SPEAKER	
L671, L672	CLEY0R5KAK	COIL , SPEAKER	0.5UH K
Q671	KVTKSA1175YT	T.R	KSA1175Y
Q672	HVTKRA107MT	T.R	KRA107M
Q673, Q674	KVTKSC2785YT	T.R	KSC2785Y
Q675, Q678	HVTKRA107MT	T.R	KRA107M
Q676, Q677	HVTKRC107MT	T.R	KRC107M
Q679, Q681	HVTKRC107MT	T.R	KRC107M
Q680	HVTKTA1271YT	T.R	KTA1271Y
R671~R674	CRD25TJ470T	RES , CARBON	47 OHM 1/4W J
R675, R676	CRG1ANJ100H	RES , METAL OXIDE FILM	10 OHM 1W J
R677, R678	CRG1ANJ221H	RES , METAL OXIDE FILM	220 OHM 1W J
R679, R680	CRD20TJ273T	RES , CARBON	27K OHM 1/5W J
R681	CRD20TJ473T	RES , CARBON	47K OHM 1/5W J
R682	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R683	CRD20TJ912T	RES , CARBON	9.1K OHM 1/5W J
R684	CRD20TJ152T	RES , CARBON	1.5K OHM 1/5W J
R685	CRD20TJ100T	RES , CARBON	10 OHM 1/5W J
R686, R688	CRD20TJ822T	RES , CARBON	8.2K OHM 1/5W J
R687	CRD20TJ105T	RES , CARBON	1M OHM 1/5W J
R689	CRD20TJ562T	RES , CARBON	5.6K OHM 1/5W J
R690	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R695	CRD20TJ102T	RES , CARBON	1K OHM 1/5W J
R901~R904	CRD25TJ393T	RES , CARBON	39K OHM 1/4W J
R905	CRD25TJ104T	RES , CARBON	100K OHM 1/4W J
R906	CRD20TJ103T	RES , CARBON	10K OHM 1/5W J
R907	CRD20TJ121T	RES , CARBON	120 OHM 1/5W J
R911, R912	CRD20TJ153T	RES , CARBON	15K OHM 1/5W J
RY61	HSL4A004ZU	RELAY	OSA-SS-212DM3
TH61	KRTSR5500	POSISTOR , ASS'Y	
	CUP11734-2	AMP PCB	
BN63~BN65	BJP06GB131ZK	CONNECTOR(PLUG)	TAC-L06P-B3
C601, C602	CCEA1HH100T	CAP. ELECT	10UF 50V
C603, C604	CCKT1H102KB	CAP , CERAMIC	1000PF 50V KB
C605, C606	CCEA1CH101T	CAP , ELECT	100UF 16V
C607~C610	CCEA1JH221E	CAP , ELECT	220UF 63V
C611, C612	CCCT1H120JC	CAP , CERAMIC	12PF 50V JC
C613, C614	CCCT1H330JC	CAP , CERAMIC	33PF 50V JC
C615, C616	HCBS1H681KBT	CAP , CERAMIC	680PF 50V K
C617, C618	CCEA1CH101T	CAP , ELECT	100UF 16V
C619~C622	CCEA1HH100T	CAP. ELECT	10UF 50V

CN23	CJP06GA19ZY	WAFER, STRAIGHT, 6PIN	
D601~D606	HVD1SS133MT	DIODE	1SS133T-77
Q601~Q606	HVTKTC3200GRT	T.R	KTC3200GR
Q607~Q610	HVTKTA1268GRT	T.R	KTA1268GR
Q611, Q612	HVTKTC3200GRT	T.R	KTC3200GR
Q623, Q624	KVTKSC2785YT	T.R	KSC2785Y
Q625, Q626	HVTKTC3198YT	T.R	KTC3198Y
Q627, Q628	HVTKTC2874BT	T.R, MUTE	KTC2874B
Q629	HVTKTA1024YT	T.R	KTA1024Y
Q630	HVTKRC107MT	T.R	KRC107M
Q617, Q618	HVTKTC3114A	T.R, BIAS	KTC3114A
Q619, Q620	BVT2SD2389P-OKM	TR, POWER (DARLINGTON TYPE)	2SD2389P-OKM
Q621, Q622	BVT2SB1559P-OKM	TR, POWER (DARLINGTON TYPE)	2SB1559P-OKM
Q613, Q614	HVTKTA1360Y	T.R, PRE DRIVE	KTA1360Y
Q615, Q616	HVTKTC3423Y	T.R, PRE DRIVE	KTC3423Y
R601, R602	CRD20TJ102T	RES, CARBON	1K OHM 1/5W J
R603, R604	CRD20TJ333T	RES, CARBON	33K OHM 1/5W J
R605, R606	CRD20TJ471T	RES, CARBON	470 OHM 1/5W J
R607, R608	CRD20TJ100T	RES, CARBON	10 OHM 1/5W J
R609, R610	CRD20TJ271T	RES, CARBON	270 OHM 1/5W J
R611~R614	CRD20TJ221T	RES, CARBON	220 OHM 1/5W J
R615~R618	CRD20TJ152T	RES, CARBON	1.5K OHM 1/5W J
R619, R620	CRD20TJ333T	RES, CARBON	33K OHM 1/5W J
R621, R622	CRD20TJ202T	RES, CARBON	2K OHM 1/5W J
R623~R634	CRD20TJ561T	RES, CARBON	560 OHM 1/5W J
R635~R638	CRD20TJ750T	RES, CARBON	75 OHM 1/5W J
R639~R642	CRD20TJ223T	RES, CARBON	22K OHM 1/5W J
R643, R644	CRD20TJ152T	RES, CARBON	1.5K OHM 1/5W J
R645, R646	CRD20TJ561T	RES, CARBON	560 OHM 1/5W J
R647~R650	KRD25FJ3R3T	RES, CARBON	3.3 OHM 1/4W J
R651~R654	KRD25FJ180T	RES, CARBON	18 OHM 1/4W J
R655, R656	CRF5EKR22HX2	RES, CEMENT	0.22OHM(*2), 5W
R657	CRD20TJ331T	RES, CARBON	330 OHM 1/5W J
R658	CRD20TJ273T	RES, CARBON	27K OHM 1/5W J
R659, R660	CRD20TJ332T	RES, CARBON	3.3K OHM 1/5W J
R661, R662	CRD20TJ433T	RES, CARBON	43K OHM 1/5W J
R663, R664	CRD20TJ102T	RES, CARBON	1K OHM 1/5W J
R665, R666	CRD20TJ182T	RES, CARBON	1.8K OHM 1/5W J
R667, R668	CRD20TJ102T	RES, CARBON	1K OHM 1/5W J
R669, R670, R691, R692	CRD20TJ103T	RES, CARBON	10K OHM 1/5W J
R693, R694	CRD20TJ473T	RES, CARBON	47K OHM 1/5W J
	CUP11734-3	REGULATOR PCB	
C920	CCEA1CH101T	CAP, ELECT	100UF 16V
CN96	CJP12GA01ZY	WAFER	
IC91	HVIL7812CP	I.C, REGULATOR	L7812(ST)
IC92	HVIL7912CP	I.C, REGULATOR	L7912(ST)
IC93	HVIKIA278R05PI	REGULATOR (5V OUTPUT LOW DR	KIA278R05PI
R913	CRD20TJ332T	RES, CARBON	3.3K OHM 1/5W J
	CUP11734-4	CONNECT PCB	
BN31	KJP06GB99ZM	CONNECTOR	MOLEX35237-0610
BN32	KJP11GB99ZM	CONNECTOR	MOLEX35237-1110
CN25	KJP11GA98ZM	WAFER	MOLEX35336-1110
CN26	KJP06GA98ZM	WAFER	MOLEX35336-0610

	CUP11734-5	DOWNLOAD PCB	
BN87	CWB2B907300EN	WIRE ASS'Y	
CN99	KJP07HA37ZM	WAFER	
	CQXL53C	INSTRUCTION MANUAL ASS'Y	
	CARTL53C	REMOCON TRANSMITTER ASS'Y	
	CQX1A956Y	MANUAL , INSTRUCTION	
	CQX1A956Z	MANUAL , INSTRUCTION	
	CSA267	ANT , FM.T (LUG TYPE)	
	CSA3A011Z	AM LOOP ANTENNA ASS'Y	LEADWIRE TYPE
	HABAAAM1.5V	BATTERY	
	KLRICM04	ADAPTOR,75-300(PAL)	ICM04
	CJDL53C	MECHANISM ASS'Y	
	HJDRL-S2003NA	1 DVD MECHANISM ASS'Y	
	OTHERS		
	CNVKSTMB014MA18	MODULE , TUNER(4GA/2B/50US)	KST-MB014MA1-8
	HDMF410T12L1C01	FAN , MOTOR	BFQ-1
	HLZ9Z009Z	FERRITE CORE	LF-50BR
	CLZ9Z028Z	FERRITE CORE(21.2X6.4X12.7)	K5C T
	CLZ9W003Z	FERRITE , RING	29X7.7X19
BN13	CWZL53BN13	WIRE ASS'Y	
BN14	CWZL53BN14	WIRE ASS'Y	
BN15	CWZL53BN15	WIRE ASS'Y	
BN29	CWZL53BN29	WIRE ASS'Y	
CB22	CWC1C4A15B060B	CABLE , CARD	
CB24	CWC1B2A19A080B	CARD CABLE	
CB83	CWC1B2A11A240B	CARD CABLE	