Version: 1PM050C1
Date: Fed.26.2007

SERVICE MANUAL

ACT-7T

TRANSMITTER

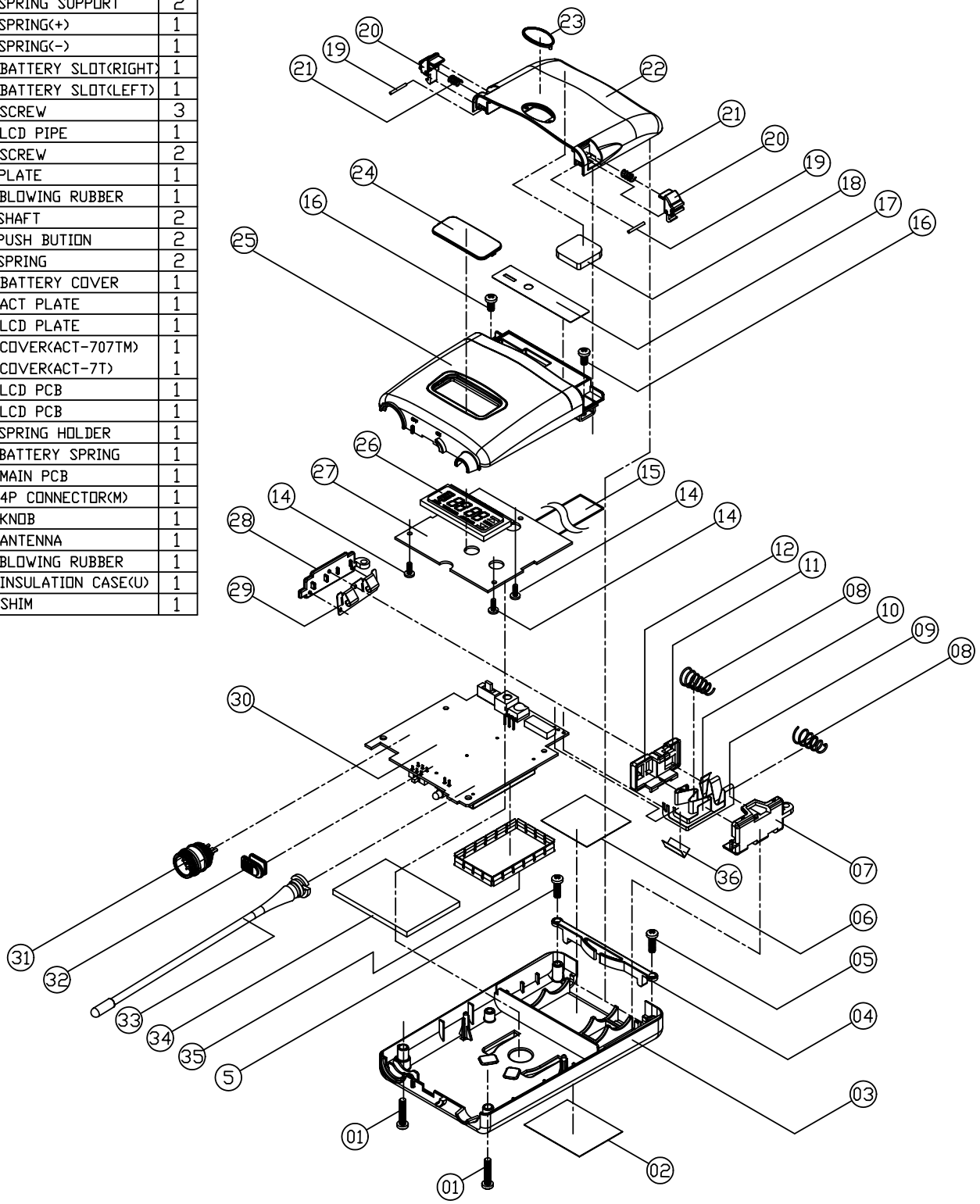
MIPRO

SPECIFICATIONS FOR ACT-7T TRANSMITTER

ITEM	SPECIFICATIONS
1. FREQUENCY RANGE	620.000 ~ 950.000MHz
2. FREQUENCY GENERATION	Phase Locked Loop (PLL) technique
3. CHANNEL GRID	25KHz
4. FREQUENCY STABLE	±0.005% 0℃~ +50℃
5. MODULATION	FM
6. RF OUTPUT POWER (50 OHMS LOAD)	<10mW
7. SPURIOUS EMISSION	<4nW
8. NOMINAL DEVIATION	±4.0KHz
9. AUDIO FREQUENCY RANGE	80~18,000Hz
10. DISTORTION (AT 1KHZ AND NOMINAL DEV)	<0.3%
11. PRE-EMPHASIS	25uS
12. MIN. OPERATING VOLTAGE	+2V DC
13. BATTERY	AA3(1.5V) ×2
14. CURRENT CONSUMPTION	Approx. 80mA
15. ANTENNA	Internal (1/4 λ)
16. CONNECTORS	4 PIN SCREW TYPE MINIATURE
17. DIMENSION (m/m)	105(L)×66(W)×25(H)
18. WEIGHTS	Approx. 145g
19. ENVIRONMENTAL	Full SPECS -10 to 60 ℃

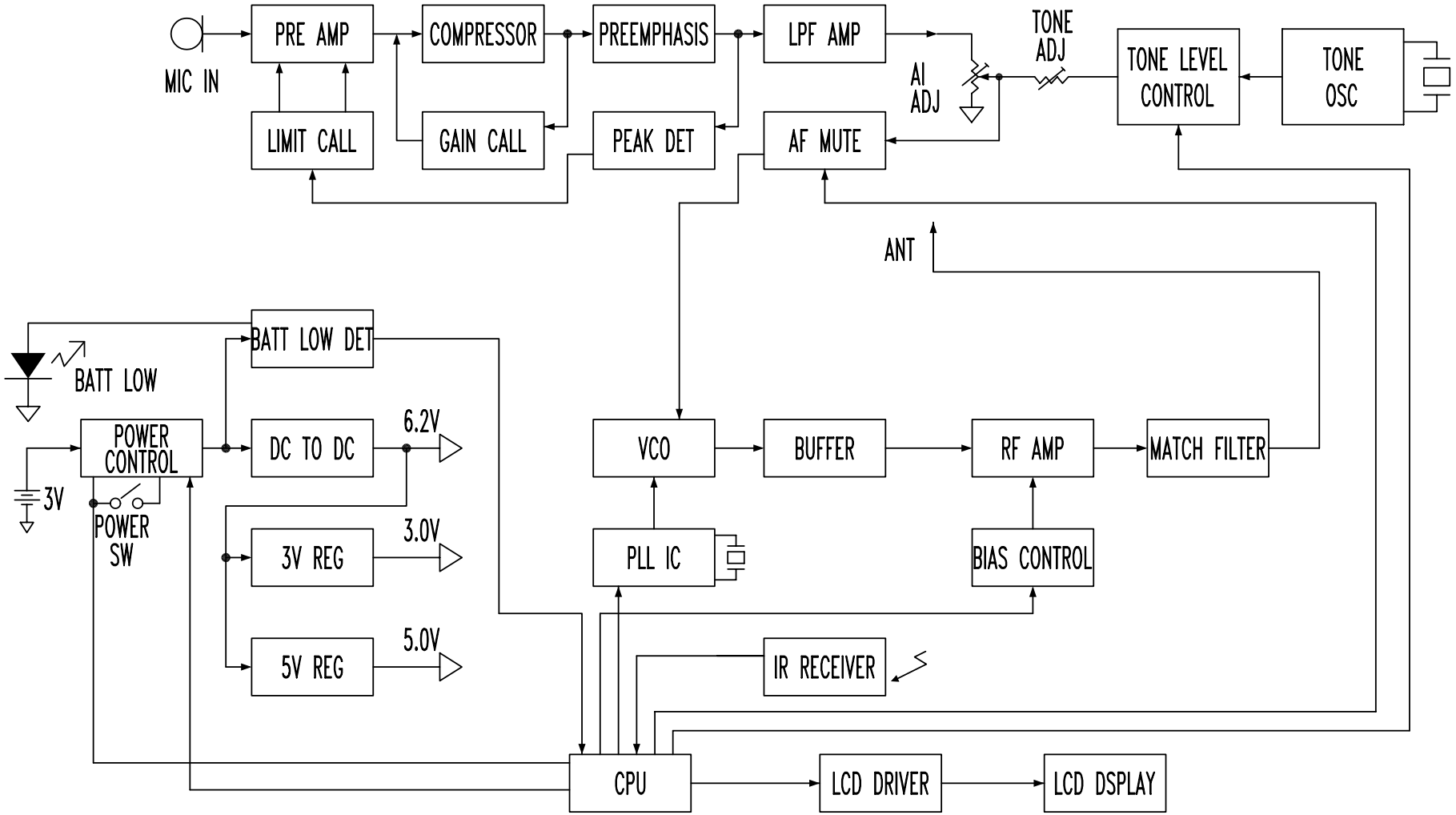
ACT7TI01A

NO.	SERIAL NO.	DESCRIPTION	Q'TY
1	1MSA0081	SCREW	2
2	*******	STICKER	1
3	1QLA0007	CASE	1
4	1QGC0006	HOLDING BASE	1
5	1MSA0050	SCREW	2
6	*******	STICKER	1
7	1QGC0005	SPRING	1
8	1QGB0006	SPRING SUPPORT	2
9	1QGA0034	SPRING(+)	1
10	1QGA0033	SPRING(-)	1
11	1QGC0003	BATTERY SLOT(RIGHT)	1
12	1QGC0004	BATTERY SLOT(LEFT)	1
14	1MSA0046	SCREW	3
15	1MLM0034	LCD PIPE	1
16	1MSA0090	SCREW	2
17	1QIB0024	PLATE	1
18	2ED052	BLOWING RUBBER	1
19	1QPA0012	SHAFT	2
20	1QPB0034	PUSH BUTION	2
21	1QGB0007	SPRING	2
22	1QHD0021	BATTERY COVER	1
23	1QIB0023	ACT PLATE	1
24	1QIB0022	LCD PLATE	1
25	1QLB0070	COVER(ACT-707TM)	1
	1QLB0087	COVER(ACT-7T)	1
26	1DLM1631	LCD PCB	1
27	3PM023CA	LCD PCB	1
28	1QGC0002	SPRING HOLDER	1
29	1QGB0008	BATTERY SPRING	1
30	3PM0050BA	MAIN PCB	1
31	1MPA0017	4P CONNECTOR(M)	1
32	1QHC0010	KNOB	1
33	1MLR0042~45	ANTENNA	1
34	2ED036	BLOWING RUBBER	1
35	1BEA0010	INSULATION CASE(U)	1
36	1QIB0029	SHIM	1



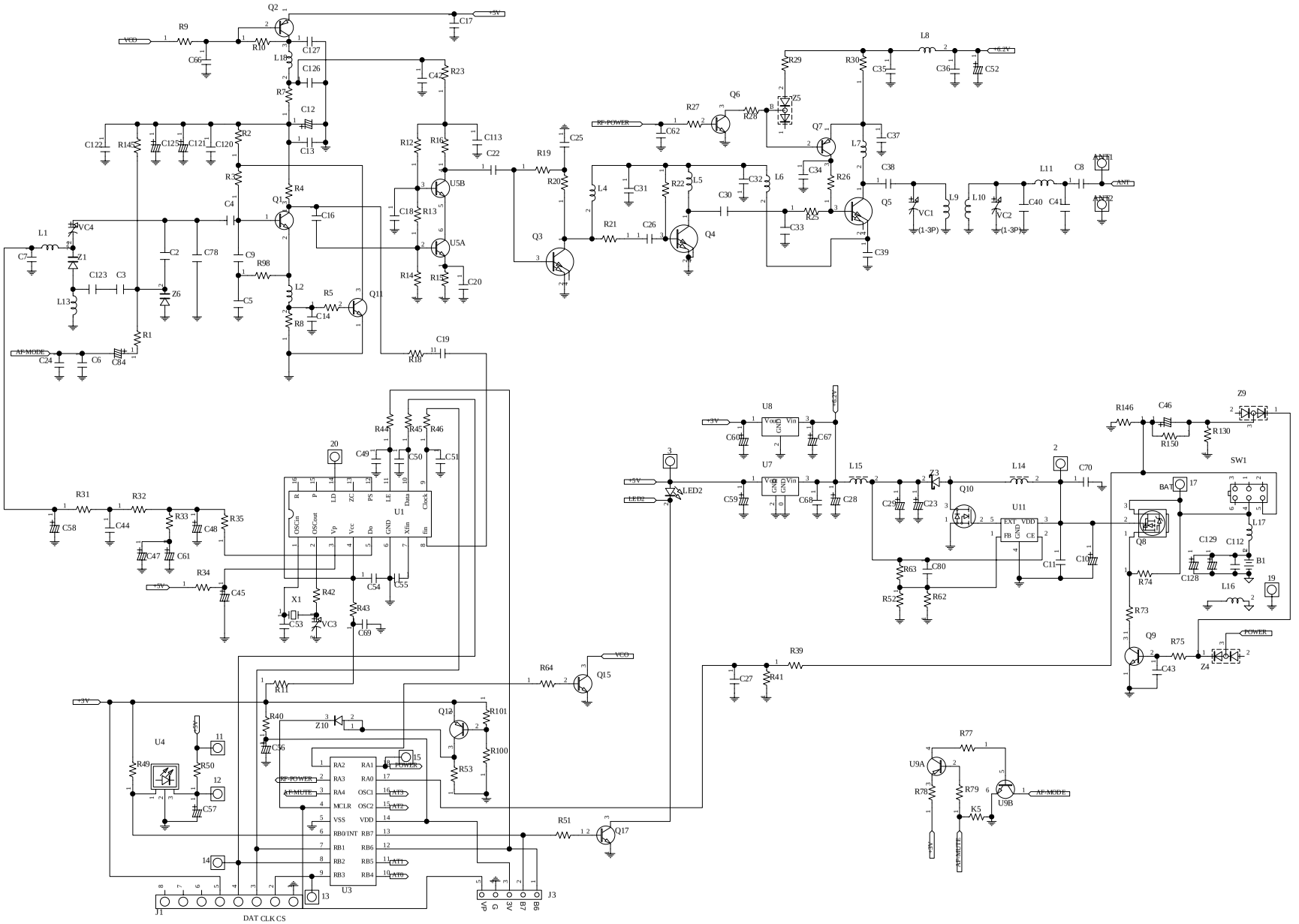
f	
e	03/01/2005
d	12/30/2004
c	11/05/2004
b	06/03/2003

圖號 NUMBER	ACT707TMU01E	機型 MODEL	ACT-707TM/ACT-7T	品名 DESCRIPTION	爆炸圖 (ASSEMBLY)	版本 VISION	b 06/03/2003
日期 DATE	03/03/2003	比例 SCALE	1=3 A4	材質 MATERIAL		MIPRO	
設計 DESIGNED	TENOR	繪圖 DRAWN	BALL	核准 APPROVED	Michael		

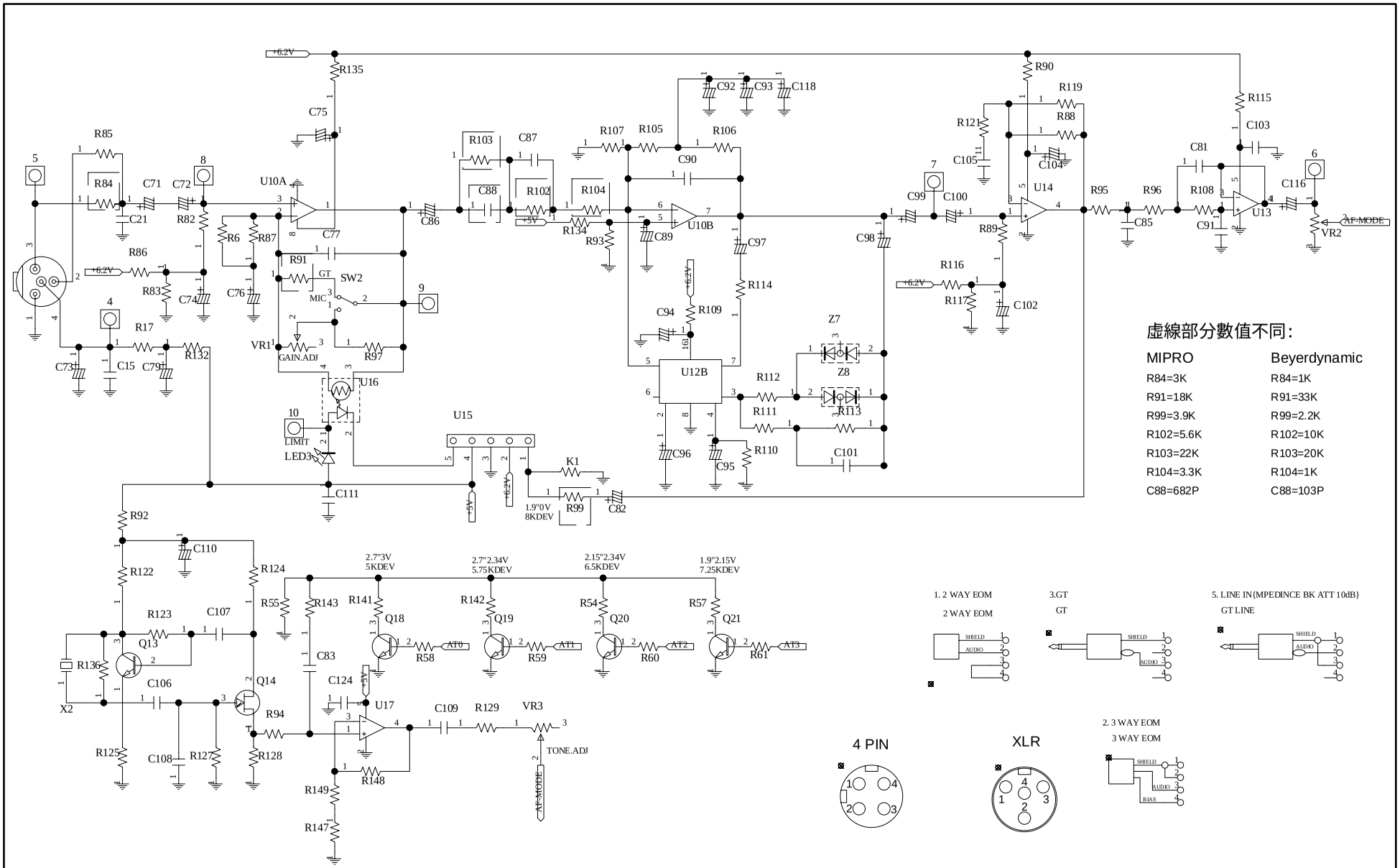


圖號 NUMBER	ACT707TMQ01B	機型 MODEL	ACT-7T	品名 DESCRIPTION	方塊圖(BLOCK DIAGRAM)	版本 VISION	f		g	MiPRO
日期 DATE	12/14/2004	比例 SCALE	1=1 A4	材質 MATERIAL			d		e	
設計 DESIGNED	MICHAEL	繪圖 DRAWN	CANDY	核准 APPROVED	MICHAEL		b	12/02/2005	c	

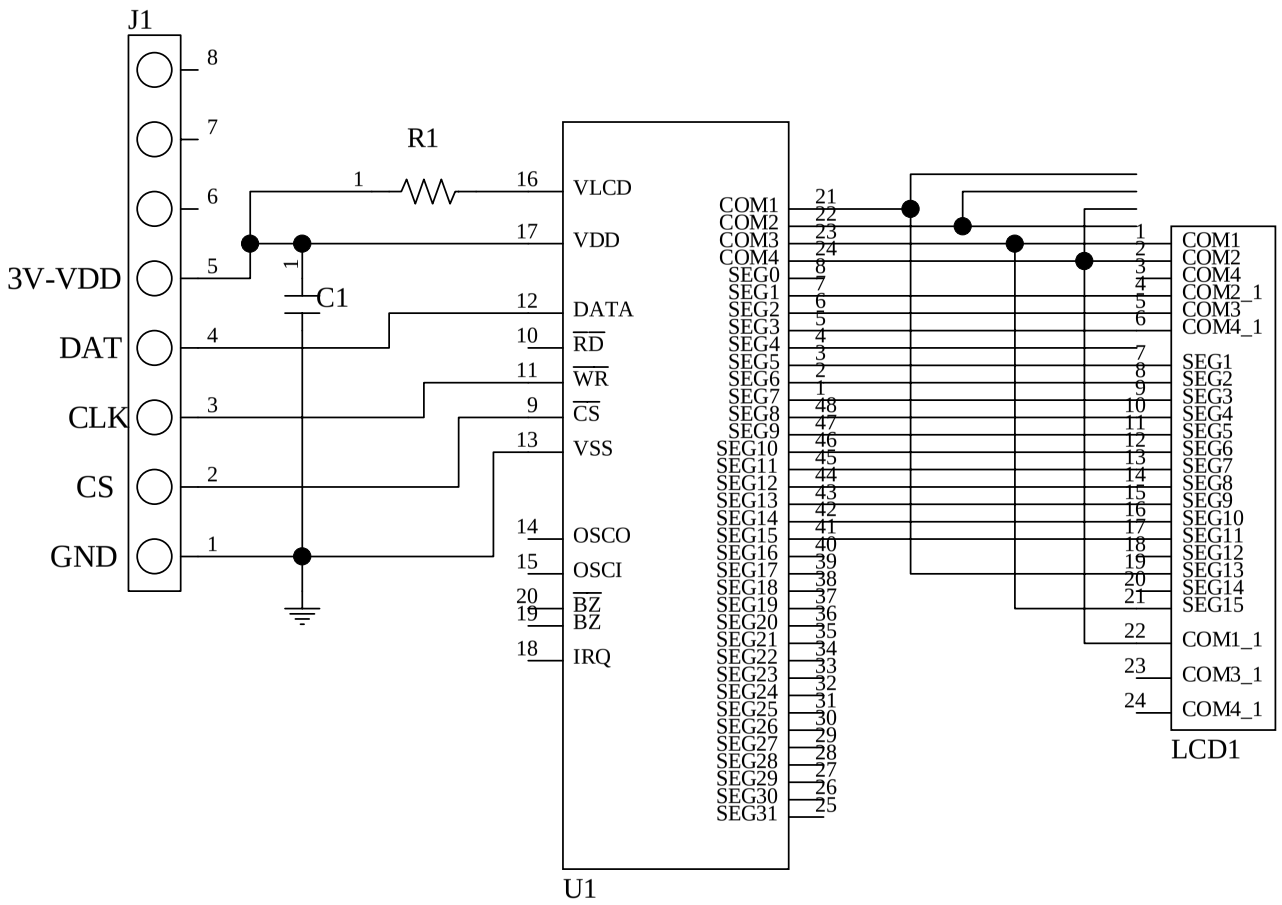
BLOCK DIAGRAM



圖號 NUMBER	1CM050CA-C1	機型 MOEDL	ACT-707TM / ACT-7T (M050C1)	品名 DESCRIPTION	CIRCUIT(RF)	版本 VISION	(F)		(G)	MiPRO
日期 DATE	02/26/2007	比例 SCALE	1 / 2 / A1	材質 MATERIAL			(D)		(E)	
設計 DESIGNED	TENOR	繪圖 DRAWN	TENOR	核准 APPROVED	Michael		(B)		(C)	

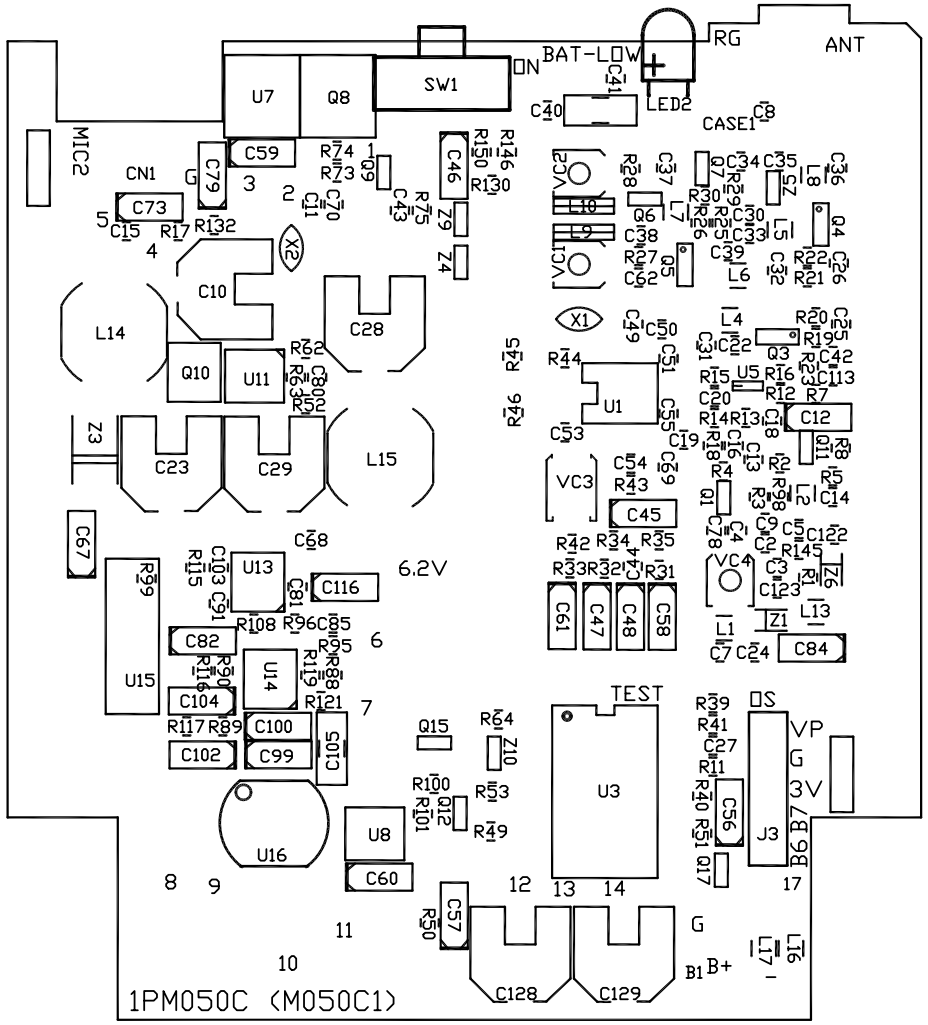


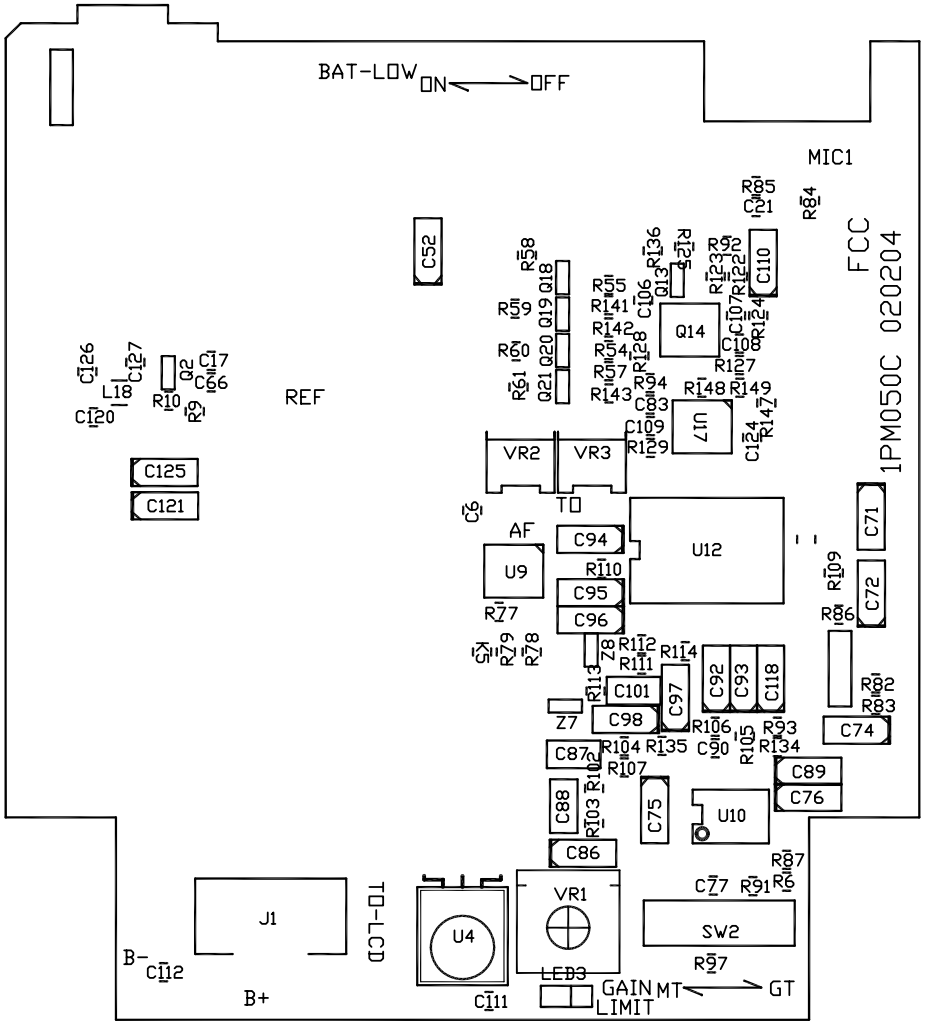
圖號 NUMBER	1CM050CA-C2	機型 MOEDL	ACT-707TM/7T (M050C1)	品名 DESCRIPTION	CIRCUIT(AUDIO)	版本 VISION	(F)		(G)	MIPRO
日期 DATE	02/26/2007	比例 SCALE	2 / 2 / A2	材質 MATERIAL			(D)		(E)	
設計 DESIGNED	TENOR	繪圖 DRAWN	TENOR	核准 APPROVED	Michael		(B)		(C)	



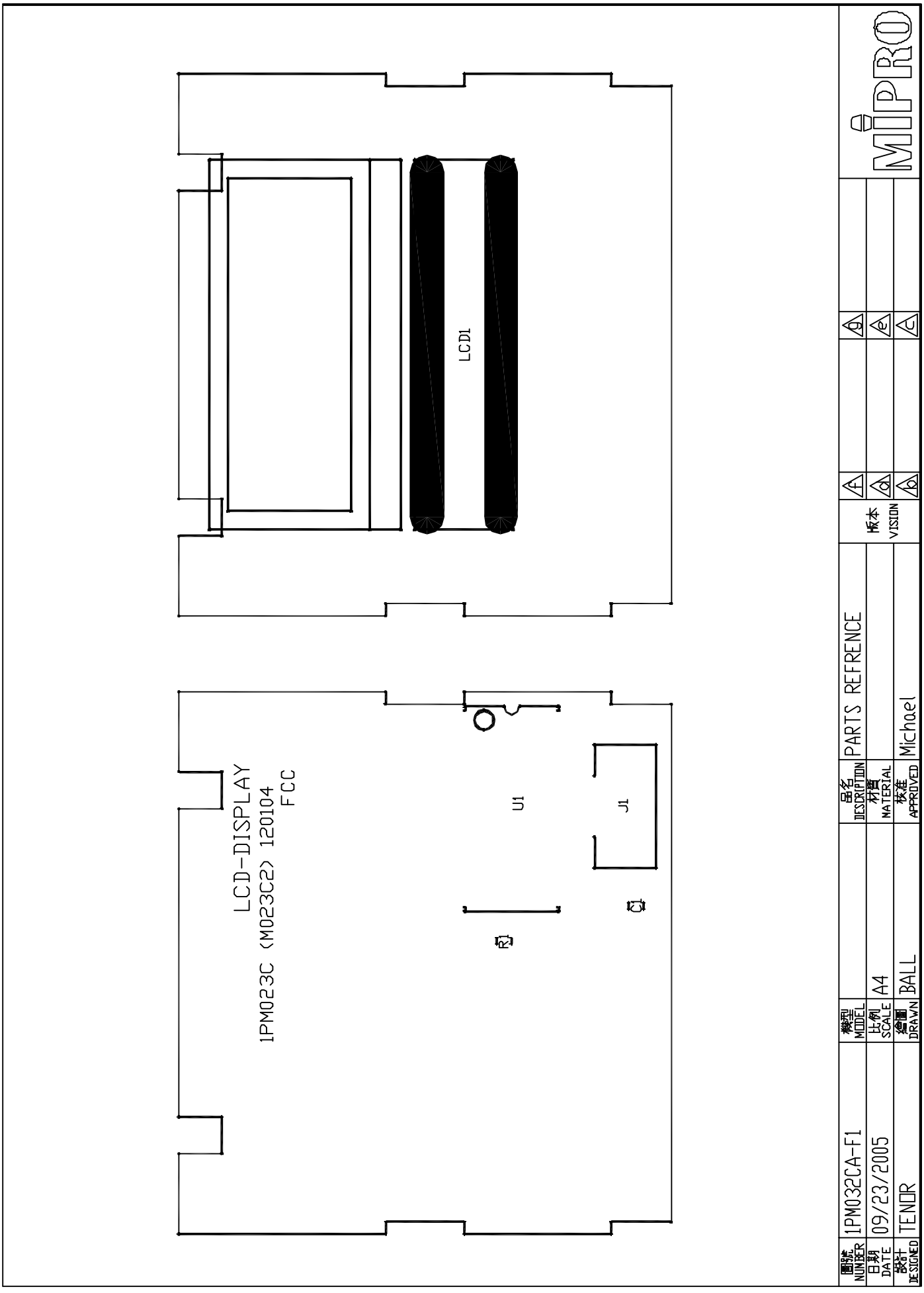
圖號 NUMBER	1CM023CA-C1	機型 MOEDL	ACT-707T/TM (M023C2)	品名 DESCRIPTION	LCD-CIRCUIT	版本 VISION	(F)		(G)	
日期 DATE	12/01/2004	比例 SCALE	1 / 1 / A4	材質 MATERIAL			(D)		(E)	
設計 DESIGNED	TENOR	繪圖 DRAWN	TSAE	核准 APPROVED	Michael		(B)		(C)	

MiPRO



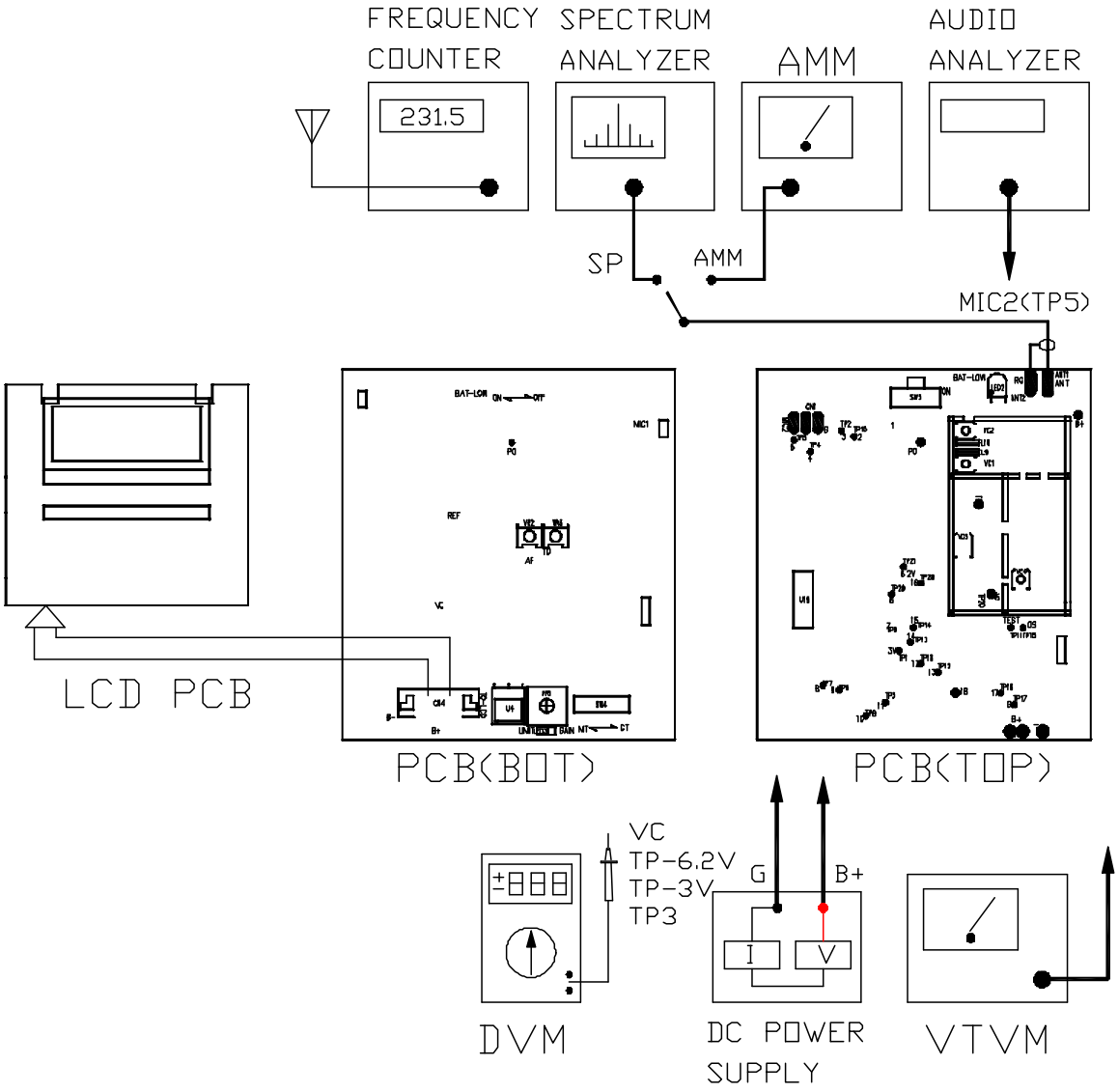


圖號 NUMBER	1PM050CA-F1	機型 MODEL	ACT-707TM/7T(M050C1)	品名 DESCRIPTION	零件編號(PARTS REFERENCE)(TOP)	版本 VISION	f		g	MIPRO
日期 DATE	02/26/2007	比例 SCALE	1=1 A4	材質 MATERIAL	1.0m/m 玻纖板		d		e	
設計 DESIGNED	Michael	繪圖 DRAWN	BALL	核准 APPROVED	Michael		b		c	


LCD1
LCD-DISPLAY
1PM023C (M023C2) 120104
FCC
U1
J1
C1
R1
圖號 NUMBER 1PM032CA-F1
日期 DATE 09/23/2005
設計 DESIGNED TENOR
機型 MODEL
比例 SCALE A4
繪圖 DRAWN BALL
品名 DESCRIPTION PARTS REFRENCE
材質 MATERIAL
核准 APPROVED Michael
版本 VISION
MIPRO

TEST AND ALINGNMENT INSTRUCTIONS

1、Measuring instruments and test set-up



2.Pre-set

A、Audio analyzer ：400Hz，—14.3dBV.

B、DC power supply ：3V OUT

C、Spectrum analyzer ：Frequency start 10MHz

Frequency stop 2.9GHz

TEST AND ALINGNMENT INSTRUCTIONS

NO	MEASUREMENTA DJUSTMENT	SET-UP	OBSERVATION	TEST POINT	ADJ	NORMAL VALUE
1	"BATT-LOW" LED	DC POWER SUPPLY 3V	"BATT-LOW" LED	BAT＋, BAT －	NO	LED flash one time when switch ON
2	DC TO DC	DC POWER SUPPLY 3V	DC VOLTAGE METER	TP-6.2V	NO	＋6.2V ±0.2V
3	VOLTAGE REAULATOR 3V	DC POWER SUPPLY 3V	DC VOLTAGE METER	TP-3V	NO	＋3V ±0.25V
4	VOLTAGE REAULATOR 5V	DC POWER SUPPLY 3V	DC VOLTAGE METER	TP3	NO	＋5V ±0.25V
5	CENTER FREQ TRACKING VOLTAGE	SET TO CENTER FREQ	DC VOLTAGE METER	VC	VC4	2.5V ±0.1V
6	DOWN FREQ TRACKING VOLTAGE VCO	SET TO DOWN FREQ	DC VOLTAGE METER	VC	VC4	>1V
7	UPER FREQ TRACKING VOLTAGE	SET TO UPER FREQ	DC VOLTAGE METER	VC	VC4	<4V
8	RF OUTPUT POWER	SPECTRUM 1.FULL SPAN 2. Att 30dB 3. CENTER FREQ	SPECTRUM ANALYZET	ANT	VC1,VC2	1.PEAK:+11~+15dBm 2.SPURIOUS>-55dBc
9	CURRENT DISSIPATION	DC POWER SUPPLY 3V	CURRENT MATER	BAT＋ BAT －	NO	75mA 85mA
10	CENTER FREQUENCY	FRQUENCY COUNTER(100Hz RES)	FREQUENCY COUNTER	ANT	VC3	Fo ±2KHz
11	AF 0 dB COMPANDOR	1. SW4 switch to "GT" 2. AUDIO ANALYZER 400Hz, -14.3dBV	AUDIO ANALYZER	TP7	NO	612 mV ±12mV
12	MODULATION	AUDIO ANALYZER 400Hz, -14.3dBV	AMM (3.5K LPF)	ANT	VR2	40 ±1K
13	MT INPUT	1. SW4 switch to"MT" 2. AUDIO ANALYZER 400Hz, -39dBV	AMM (3.5K LPF)	ANT	NO	40 ±4K
14	PREEMPHASIS	AUDIO ANALYZER 10KHz, -14.3dBV	AMM (15K LPF)	ANT	NO	63 ±4K LED3 ON
15	TONE DEF (8K DEV)	1.MIC2 (TP5 TO GND) 2.AMM(50K,60K LPF) OR SPECTRUN ANY 3. DC POWER SUPPLY 4V	AMM OR SPECTRUM ANALYZER MARK Δ TO32K (NEXT PEAK)	ANT	VR3	5K ±0.3K (AMM) -22.5 ±0.5dB (SPECTRUN)
16	BATT. LOW DISPLAY	DC VOLTAGE 1.85V	LED2,LCD	BAT＋ BAT －	NO	LED2 ON,LCD Batt. Ststus no segment
17	BATT. LOW OFF	DC VOLTAGE 1.7V	LCD CURRENT METER	BAT＋ BAT －	NO	LCD SHOW PoFF I<1mA

CIRCUIT： 1PM050C1

COMPUCTOR NO.	REFETENCE	VALUE
1QGA0033+1 QGA0034	B1	BATT
	C2	C2
	C3	C3
	C4	C4
	C5	C5
1CCS6P101	C6	100P
1CCS6X104	C7	104P
1CCS6P471	C8	470P
	C9	C9
1CESHA107	C10	100uF
1CCS6X104	C11	104P
1CTSBA106	C12	10uF
1CCS6P471	C13	470P
1CCS6P068	C14	68P
1CCS6P101	C15	100P
1CCS6P047	C16	47P
1CCS6P471	C17	470P
1CCS6P471	C18	470P
1CCS6P006	C19	6P
1CCS6P471	C20	470P
1CCS6P101	C21	100P
1CCS6P010	C22	10P
1CESHA107	C23	100uF
1CCS6P471	C24	470P
1CCS6X103	C25	103P
1CCS6P101	C26	100P
1CCS6X104	C27	104P
1CESHA107	C28	100uF
1CESHA107	C29	100uF
	C30	C30
1CCS6P471	C31	470P
1CCS6P471	C32	470P
	C33	C33
1CCS6P101	C34	100P
1CCS6X102	C35	102P
1CCS6X102	C36	102P
1CCS6P471	C37	470P
1CCS6P151	C38	150P
1CCS6P471	C39	470P
	C40	C40
	C41	C41
1CCS6P471	C42	470P
1CCS6X104	C43	104P

ACT7TP01B

COMPUCTOR NO.	REFETENCE	VALUE
1CCS6X104	C44	104P
1CTSBA106	C45	10UF
1CTSBA106	C46	10UF
1CTSBA106	C47	10UF
1CTSDA474	C48	0.47UF
1CCS6P101	C49	100P
1CCS6P101	C50	100P
1CCS6P101	C51	100P
1CTSBA106	C52	10uF
1CCS6P047	C53	47P
1CCS6P471	C54	470P
1CCS6X102	C55	102P
1CTSBA105	C56	1uF
1CTSBA225	C57	2.2UF
1CTSDA474	C58	0.47UF
1CTSBA106	C59	10uF
1CTSBA105	C60	1uF
1CTSBA106	C61	10UF
1CCS6P101	C62	100P
1CCS6P101	C66	100P
1CTSBA106	C67	10uF
1CCS6X103	C68	103P
1CCS6X103	C69	103P
1CCS6X104	C70	104P
1CTSBA106	C71	10uF
1CTSBA106	C72	10uF
1CTSBA106	C73	10uF
1CTSBA225	C74	2.2uF
1CTSBA475	C75	4.7uF
1CTSBA225	C76	2.2uF
1CCS6P068	C77	68P
	C78	C78
1CTSBA106	C79	10uF
1CCS6X104	C80	104P
1CCS6X103	C81	103P
1CTSBA106	C82	10uF
1CCS6X103	C83	103P
1CTSBA105	C84	1uF
1CCS6P222	C85	222P
1CTSBA225	C86	2.2uF
1CCS8P102	C87	102P(NPO)
1CCS8X103	C88	103P
1CTSBA225	C89	2.2uF
1CCS6P020	C90	20P

PART LIST

CIRCUIT： 1PM050C1

COMPUCTOR NO.	REFETENCE	VALUE
1CCS6P068	C91	68P
1CTSBA106	C92	10uF
1CTSBA106	C93	10uF
1CTSBA475	C94	4.7uF
1CTSDA474	C95	0.47uF
1CTSBA225	C96	2.2uF
1CTSBA225	C97	2.2uF
1CTSBA225	C98	2.2uF
1CTSBA225	C99	2.2uF
1CTSBA225	C100	2.2uF
1CCS8Y104	C101	104P
1CTSBA225	C102	2.2uF
1CCS6X473	C103	473P
1CTSBA475	C104	4.7uF
1CCSCP332	C105	332P
1CCS6P012	C106	12P
1CCS6X473	C107	473P
1CCS6P036	C108	36P
1CCS6X103	C109	103P
1CTSBA105	C110	1uF
1CCS6P471	C111	470P
1CCS6X104	C112	104P
1CCS6P471	C113	470P
1CTSBA225	C116	2.2uF
1CTSBA106	C118	10uF
1CCS6P471	C120	470P
1CTSBA106	C121	10uF
1CCS6X473	C122	473P
	C123	C1
1CCS6X473	C124	473P
1CTSBA106	C125	10uF
1CCS6P471	C126	470P
1CCS6P471	C127	470P
	C128	*
	C129	*
1MPA0017	CN1	4 PIN
1SCSD08F	J1	8PIN
1SFHB05B	J3	5PIN
1LLS8224	L1	220nH
1LLS8823	L2	82nH
1LLS8224	L4	220nH

ACT7TP01B

COMPUCTOR NO.	REFETENCE	VALUE
	L5	L5
1LLS8224	L6	220nH
1LLS8224	L7	220nH
1LLS8224	L8	220nH
	L9	L9
	L10	L10
	L11	L11
	L13	L13
1LLSA476	L14	47uH
1LLSA476	L15	47uH
1LLSD001	L16	BIT
1LLSD001	L17	BIT
1LLS8224	L18	220nH
1DLNRC01	LED2	1DLNRC01
1DLSR210	LED3	1DLSR210
1TS093AW	Q1	1TS093AW
1TS01577	Q2	1TS01577
1TS0520X	Q3	1TS0520X
1TS0520X	Q4	1TS0520X
1TS0520X	Q5	1TS0520X
1TS04097	Q6	1TS04097
1TS01577	Q7	1TS01577
1TS16212	Q8	1TS16212
1TS04097	Q9	1TS04097
1TS15113	Q10	1TS15113
1TS04097	Q11	1TS04097
1TS01577	Q12	1TS01577
1TS04097	Q13	1TS04097
1TS00508	Q14	1TS00508
1TS04097	Q15	1TS04097
1TS04097	Q17	1TS04097
1TS04097	Q18	1TS04097
Q21	Q21	Q21
1RS6A153	R1	15K
1RS6A103	R2	10K
1RS6A152	R3	1.5K
1RS6A010	R4	10
1RS6A152	R5	1.5K
1RS6A101	R7	100
1RS6A082	R8	82
1RS6A104	R9	100K

CIRCUIT： 1PM050C1

COMPUCTOR NO.	REFETENCE	VALUE
1RS6A104	R10	100K
1RS6A010	R11	10
1RS6A472	R12	4.7K
1RS6A472	R13	4.7K
1RS6A472	R14	4.7K
1RS6A181	R15	180
1RS6A056	R16	56
1RS6A101	R17	100
1RS6A022	R18	22
1RS6A273	R19	27K
1RS6A181	R20	180
1RS6A022	R21	22
1RS6A103	R22	10K
1RS6A022	R23	22
1RS6A010	R25	10
1RS6A472	R26	4.7K
1RS6A104	R27	100K
1RS6A473	R28	47K
	R29	R29
1RS6A022	R30	22
1RS6A682	R31	6.8K
1RS6A471	R32	470
R33	R33	R33
1RS6A022	R34	22
1RS6A103	R35	10K
1RS6A333	R39	33K
1RS6A047	R40	47
1RS6A563	R41	56K
1RS6A123	R42	12K
1RS6A047	R43	0
1RS6A101	R44	100
1RS6A101	R45	100
1RS6A101	R46	100
1RS6A473	R49	47K
1RS6A101	R50	100
1RS6A104	R51	100K
	R52	*
1RS6A473	R53	47K
1RS6A183	R55	18K
R57	R57	R57
1RS6A563	R58	56K
R61	R61	R61
1RS6A473	R62	47K
1RS6A244	R63	240K

ACT7TP01B

COMPUCTOR NO.	REFETENCE	VALUE
1RS6A473	R64	47K
1RS6A103	R73	10K
1RS6A104	R74	100K
1RS6A333	R75	33K
1RS6A103	R77	10K
1RS6A010	R78	10
1RS6A473	R79	47K
1RS6A474	R82	470K
1RS6A153	R83	15K
1RS6A182	R84	1.8K
1RS6A622	R85	6.2K
1RS6A153	R86	15K
1RS6A512	R87	5.1K
1RS6A123	R88	18K
1RS6A123	R89	12K
1RS6A047	R90	47
1RS6A102	R91	1K
1RS6A272	R92	2.7K
1RS6A393	R93	39K
1RS6A622	R94	6.2K
1RS6A822	R95	8.2K
1RS6A682	R96	6.8K
1RS6A010	R97	10
1RS6A010	R98	10
1RS6A222	R99	2.2K
1RS6A154	R100	150K
1RS6A473	R101	47K
1RS6A103	R102	10K
1RS6A203	R103	20K
1RS6A272	R104	2.7K
1RS6A103	R105	10K
1RS6A103	R106	10K
1RS6A104	R107	100K
1RS6A822	R108	8.2K
1RS6A047	R109	47
1RS6A106	R110	10M
1RS6A103	R111	10K
1RS6A272	R112	2.7K
1RS6A822	R113	8.2K
1RS6A123	R114	12K
1RS6A047	R115	47
1RS6A473	R116	47K
1RS6A473	R117	47K
1RS6A153	R119	15K

CIRCUIT： 1PM050C1

COMPUCTOR NO.	REFETENCE	VALUE
1RS6A471	R121	470
1RS6A472	R122	4.7K
1RS6A474	R123	470K
1RS6A561	R124	560
1RS6A010	R125	10
1RS6A104	R127	100K
1RS6A332	R128	3.3K
1RS6A683	R129	56K
1RS6A104	R130	100K
1RS6A101	R132	100
1RS6A393	R134	39K
1RS6A047	R135	47
1RS6A106	R136	10M
1RS6A153	R141	15K
1RS6A101	R143	100
	R145	R145
1RS6A104	R146	100K
1RS6A101	R147	100
1RS6A153	R148	15K
1RS6A153	R149	15K
1RS6A105	R150	1M
1SWN0013	SW1	1SWN0013
1SWN0006	SW2	1SWN0006
1IS15E03	U1	1IS15E03
1IR16819	U3	1IR16819
1DLSR005	U4	1DLSR005
1TSUMX5N	U5	1TSUMX5N
1IS02981	U7	1IS02981
1IS23002	U8	1IS23002
1TSIMZ1A	U9	1TSIMZ1A
1IS00284	U10	1IS00284
1IS6368B	U11	1IS6368B
1IS00572	U12	1IS00572
1IS02221	U13	1IS02221
1IS02221	U14	1IS02221
3PM020AA	U15	3PM020AA
1INL0001	U16	1INL0001
1IS02221	U17	1IS02221
	VC1	VC1
	VC2	VC2
1CVS3U300	VC3	1CVS3U300

ACT7TP01B

COMPUCTOR NO.	REFETENCE	VALUE
1CVSTC010	VC4	1CVSTC010
1RNVB503	VR1	1RNVB503
1RSVB103	VR2	1RSVB103
1RSVB203	VR3	1RSVB203
1KM40000	X1	1KM40000
1KM32768	X2	1KM32768
1DVS0229	Z1	1DVS0229
1DDS0160	Z3	1DDS0160
1DDS0204	Z4	1DDS0204
1DDS0204	Z5	1DDS0204
1DVS0229	Z6	1DVS0229
1DDS0204	Z7	1DDS0204
1DDS0204	Z8	1DDS0204
1DDS0204	Z9	1DDS0204
1DDS0451	Z10	1DDS0451

PART LIST

CIRCUIT： 1PM023C2

ACT7TP01B

COMPUCTOR NO.	REFETENCE	VALUE
1CCS6X104	C1	104P
1SCSD08F	J1	8PIN
1DLM0709	LCD1	LCD 0709
1RS6A102	R1	1K
1IS1621B	U1	1IS1621B