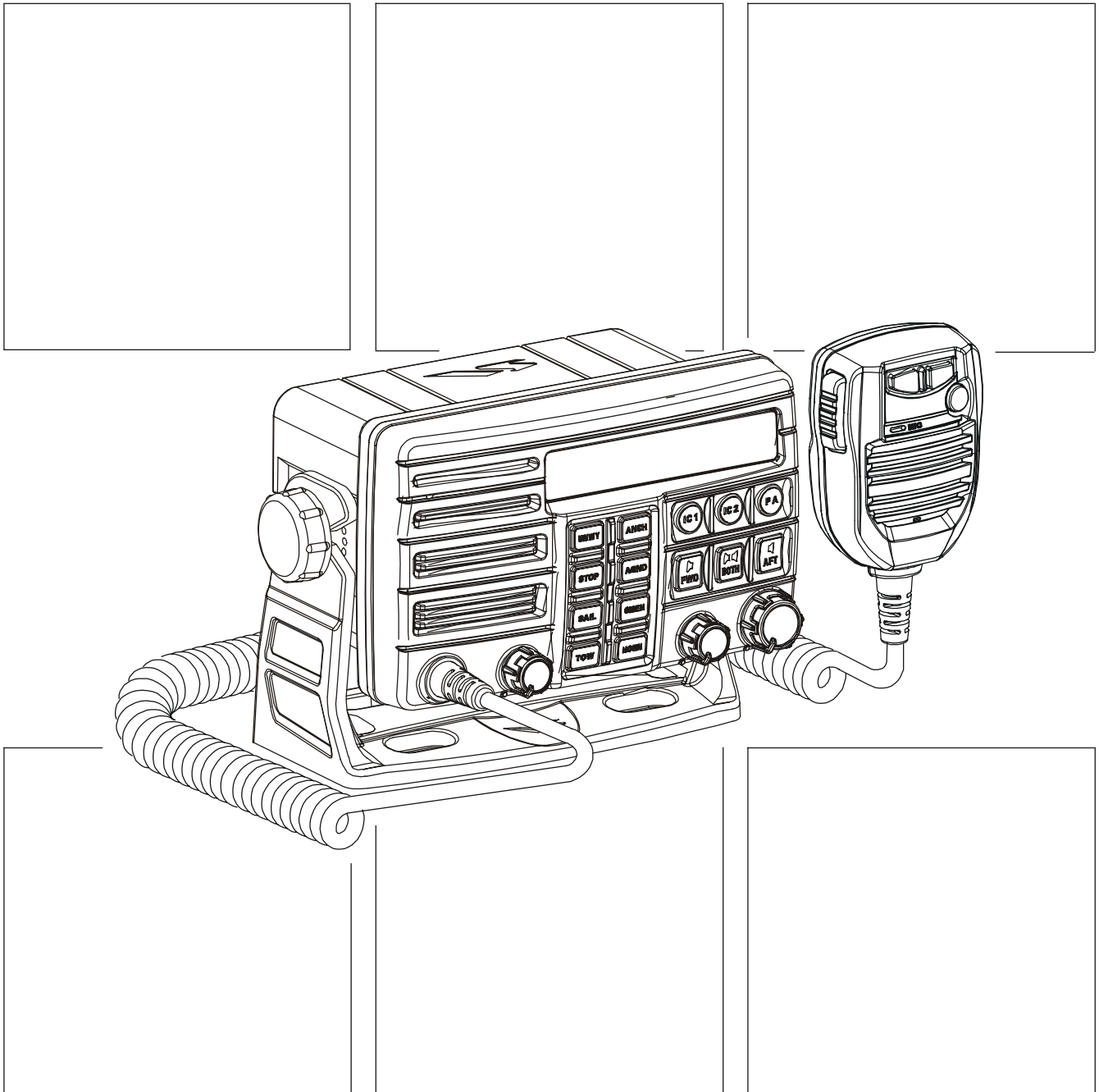


# VLH-3000

## SERVICE MANUAL



# Specifications

<b>Input Voltage:</b>	13.8 VDC $\pm$ 20%
<b>Maximum Current:</b>	8 A
<b>Operating Temperature Range:</b>	-4 °F to +140 °F (-20 °C to +60 °C)
<b>Storage Temperature Range:</b>	-22 °F to +158 °F (-30 °C to +70 °C)
<b>Storage Temperature Range:</b>	-22 °F to +158 °F (-30 °C to +70 °C)
<b>Water Integrity Performance:</b>	IPX7 (3 ft for 30 min) for the front panel
<b>Dimensions:</b>	4.3" H x 7.1" W x 5.5" D (110 H x 180 W x 140 D mm)
<b>Flush-Mount Dimensions:</b>	3.6" H x 6.5" W x 4.5" D (92 H x 165 W x 115 D mm)
<b>Weight:</b>	2.97 lbs (1.35 kg)
<b>Microphone Impedance:</b>	2 k $\Omega$
<b>Microphone Sensitivity:</b>	10 mV
<b>Speaker Impedance:</b>	Internal Speaker 8 k $\Omega$ External Speaker 4 k $\Omega$ Intercom Speaker 4 k $\Omega$ PA Horn 4 k $\Omega$
<b>Maximum Output Power:</b>	Internal Speaker 2.0 Watts (@8 $\Omega$ , 10 % distortion) External Speaker 4.0 Watts (@4 $\Omega$ , 10 % distortion) Intercom Speaker 4.0 Watts x 2 CH (@4 $\Omega$ , 10 % distortion) PA Horn 25 Watts x 2 CH (@4 $\Omega$ , 10 % distortion)
<b>Fog Horn Frequency:</b>	150 - 850 Hz (Adjustable, 50 Hz multiple)

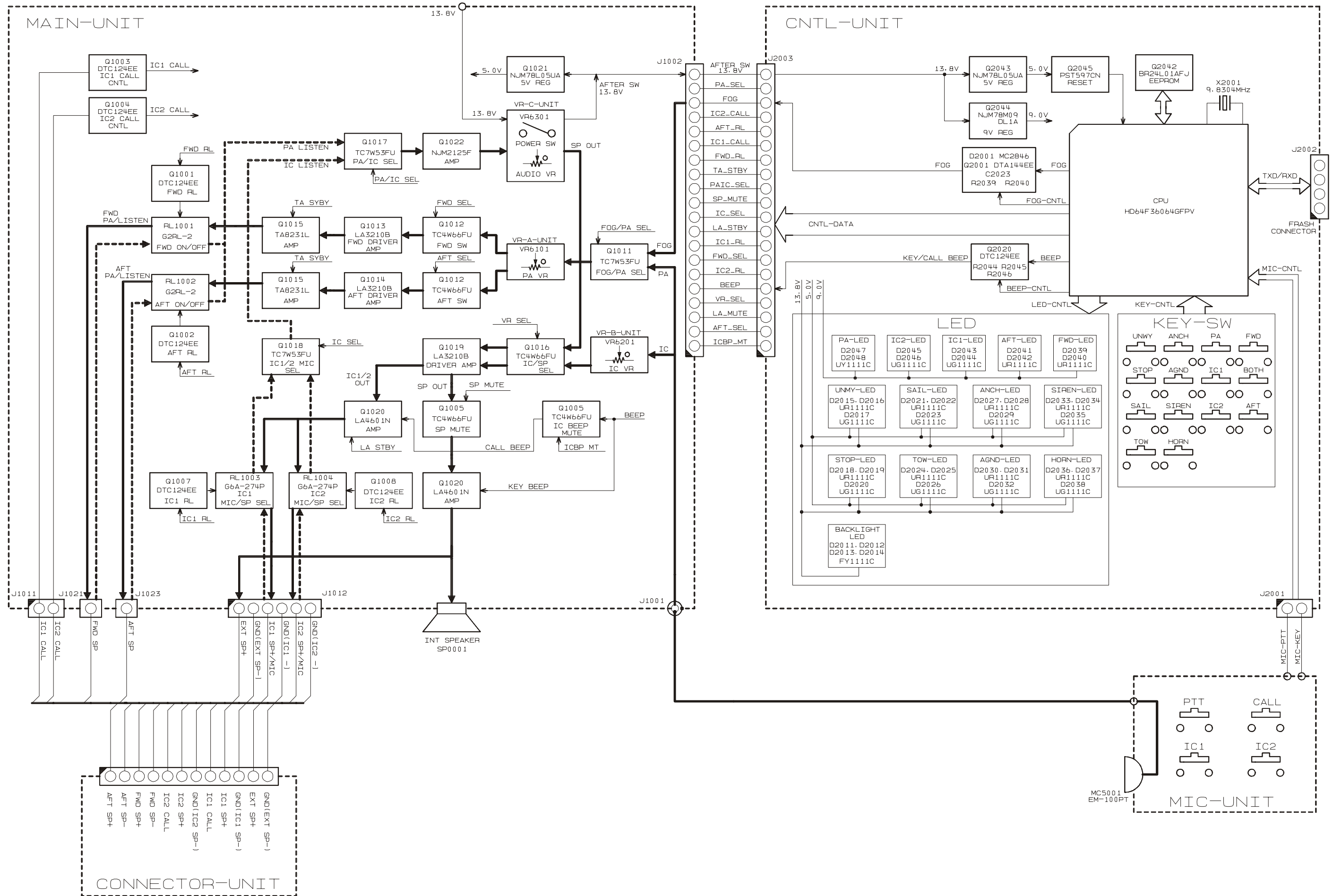
*Standard Horizon reserves the right to make changes and enhancements to products at our discretion. Current specifications are therefore subject to change without notice.*



## *Exploded View & Miscellaneous Parts*

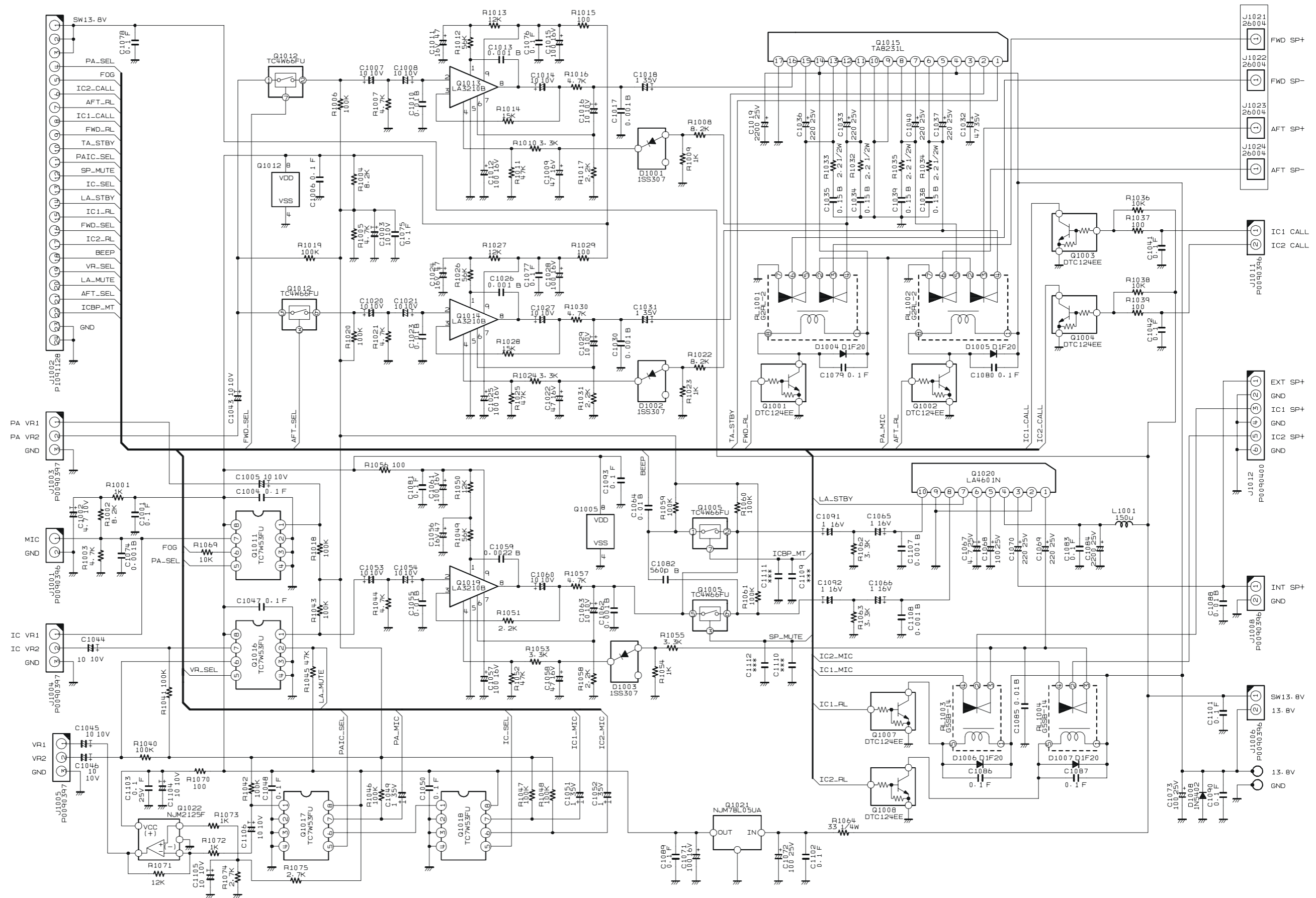
*Note*

# Block Diagram



## *Block Diagram*

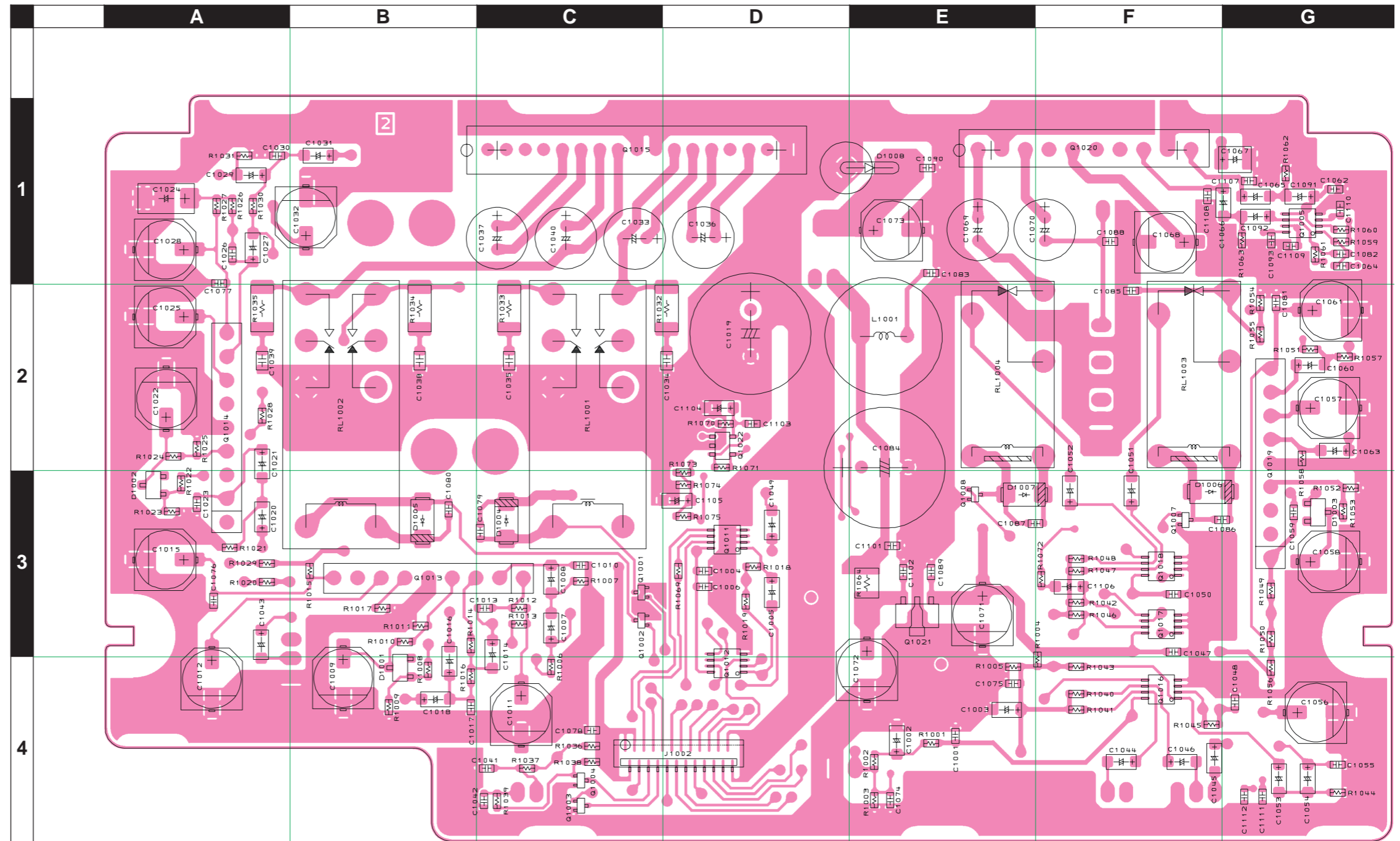
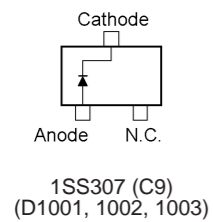
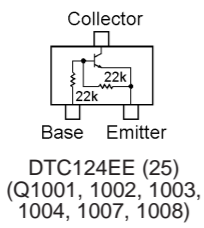
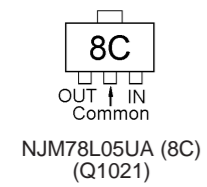
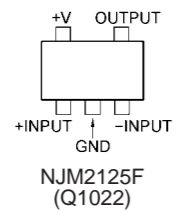
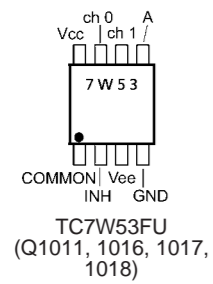
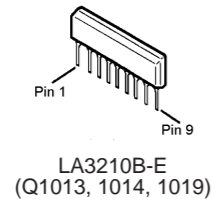
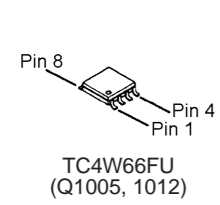
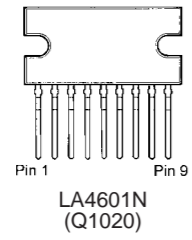
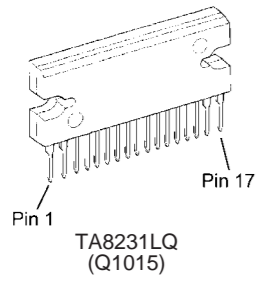
*Note*



***MAIN Unit (Lot. 1)***

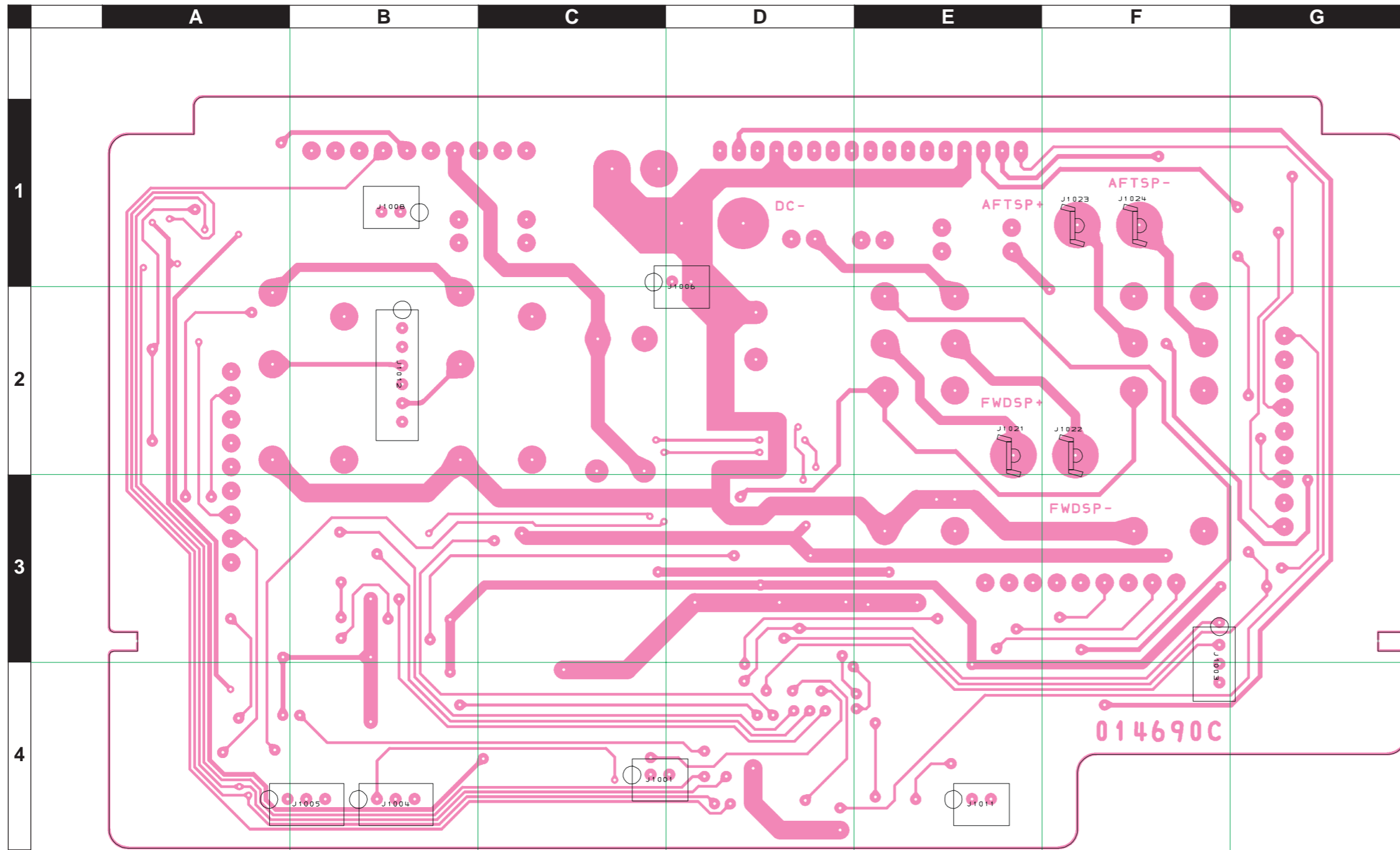
*Note*

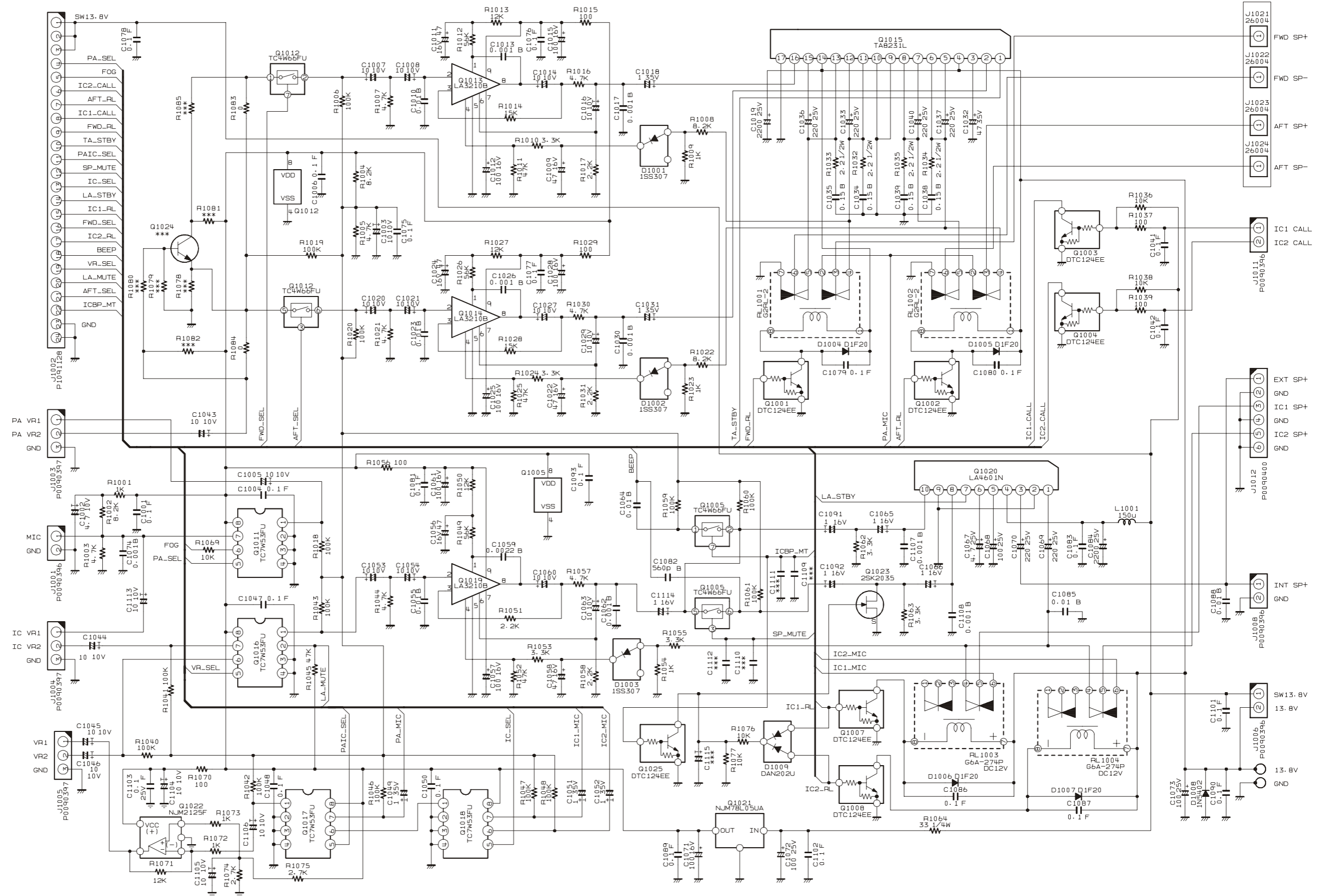




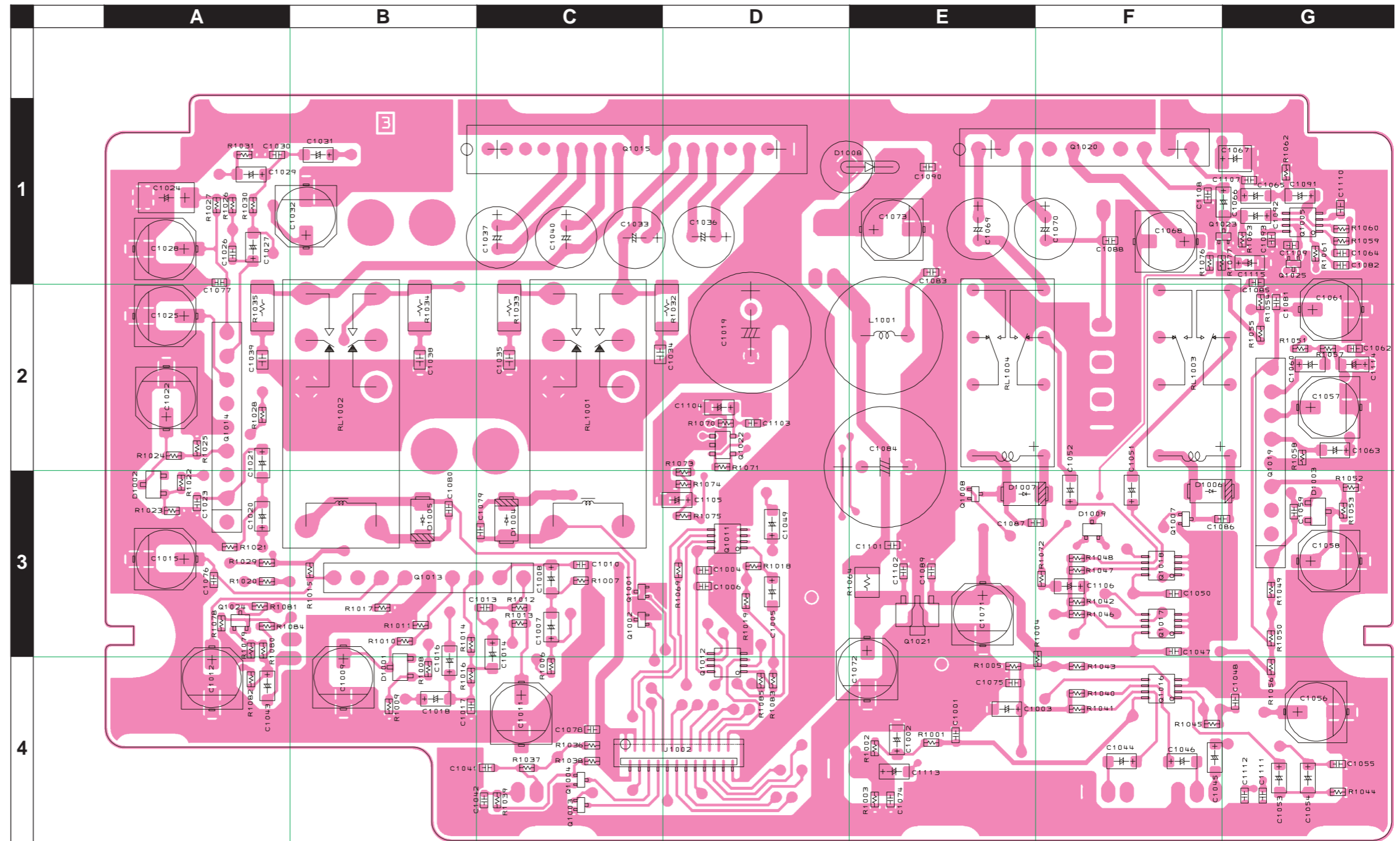
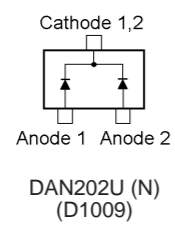
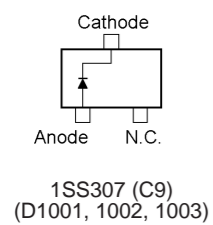
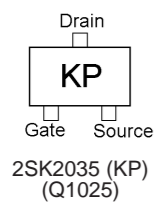
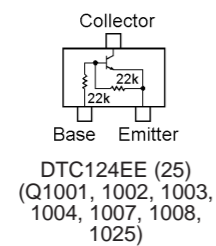
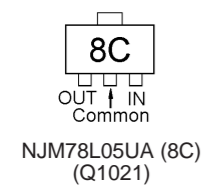
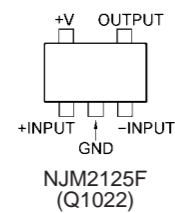
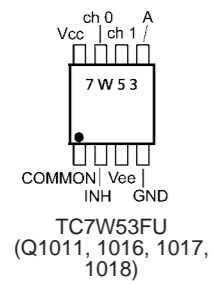
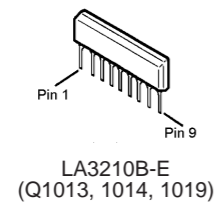
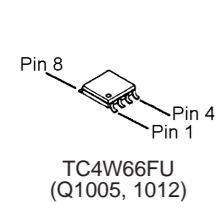
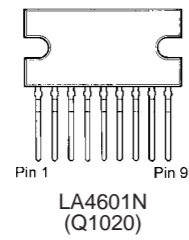
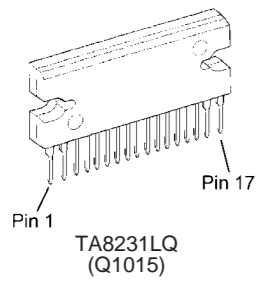
# MAIN Unit (Lot. 1)

## Parts Layout (Side B)



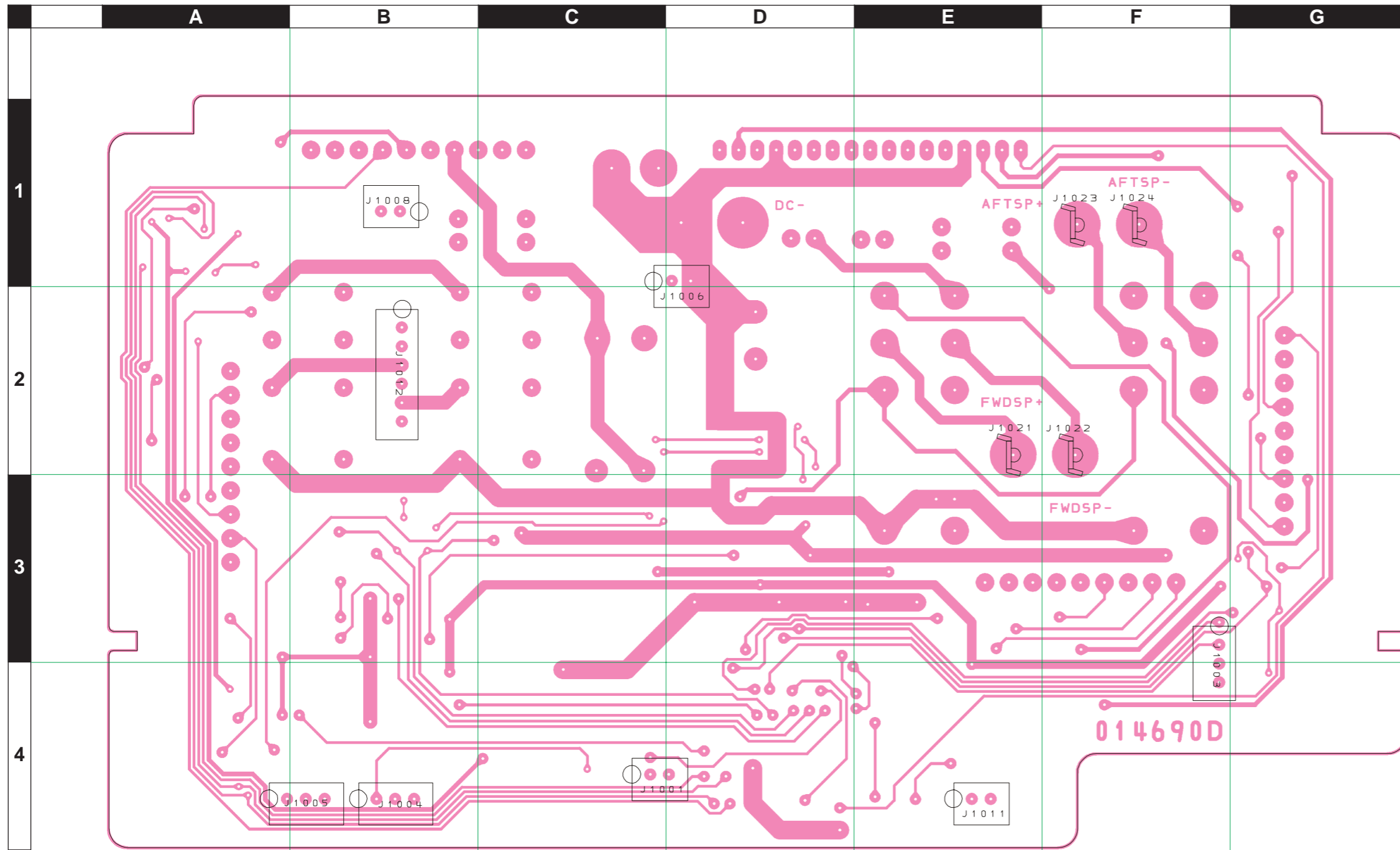


*MAIN Unit (Lot. 2~)*



**MAIN Unit (Lot. 2~)**

**Parts Layout (Side B)**





# MAIN Unit

## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
PCB with Components						CB3497001				
Printed Circuit Board						FR014690C		1		
						FR014690D		2-		
C 1001	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E4
C 1002	CHIP TA.CAP.	4.7uF	10V		TEMSVA1A475M-8R	K78100022		1-	A	E4
C 1003	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	E3
C 1004	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	D3
C 1005	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	D3
C 1006	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	D3
C 1007	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C3
C 1008	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C3
C 1009	AL.ELECTRO.CAP.	47uF	16V		EEE1CA470SP	K48120005		1-	A	B3
C 1010	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	C3
C 1011	AL.ELECTRO.CAP.	47uF	16V		EEE1CA470SP	K48120005		1-	A	C4
C 1012	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	A3
C 1013	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	A	C3
C 1014	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	C3
C 1015	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	A3
C 1016	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	B3
C 1017	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	B3
C 1018	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	A	B3
C 1019	AL.ELECTRO.CAP.	2200uF	25V		RE3-25V222MI6#	K40149055		1-	A	D1
C 1020	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	A2
C 1021	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	A2
C 1022	AL.ELECTRO.CAP.	47uF	16V		EEE1CA470SP	K48120005		1-	A	A2
C 1023	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	A2
C 1024	CHIP TA.CAP.	47uF	16V		TEMSVC1C476M12R	K78120057		1-	A	A1
C 1025	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	A1
C 1026	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	A	A1
C 1027	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	A1
C 1028	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	A1
C 1029	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	A1
C 1030	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	A1
C 1031	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	A	B1
C 1032	AL.ELECTRO.CAP.	47uF	35V		EEE1VA470WP	K48160005		1-	A	B1
C 1033	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	C1
C 1034	CHIP CAP.	0.15uF	25V	B	GRM40B154K25PT	K22140823		1-	A	C2
C 1035	CHIP CAP.	0.15uF	25V	B	GRM40B154K25PT	K22140823		1-	A	C2
C 1036	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	D1
C 1037	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	C1
C 1038	CHIP CAP.	0.15uF	25V	B	GRM40B154K25PT	K22140823		1-	A	B2
C 1039	CHIP CAP.	0.15uF	25V	B	GRM40B154K25PT	K22140823		1-	A	A2
C 1040	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	C1
C 1041	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	C4
C 1042	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	C4
C 1043	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	A3
C 1044	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F4
C 1045	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F4
C 1046	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F4
C 1047	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	F3
C 1048	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	G3
C 1049	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	A	D3
C 1050	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	F3
C 1051	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	A	F2
C 1052	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	A	F2
C 1053	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	G4
C 1054	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	G4
C 1055	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	G4
C 1056	AL.ELECTRO.CAP.	47uF	16V		EEE1CA470SP	K48120005		1-	A	G4
C 1057	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	G2
C 1058	AL.ELECTRO.CAP.	47uF	16V		EEE1CA470SP	K48120005		1-	A	G3
C 1059	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174813		1-	A	G2
C 1060	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	G2
C 1061	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	G1
C 1062	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	G2
C 1063	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	G2
C 1064	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	G1
C 1065	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	G1
C 1066	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	F1
C 1067	CHIP TA.CAP.	4.7uF	25V		TEMSVB21E475M-8R	K78140019		1-	A	G1
C 1068	AL.ELECTRO.CAP.	100uF	25V		EMVA250ADA101MF80G	K48140016		1-	A	F1
C 1069	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	E1
C 1070	AL.ELECTRO.CAP.	220uF	25V		EKM250ELL221MF11D	K40149071		1-	A	F1

# MAIN Unit

## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
C 1071	AL.ELECTRO.CAP.	100uF	16V		EEE1CA101WP	K48120012		1-	A	E3
C 1072	AL.ELECTRO.CAP.	100uF	25V		EMVA250ADA101MF80G	K48140016		1-	A	E3
C 1073	AL.ELECTRO.CAP.	100uF	25V		EMVA250ADA101MF80G	K48140016		1-	A	E1
C 1074	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	E4
C 1075	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E3
C 1076	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	A3
C 1077	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	A1
C 1078	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	C4
C 1079	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	C3
C 1080	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	B2
C 1081	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	G1
C 1082	CHIP CAP.	0.0022uF	50V	B	GRM188B11H222KA01D	K22174813		1	A	G1
C 1082	CHIP CAP.	560pF	50V	B	GRM188B11H561KA01D	K22174806		2-	A	G1
C 1083	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E1
C 1084	AL.ELECTRO.CAP.	2200uF	25V		RE3-25V222MI6#	K40149055		1-	A	E2
C 1085	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	G1
C 1086	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	F2
C 1087	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E2
C 1088	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	A	F1
C 1089	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E3
C 1090	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E1
C 1091	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	G1
C 1092	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		1-	A	G1
C 1093	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	G1
C 1101	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E3
C 1102	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	E3
C 1103	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	A	D2
C 1104	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	D2
C 1105	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	D2
C 1106	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	A	F3
C 1107	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	G1
C 1108	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	A	F1
C 1113	TANTALUM CAP.	1uF	16V		SS2-1C105-T2	K76120024		1	A	E4
C 1113	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		2-	A	E4
C 1114	TANTALUM CAP.	1uF	16V		SS2-1C105-T2	K76120024		1	A	G2
C 1114	CHIP TA.CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		2-	A	G2
D 1001	DIODE				1SS307(TE85L.F)	G2071118		1-	A	B3
D 1002	DIODE				1SS307(TE85L.F)	G2071118		1-	A	A2
D 1003	DIODE				1SS307(TE85L.F)	G2071118		1-	A	G2
D 1004	DIODE				D1F20-5063	G2070474		1-	A	C2
D 1005	DIODE				D1F20-5063	G2070474		1-	A	B2
D 1006	DIODE				D1F20-5063	G2070474		1-	A	F2
D 1007	DIODE				D1F20-5063	G2070474		1-	A	E2
D 1008	DIODE				1N5402	G2090778		1-	A	E1
D 1009	DIODE				DAN202U T106	G2070162		2-	A	F3
J 1001	CONNECTOR				B2B-PH-K-S	P0090396		1-	B	c4
J 1002	CONNECTOR				24FLT-SM1-TB	P1091128		1-	A	D4
J 1003	CONNECTOR				B3B-PH-K-S	P0090397		1-	B	f3
J 1004	CONNECTOR				B3B-PH-K-S	P0090397		1-	B	b4
J 1005	CONNECTOR				B3B-PH-K-S	P0090397		1-	B	a4
J 1006	CONNECTOR				B2B-PH-K-S	P0090396		1-	B	c1
J 1008	CONNECTOR				B2B-PH-K-S	P0090396		1-	B	b1
J 1011	CONNECTOR				B2B-PH-K-S	P0090396		1-	B	e4
J 1012	CONNECTOR				B6B-PH-K-S	P0090400		1-	B	b1
J 1021	TERMINAL				26004	Q5000167		1-	B	e2
J 1022	TERMINAL				26004	Q5000167		1-	B	f2
J 1023	TERMINAL				26004	Q5000167		1-	B	f1
J 1024	TERMINAL				26004	Q5000167		1-	B	f1
L 1001	AFC	150uH			7313NA-151K	L2190061		1-	A	E1
Q 1001	TRANSISTOR				DTC124EE TL	G3070109		1-	A	C3
Q 1002	TRANSISTOR				DTC124EE TL	G3070109		1-	A	C3
Q 1003	TRANSISTOR				DTC124EE TL	G3070109		1-	A	C4
Q 1004	TRANSISTOR				DTC124EE TL	G3070109		1-	A	C4
Q 1005	IC				TC4W66FU(TE12L.F)	G1091676		1-	A	G1
Q 1007	TRANSISTOR				DTC124EE TL	G3070109		1-	A	F2
Q 1008	TRANSISTOR				DTC124EE TL	G3070109		1-	A	E2
Q 1011	IC				TC7W53FU(TE12L_F)	G1094158		1-	A	D3
Q 1012	IC				TC4W66FU(TE12L.F)	G1091676		1-	A	D3
Q 1013	IC				LA3210B-E	G1094267		1-	A	C3
Q 1014	IC				LA3210B-E	G1094267		1-	A	A2
Q 1015	IC				TA8231LQ	G1094265		1-	A	C1
Q 1016	IC				TC7W53FU(TE12L_F)	G1094158		1-	A	F3
Q 1017	IC				TC7W53FU(TE12L_F)	G1094158		1-	A	F3



# MAIN Unit

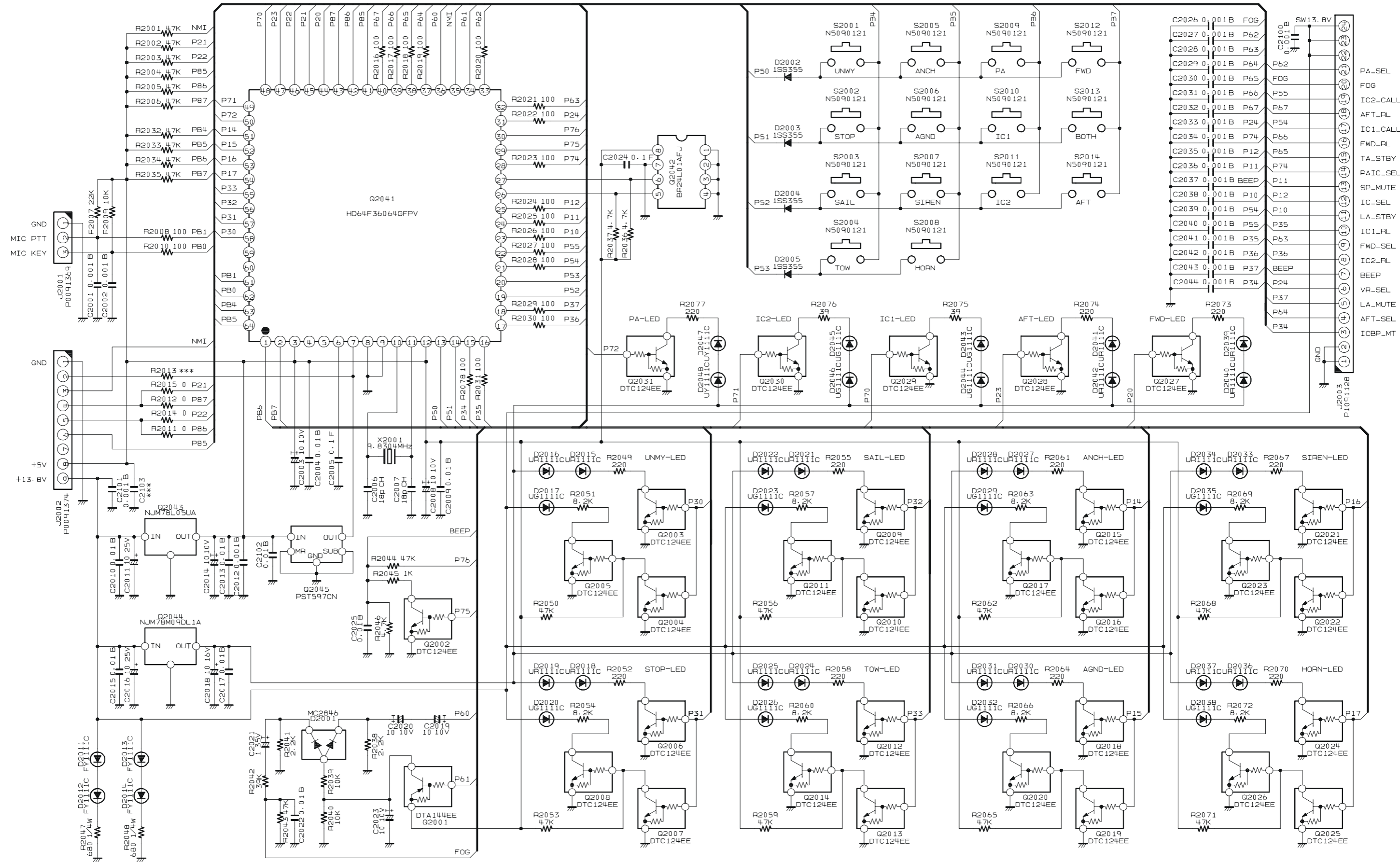
## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
Q 1018	IC				TC7W53FU(TE12L_F)	G1094158		1-	A	F3
Q 1019	IC				LA3210B-E	G1094267		1-	A	G3
Q 1020	IC				LA4601N	G1094266		1-	A	E1
Q 1021	IC				NJM78L05UA-TE1	G1091325		1-	A	E3
Q 1022	IC				NJM2125F(TE1)	G1093894		1-	A	D2
Q 1023	FET				2SK2035 TE85R	G3820357		2-	A	F1
Q 1025	TRANSISTOR				DTC124EE TL	G3070109		2-	A	G1
R 1001	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	E4
R 1002	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	E4
R 1003	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	E4
R 1004	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	F3
R 1005	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	E3
R 1006	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	C3
R 1007	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	C3
R 1008	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	B3
R 1009	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	B3
R 1010	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	B3
R 1011	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	B3
R 1012	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	C3
R 1013	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	A	C3
R 1014	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	B3
R 1015	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	B3
R 1016	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	B3
R 1017	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	B3
R 1018	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	D3
R 1019	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	D3
R 1020	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	A3
R 1021	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	A3
R 1022	CHIP RES.	8.2k	1/16W	5%	RMC1/16 822JATP	J24185822		1-	A	A2
R 1023	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	A2
R 1024	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	A2
R 1025	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	A2
R 1026	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	A1
R 1027	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	A	A1
R 1028	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	A2
R 1029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	A3
R 1030	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	A1
R 1031	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	A1
R 1032	CHIP RES.	2.2	1/2W	5%	RMC1/2 2R2JCTP	J24275229		1-	A	D1
R 1033	CHIP RES.	2.2	1/2W	5%	RMC1/2 2R2JCTP	J24275229		1-	A	C1
R 1034	CHIP RES.	2.2	1/2W	5%	RMC1/2 2R2JCTP	J24275229		1-	A	B1
R 1035	CHIP RES.	2.2	1/2W	5%	RMC1/2 2R2JCTP	J24275229		1-	A	A1
R 1036	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C4
R 1037	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C4
R 1038	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	C4
R 1039	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	C4
R 1040	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1041	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1042	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1043	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1044	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	G4
R 1045	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	F4
R 1046	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1047	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1048	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	F3
R 1049	CHIP RES.	56k	1/16W	5%	RMC1/16 563JATP	J24185563		1-	A	G3
R 1050	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	A	G3
R 1051	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	G2
R 1052	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	A	G2
R 1053	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	G2
R 1054	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	G1
R 1055	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		1-	A	G1
R 1056	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	G3
R 1057	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	A	G2
R 1058	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	A	G2
R 1059	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		1-	A	G1
R 1060	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1	A	G1
R 1060	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		2-	A	G1
R 1061	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1	A	G1
R 1061	CHIP RES.	100k	1/16W	5%	RMC1/16 104JATP	J24185104		2-	A	G1
R 1062	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1	A	G1
R 1062	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		2-	A	G1
R 1063	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1	A	G1

# MAIN Unit

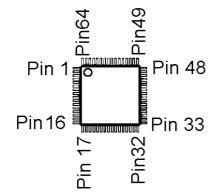
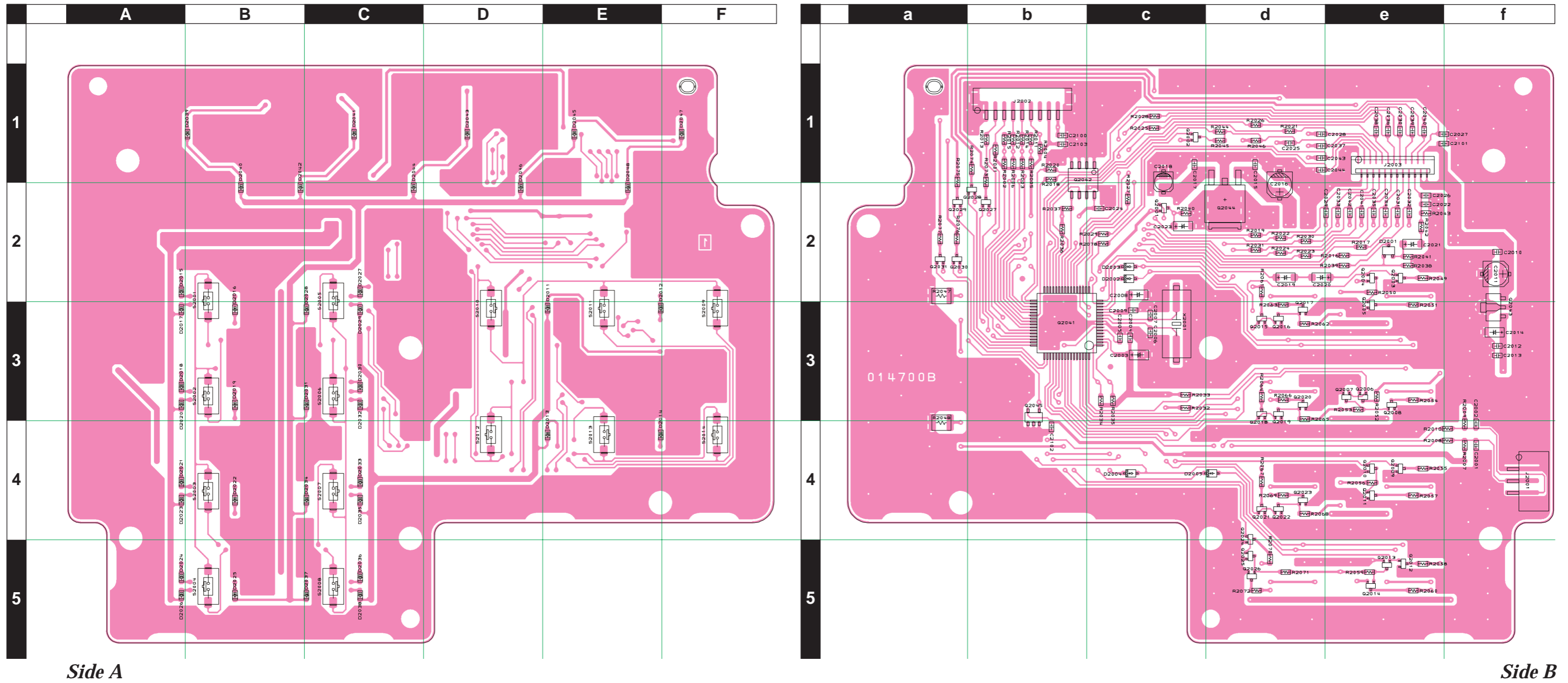
## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 1063	CHIP RES.	3.3k	1/16W	5%	RMC1/16 332JATP	J24185332		2-	A	G1
R 1064	CHIP RES.	33	1/4W	5%	RMC1/4 330JATP	J24245330		1-	A	E3
R 1069	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	A	D3
R 1070	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	A	D2
R 1071	CHIP RES.	12k	1/16W	5%	RMC1/16 123JATP	J24185123		1-	A	D2
R 1072	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	F3
R 1073	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	A	D2
R 1074	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	A	D2
R 1075	CHIP RES.	2.7k	1/16W	5%	RMC1/16 272JATP	J24185272		1-	A	D2
R 1076	CARBON FILM RES.	3.3k	1/6W	5%	RD16TPJ332 3.3K	J07225332		1	A	F1
R 1076	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		2-	A	F1
R 1077	CARBON FILM RES.	3.3k	1/6W	5%	RD16TPJ332 3.3K	J07225332		1	A	F1
R 1077	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		2-	A	F1
R 1083	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		2-	A	D3
R 1084	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		2-	A	A3
RL1001	RELAY		DC12V		G2RL-2 DC12V	M1190178		1-	A	C3
RL1002	RELAY		DC12V		G2RL-2 DC12V	M1190178		1-	A	B3
RL1003	RELAY		DC12V		G6A-274P DC12V	M1190195		1-	A	G2
RL1004	RELAY		DC12V		G6A-274P DC12V	M1190195		1-	A	F2

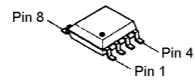


# CNTL Unit

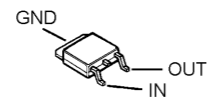
## Parts Layout



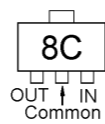
HD64F36064GFPV (Q2041)



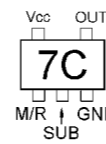
BR24L01AFJ-W (Q2042)



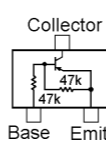
NJM78M09DL1A (Q2044)



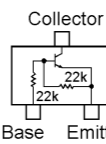
NJM78L05UA (8C) (Q2043)



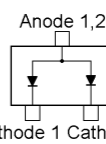
PST597CNR (7C) (Q2045)



DTA144EE (16) (Q2001)



DTC124EE (25) (Q2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031)



MC2846 (A4) (D2001)

# CNTL Unit

## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR	
PCB with Components						CB3498001					
Printed Circuit Board						AM006N000	FR014700B		1-		
C 2001	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e4	
C 2002	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e4	
C 2003	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c3	
C 2004	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c3	
C 2005	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	b3	
C 2006	CHIP CAP.	18pF	50V	CH		K22174217		1-	B	c3	
C 2007	CHIP CAP.	18pF	50V	CH		K22174217		1-	B	c3	
C 2008	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c3	
C 2009	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c3	
C 2010	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f2	
C 2011	AL.ELECTRO.CAP.	10uF	25V		EMVA250ADA100MD55G	K48140014		1-	B	f2	
C 2012	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	f3	
C 2013	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	f3	
C 2014	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	f3	
C 2015	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d1	
C 2016	AL.ELECTRO.CAP.	10uF	25V		EMVA250ADA100MD55G	K48140014		1-	B	d2	
C 2017	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	c1	
C 2018	AL.ELECTRO.CAP.	10uF	16V		RV2-16V100MB55U-R	K48120014		1-	B	c2	
C 2019	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	d2	
C 2020	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	d2	
C 2021	CHIP TA.CAP.	1uF	35V		TEMSVA1V105M-8R	K78160032		1-	B	e2	
C 2022	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	e2	
C 2023	CHIP TA.CAP.	10uF	10V		TEMSVA1A106M-8R	K78100028		1-	B	c2	
C 2024	CHIP CAP.	0.1uF	25V	F	GRM39F104Z25PT	K22145001		1-	B	b2	
C 2025	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	d1	
C 2026	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2027	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2028	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d1	
C 2029	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d2	
C 2030	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2031	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2032	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2033	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d2	
C 2034	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2035	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2036	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2037	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d1	
C 2038	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2039	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2040	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2041	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e2	
C 2042	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d2	
C 2043	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d1	
C 2044	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	d1	
C 2100	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	b1	
C 2101	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174821		1-	B	e1	
C 2102	CHIP CAP.	0.01uF	50V	B	GRM188B11H103KA01D	K22174823		1-	B	b4	
D 2001	DIODE				MC2846-T11-1	G2070702		1-	B	e2	
D 2002	DIODE				1SS355 TE-17	G2070470		1-	B	c2	
D 2003	DIODE				1SS355 TE-17	G2070470		1-	B	c2	
D 2004	DIODE				1SS355 TE-17	G2070470		1-	B	c4	
D 2005	DIODE				1SS355 TE-17	G2070470		1-	B	c4	
D 2011	LED				FY1111C-722-TR	G2070916		1-	A	E3	
D 2012	LED				FY1111C-722-TR	G2070916		1-	A	F3	
D 2013	LED				FY1111C-722-TR	G2070916		1-	A	E4	
D 2014	LED				FY1111C-722-TR	G2070916		1-	A	F4	
D 2015	LED				UR1111C	G2071110		1-	A	B2	
D 2016	LED				UR1111C	G2071110		1-	A	B3	
D 2017	LED				UG1111C	G2071112		1-	A	B3	
D 2018	LED				UR1111C	G2071110		1-	A	B3	
D 2019	LED				UR1111C	G2071110		1-	A	B3	
D 2020	LED				UG1111C	G2071112		1-	A	B3	
D 2021	LED				UR1111C	G2071110		1-	A	B4	
D 2022	LED				UR1111C	G2071110		1-	A	B4	
D 2023	LED				UG1111C	G2071112		1-	A	B4	
D 2024	LED				UR1111C	G2071110		1-	A	B5	
D 2025	LED				UR1111C	G2071110		1-	A	B5	
D 2026	LED				UG1111C	G2071112		1-	A	B5	
D 2027	LED				UR1111C	G2071110		1-	A	C2	
D 2028	LED				UR1111C	G2071110		1-	A	C3	
D 2029	LED				UG1111C	G2071112		1-	A	C3	



# CNTL Unit

## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
D 2030	LED				UR1111C	G2071110		1-	A	C3
D 2031	LED				UR1111C	G2071110		1-	A	C3
D 2032	LED				UG1111C	G2071112		1-	A	C3
D 2033	LED				UR1111C	G2071110		1-	A	C4
D 2034	LED				UR1111C	G2071110		1-	A	C4
D 2035	LED				UG1111C	G2071112		1-	A	C4
D 2036	LED				UR1111C	G2071110		1-	A	C5
D 2037	LED				UR1111C	G2071110		1-	A	C5
D 2038	LED				UG1111C	G2071112		1-	A	C5
D 2039	LED				UR1111C	G2071110		1-	A	B1
D 2040	LED				UR1111C	G2071110		1-	A	B2
D 2041	LED				UR1111C	G2071110		1-	A	C1
D 2042	LED				UR1111C	G2071110		1-	A	C2
D 2043	LED				UG1111C	G2071112		1-	A	D1
D 2044	LED				UG1111C	G2071112		1-	A	D2
D 2045	LED				UG1111C	G2071112		1-	A	E1
D 2046	LED				UG1111C	G2071112		1-	A	E2
D 2047	LED				UY1111C	G2071114		1-	A	F1
D 2048	LED				UY1111C	G2071114		1-	A	F2
J 2001	CONNECTOR				B3B-PH-SM3-TBT	P0091369		1-	B	f4
J 2002	CONNECTOR				B9B-ZR-SM4-TFT(LF)(SN)	P0091374		1-	B	b1
J 2003	CONNECTOR				24FLT-SM1-TB	P1091128		1-	B	e1
Q 2001	TRANSISTOR				DTA144EE TL	G3070074		1-	B	c2
Q 2002	TRANSISTOR				DTC124EE TL	G3070109		1-	B	c1
Q 2003	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e2
Q 2004	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e2
Q 2005	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e3
Q 2006	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e3
Q 2007	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d3
Q 2008	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e3
Q 2009	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e4
Q 2010	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e4
Q 2011	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e4
Q 2012	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e5
Q 2013	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e5
Q 2014	TRANSISTOR				DTC124EE TL	G3070109		1-	B	e5
Q 2015	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d3
Q 2016	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d3
Q 2017	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d3
Q 2018	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d4
Q 2019	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d4
Q 2020	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d3
Q 2021	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d4
Q 2022	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d4
Q 2023	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d4
Q 2024	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d5
Q 2025	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d5
Q 2026	TRANSISTOR				DTC124EE TL	G3070109		1-	B	d5
Q 2027	TRANSISTOR				DTC124EE TL	G3070109		1-	B	a2
Q 2028	TRANSISTOR				DTC124EE TL	G3070109		1-	B	a2
Q 2029	TRANSISTOR				DTC124EE TL	G3070109		1-	B	a2
Q 2030	TRANSISTOR				DTC124EE TL	G3070109		1-	B	a2
Q 2031	TRANSISTOR				DTC124EE TL	G3070109		1-	B	a2
Q 2041	IC				HD64F36064GFPV	×		1-	B	b3
Q 2042	IC				BR24L01AFJ-W	G1094332		1-	B	b2
Q 2043	IC				NJM78L05UA-TE1	G1091325		1-	B	f3
Q 2044	IC				NJM78M09DL1A	G1094262		1-	B	c2
Q 2045	IC				PST597CNR	G1092589		1-	B	b4
R 2001	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	a1
R 2002	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b1
R 2003	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b1
R 2004	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b1
R 2005	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b1
R 2006	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b1
R 2007	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	B	e4
R 2008	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e4
R 2009	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e4
R 2010	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e4
R 2011	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b1
R 2012	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b1
R 2014	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b1
R 2015	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		1-	B	b1
R 2016	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2

×: Please contact Vertex Standard

# CNTL Unit

## Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
R 2017	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	e2
R 2018	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 2019	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2020	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b1
R 2021	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d1
R 2022	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2023	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2024	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2025	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c1
R 2026	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d1
R 2027	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c2
R 2028	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	c1
R 2029	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
R 2030	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2031	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	d2
R 2032	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c3
R 2033	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c3
R 2034	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b3
R 2035	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	b3
R 2036	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b2
R 2037	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	b2
R 2038	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	e2
R 2039	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d2
R 2040	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	c2
R 2041	CHIP RES.	2.2k	1/16W	5%	RMC1/16 222JATP	J24185222		1-	B	e2
R 2042	CHIP RES.	39k	1/16W	5%	RMC1/16 393JATP	J24185393		1-	B	e2
R 2043	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e2
R 2044	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	c1
R 2045	CHIP RES.	1k	1/16W	5%	RMC1/16 102JATP	J24185102		1-	B	c1
R 2046	CHIP RES.	4.7k	1/16W	5%	RMC1/16 472JATP	J24185472		1-	B	d1
R 2047	CHIP RES.	680	1/4W	5%	RMC1/4 681JATP	J24245681		1-	B	a3
R 2048	CHIP RES.	680	1/4W	5%	RMC1/4 681JATP	J24245681		1-	B	a4
R 2049	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	e2
R 2050	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e2
R 2051	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e3
R 2052	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	e3
R 2053	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d3
R 2054	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e3
R 2055	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	e4
R 2056	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e4
R 2057	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e4
R 2058	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	e5
R 2059	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	e5
R 2060	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	e5
R 2061	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	d2
R 2062	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d3
R 2063	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d3
R 2064	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	d3
R 2065	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d4
R 2066	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d3
R 2067	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	d4
R 2068	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d4
R 2069	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d4
R 2070	CHIP RES.	1.2k	1/16W	5%	RMC1/16 122JATP	J24185122		1-	B	d5
R 2071	CHIP RES.	47k	1/16W	5%	RMC1/16 473JATP	J24185473		1-	B	d5
R 2072	CHIP RES.	10k	1/16W	5%	RMC1/16 103JATP	J24185103		1-	B	d5
R 2073	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	a2
R 2074	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	a1
R 2075	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	a2
R 2076	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	a2
R 2077	CHIP RES.	560	1/16W	5%	RMC1/16 561JATP	J24185561		1-	B	a2
R 2078	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		1-	B	b2
S 2001	TACT SWITCH				SKQMAQE010	N5090121		1-	A	B3
S 2002	TACT SWITCH				SKQMAQE010	N5090121		1-	A	B3
S 2003	TACT SWITCH				SKQMAQE010	N5090121		1-	A	B4
S 2004	TACT SWITCH				SKQMAQE010	N5090121		1-	A	B5
S 2005	TACT SWITCH				SKQMAQE010	N5090121		1-	A	C3
S 2006	TACT SWITCH				SKQMAQE010	N5090121		1-	A	C3
S 2007	TACT SWITCH				SKQMAQE010	N5090121		1-	A	C4
S 2008	TACT SWITCH				SKQMAQE010	N5090121		1-	A	C5
S 2009	TACT SWITCH				SKQMAQE010	N5090121		1-	A	F3
S 2010	TACT SWITCH				SKQMAQE010	N5090121		1-	A	D3
S 2011	TACT SWITCH				SKQMAQE010	N5090121		1-	A	E3

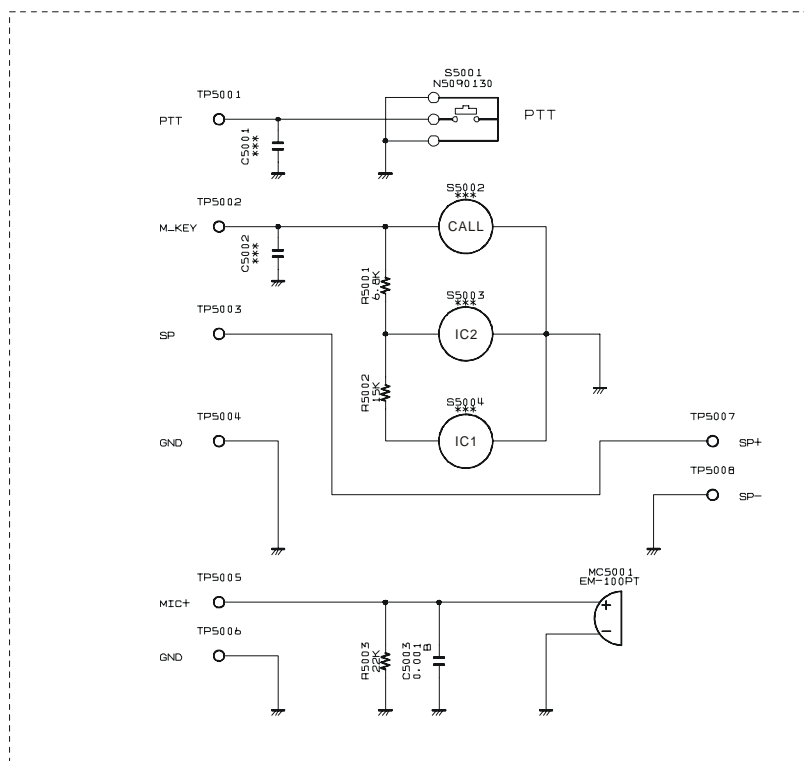
# *CNTL Unit*

## *Parts List*

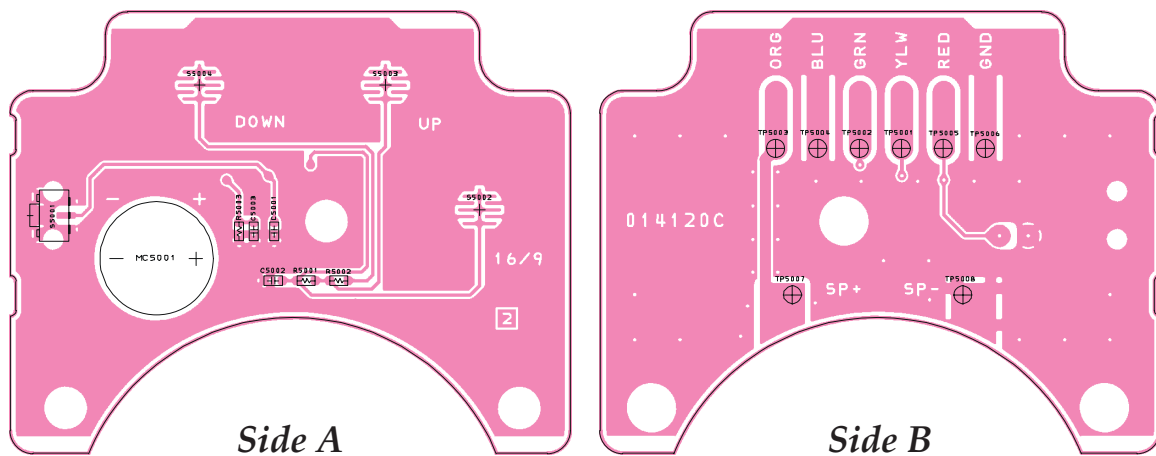
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
S 2012	TACT SWITCH				SKQMAQE010	N5090121		1-	A	D4
S 2013	TACT SWITCH				SKQMAQE010	N5090121		1-	A	E4
S 2014	TACT SWITCH				SKQMAQE010	N5090121		1-	A	F4
X 2001	XTAL SX-1319	9.8304MHz			9.8304MHZ	H0103272		1-	B	c3



Circuit Diagram



Parts Layout



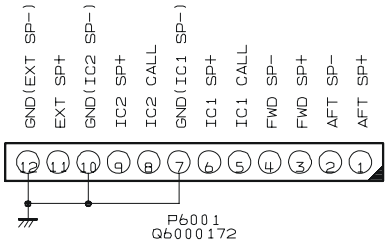
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB3558001				
	Printed Circuit Board					FR014120C		1-		
C 5003	CHIP CAP.	0.001uF	50V	B	GRM188B11H102KA01D	K22174809		1-	A	
MC5001	MIC. ELEMENT				EM-100PT	M3290029		1-	A	
R 5001	CHIP RES.	6.8k	1/16W	5%	RMC1/16 682JATP	J24185682		1-	A	
R 5002	CHIP RES.	15k	1/16W	5%	RMC1/16 153JATP	J24185153		1-	A	
R 5003	CHIP RES.	22k	1/16W	5%	RMC1/16 223JATP	J24185223		1-	A	
S 5001	TACT SWITCH				SKRTLAE010	N5090130		1-	A	

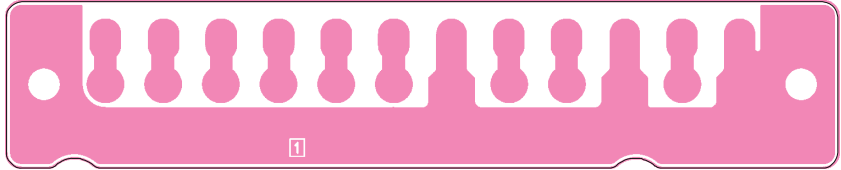
# *MIC-Unit*

## *Note*

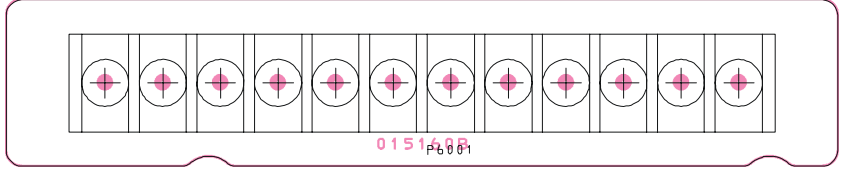
Circuit Diagram



Parts Layout



Side A



Side B

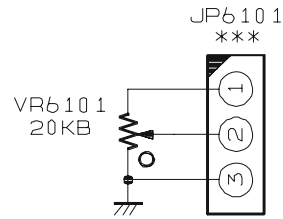
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB3641001				
	Printed Circuit Board					FR015160B		1-		
P 6001	TERMINAL STRIP				OTB-750-B-12P-C	Q6000172		1-	B	

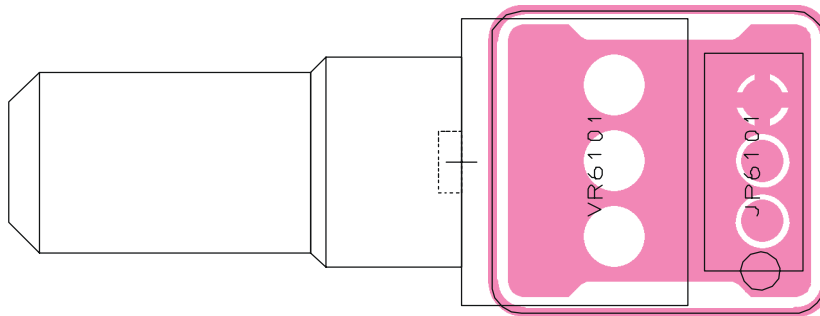
# *Connection Unit*

## *Note*

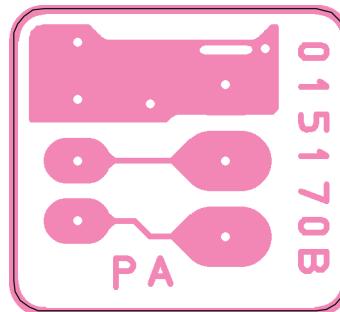
Circuit Diagram



Parts Layout



Side A



Side B

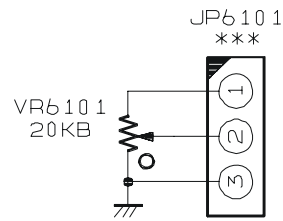
Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB3642001				
	Printed Circuit Board					FR015170B		1-		
JP6101	WIRE ASSY				AM020X PAVR	T9207322		1-	A	
VR6101	POT.				RK0971110 20KB	J60800261		1-	A	

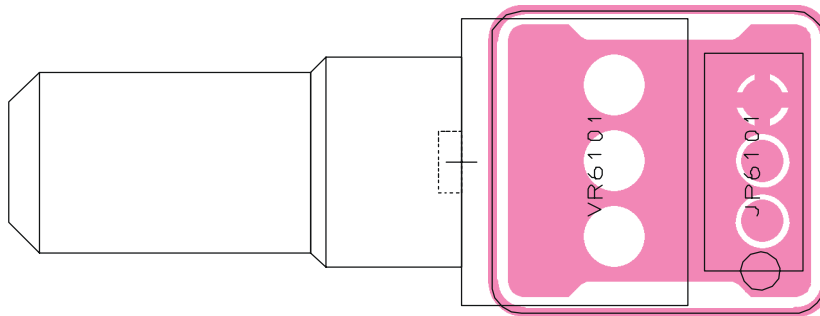
# *VR-A-Unit*

*Note*

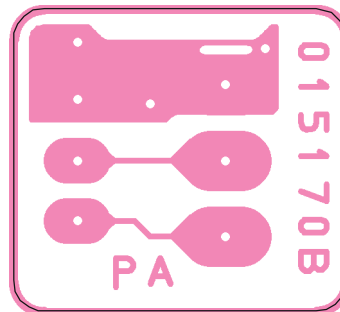
*Circuit Diagram*



*Parts Layout*



Side A



Side B

*Parts List*

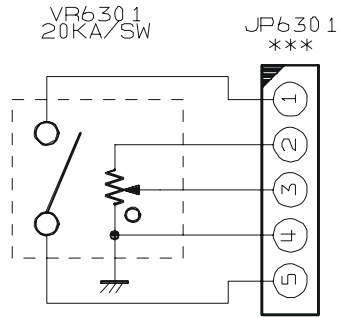
REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB3643001				
	Printed Circuit Board					FR015180B		1-		
JP6201	WIRE ASSY				AM020X ICVR	T9207323		1-	A	
VR6201	POT.				RK0971110 20KB	J60800261		1-	A	

## ***VR-B-Unit***

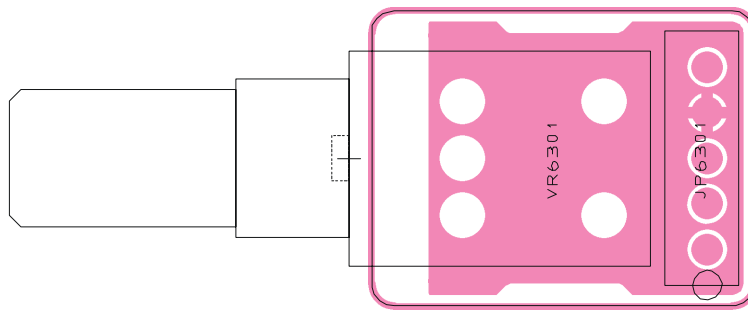
***Note***



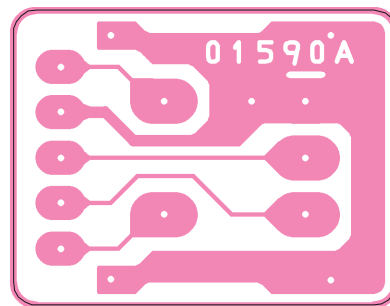
Circuit Diagram



Parts Layout



Side A



Side B

Parts List

REF	DESCRIPTION	VALUE	V/W	TOL.	MFR'S DESIG	VXSTD P/N	VERS.	LOT	SIDE	LAY ADR
	PCB with Components					CB3644001				
	Printed Circuit Board					FR015190A		1-		
JP6301	WIRE ASSY				AM020X VR/SW	T9207324		1-	A	
VR6301	POT.				RK0971111 20KA/SW	J60800262		1-	A	

## *VR-C-Unit*

*Note*



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