

# ***Service Manual***

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**MOBILE THERMAL PRINTER**

**MODEL CMP-20**

Rev. 1.02 Issued on January 2013  
With CSE Part Numbers.

**CITIZEN SYSTEMS JAPAN CO.,LTD.**

# REVISION HISTORY

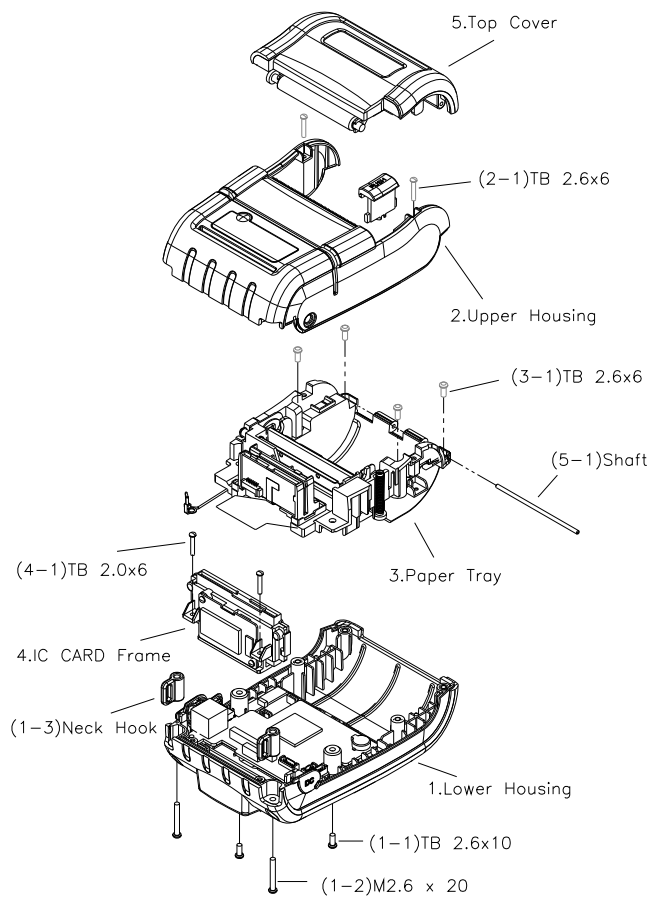
REVISION	DATE	APPROVAL	CHANGE
01	07 / 01 / 2010		Initial Release
02	01 / 10 / 2010		Use CSE Part Numbers
03	24 / 01 / 2013		Minor correction

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# 1. Disassembly and Assembly

1. How to Separate Lower Housing
  - 1-1) Unfasten 4 screw as shown in the figure and separate the Lower Housing
2. How to separate Upper Housing
  - 2-1) Disassemble it as indicated way
3. Separate Paper Tray
  - 3-1) Unfasten 4 screw as shown in the figure and separate the Paper Door
4. Separate IC Card Frame asm
  - 4-1) Unfasten 4 screw as shown in the figure and separate the Bottom Cover
5. How to separate Top Cover
  - 5-1) Unfasten 5 screw as shown in the figure and separate the Mechanism Unitr



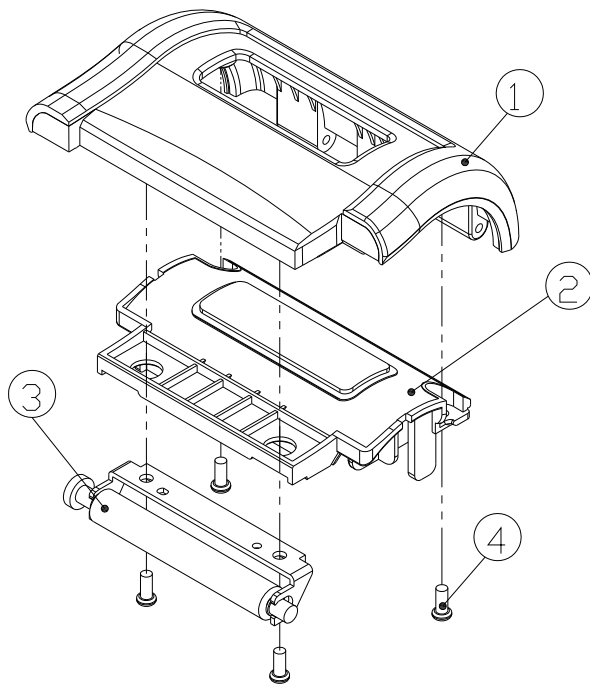
## 2. Parts List

## PARTS LIST

## CMP-20 TOTAL EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
001	1	PM20AS-B005	LOWER HOUSING ASM	1	
002	(1-1)	TB 2.6 X 10	SCREW	2	
003	(1-2)	M 2.6 X 20	SCREW	2	
004	(1-3)	PM20MD-C008	NECK HOOK	2	
005	2	PM20AS-B004	UPPER HOUSING ASM	1	
006	(2-1)	TB 2.6 X 6	SCREW	2	
007	3	PM20AS-B002	PAPER TRAY ASM	1	
008	(3-1)	TB 2.6 X 6	SCREW	4	
009	4	PM20AS-B003	IC CARD ASM	2	
010	(4-1)	TB2.0 X 6	SCREW	2	
011	5	PM20AS-B001	TOP COVER ASM	1	
012	(5-1)	PM20CT-C001	SHAFT	1	

EXPLODE VIEW

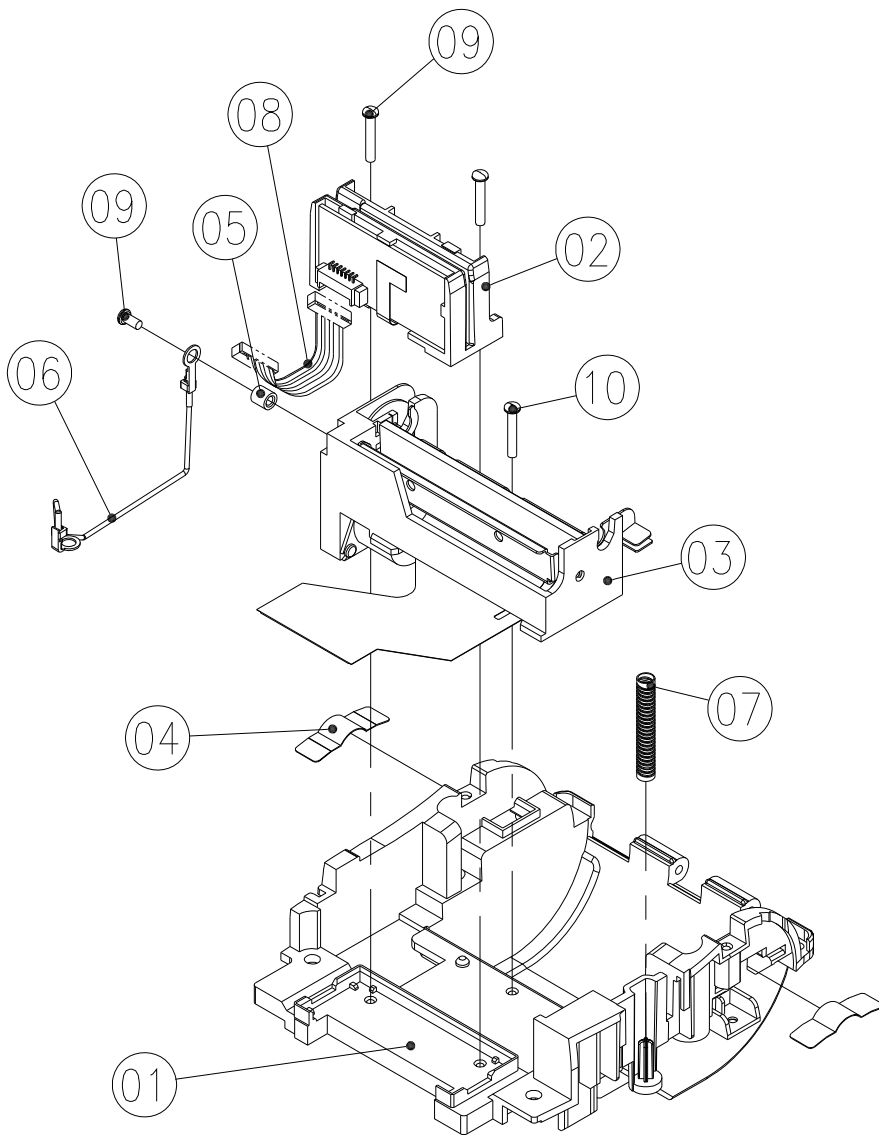


TOP COVER ASM PARTS LIST

CMP-20 EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
013	1	PM20MD-C003	TOP COVER	1	
014	2	PM20MD-C005	WINDOW	1	
015	3	PM20DG-C001	MECHNISM ASSEMBLY <b><u>INCLUDING</u></b> PLATTEN ROLLER	1	
016	4	TB 2.6 X 5 PH	SCREW	4	BLACK

EXPLODE VIEW



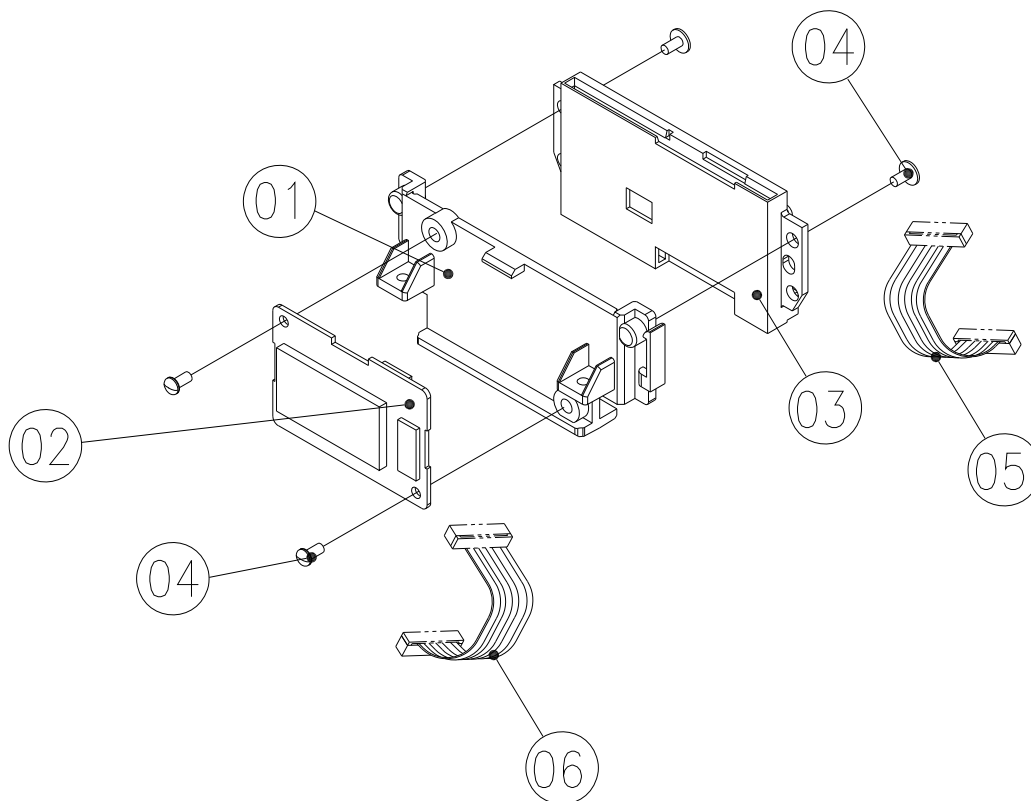
## PAPER TRAY ASM PARTS LIST

## CMP-20 EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
017	1	PM20MD-C004	PAPER TRAY	1	
018	2	PM20DG-C002	MSR ASSEMBLY	1	OPTION
019	3	PM20DG-C001	MECHNISM ASSEMBLY <b><u>INCLUDING</u></b> PLATTEN ROLLER	1	
020	4	PM20PS-C002	LIFT SPRING	2	
021	5	PM20CT-C002	CABLE SPACER	1	
022	6	PM20WH-C001	CABLE GND	1	
023	7	PM20CT-C003	SPRING BUTTON	1	
024	8	PM20WH-C003	CABLE MSR	1	
025	9	TB 2.0 X 8 (WASHER)	SCREW	3	
026	10	TB 2.0 X 6	SCREW	1	



EXPLODE VIEW

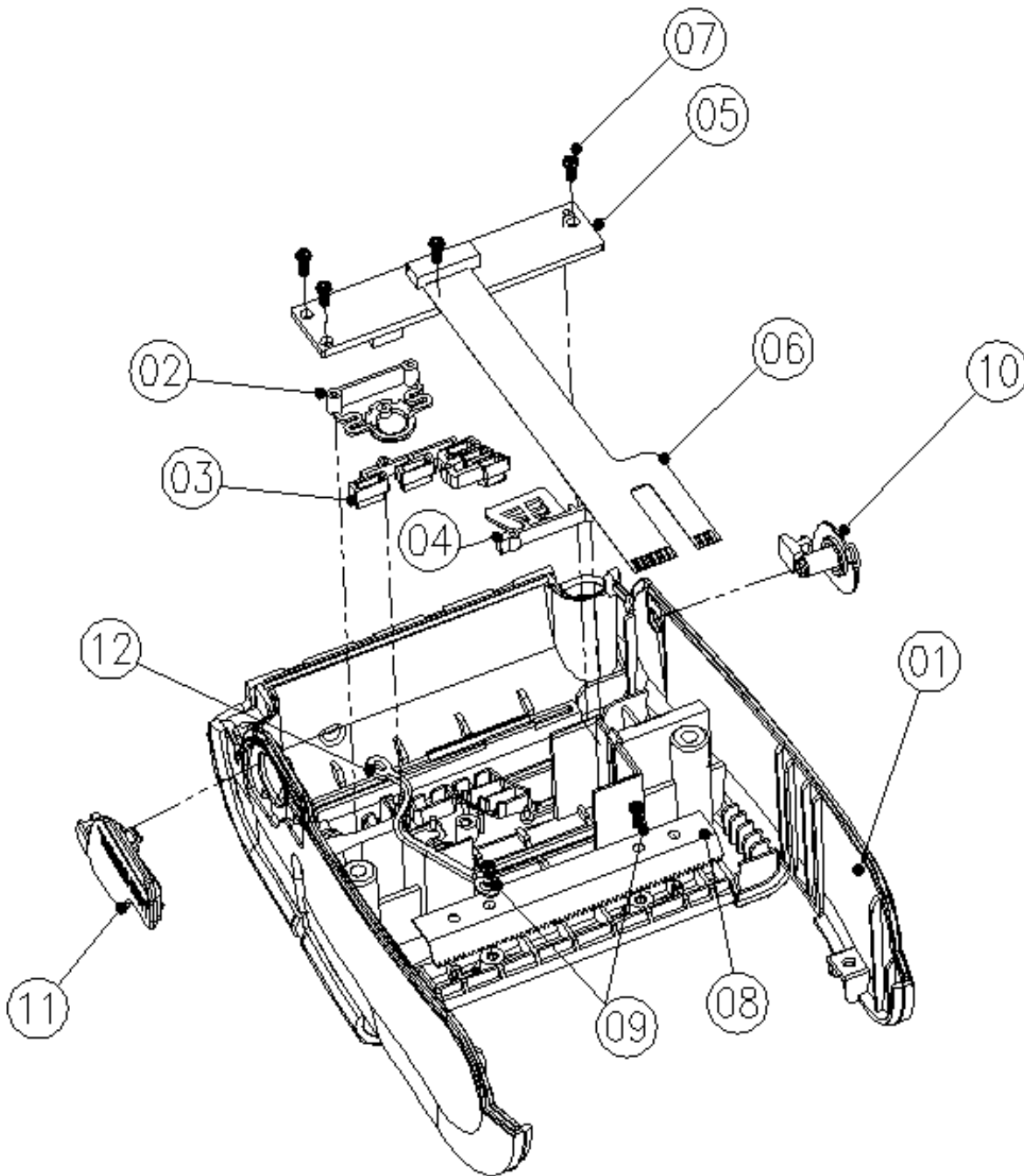


IC CARD FRAME ASM PARTS LIST

CMP-20 EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
027	1	PM20MD-C006	IC CARD FRAME	1	
028	2	PM20DG-C003	PCB BLUETOOTH Or PCB WIFI	1	
029	3	PM20DG-C003	PCB IC CARD ASSEMBLY	1	
030	4	TB 2.0 X 6	SCREW	4	
031	5	PM20WH-C004	CABLE IC CARD	1	OPTION
032	6	PM20WH-C002	CABLE BLUETOOTH	1	

EXPLODE VIEW

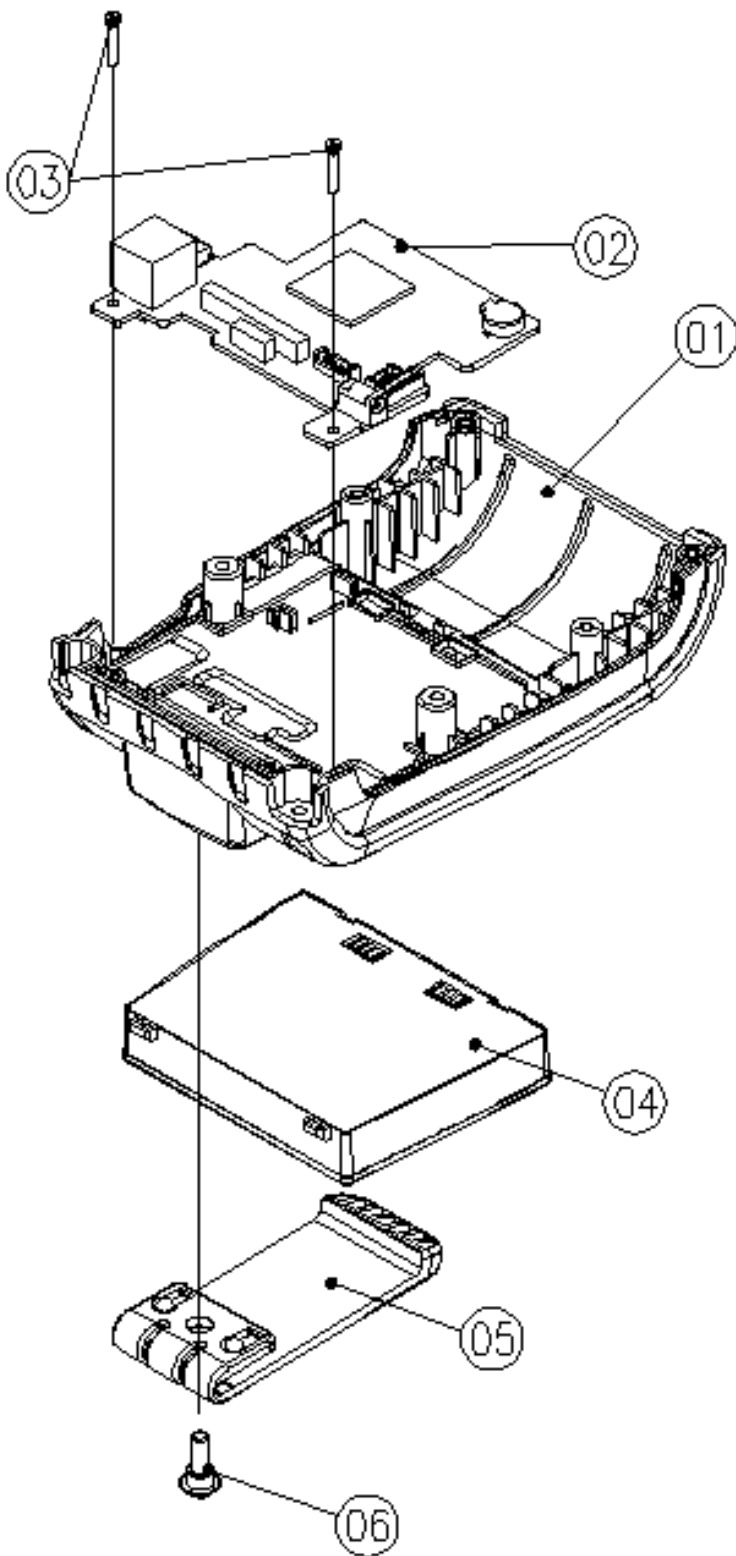


## UPPER HOUSING ASM PARTS LIST

## CMP-20 EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
033	1	PM20MD-C002	UPPER HOUSING	1	
034	2	PM20MD-C021	KEY POWER	1	
035	3	PM20MD-C019	LENS LED	1	
036	4	PM20MD-C020	KEY FEED	2	
037	5	PM20PA-B004	PCB FUCNTION ASSEMBLY	1	
039	7	TB 2.0 X5	SCREW	4	
040	8	PM20PS-C005	BRACKET TEAR BAR	1	
041	9	TB 2.0X3 납작 HEAD	SCREW	2	
042	10	PM20MD-C010	CAP DC	1	
043	11	PM20MD-C011	CAP USB	1	

EXPLODE VIEW

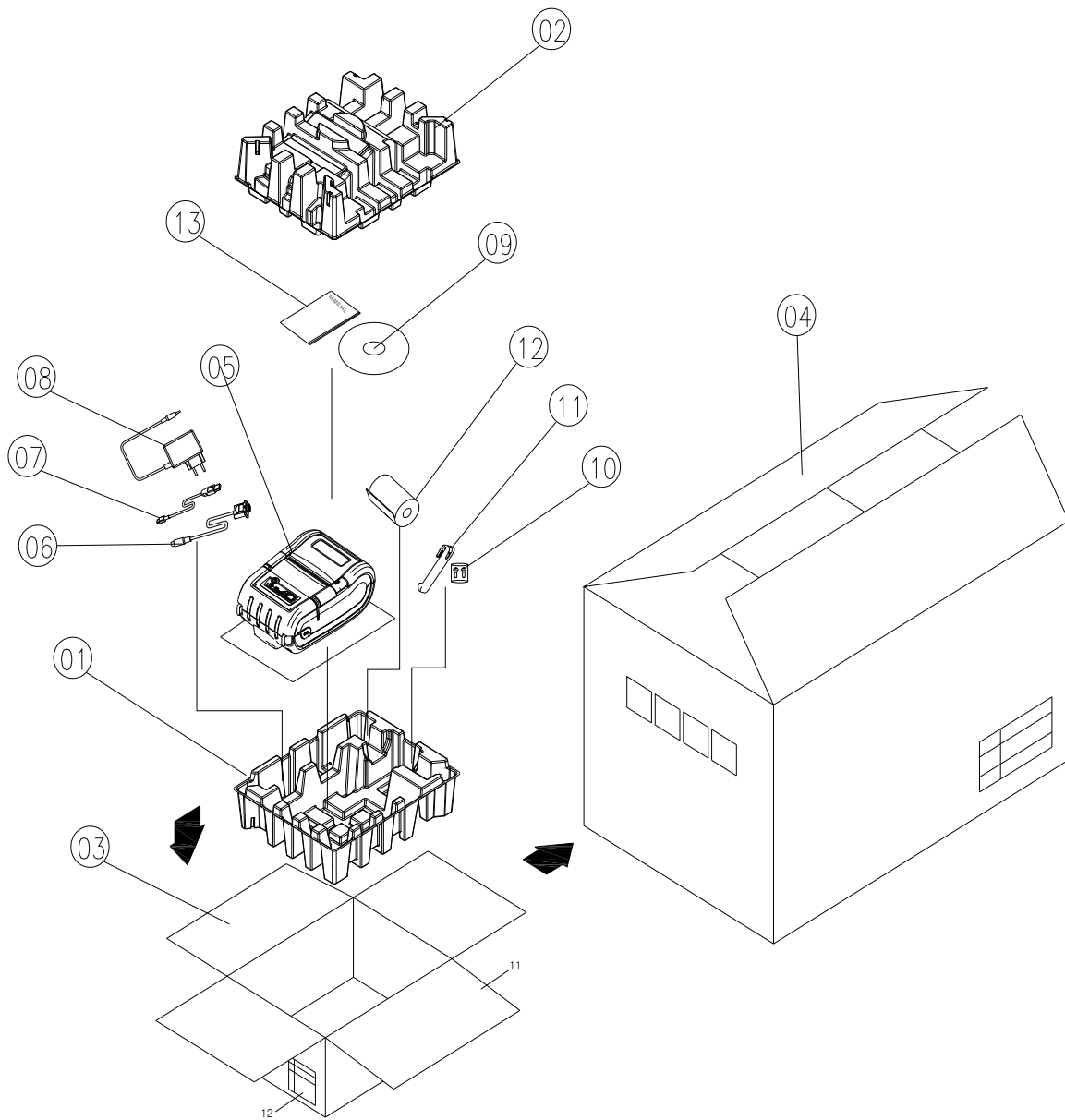


## LOWER HOUSING PARTS LIST

## CMP-20 EXPLODE VIEW

No.	Symbol	Parts No.	Description	Q'ty	Remarks
045	1	PM20MD-C002	LOWER HOUSING	1	
046	2	PM20PA-B001	PCB MAIN ASSEMBLY	1	
047	3	TB 2.0 X 8	SCREW	2	
048	4	2000435	BATTERY ASSEMBLY	1	
049	5	PM20MD-C009	BELT HOOK	1	
050	6	M 4.0*10 SN BH	SCREW	1	

EXPLODE VIEW



## PARTS LIST

## CMP-20 PACKING

No.	Symbol	Parts No.	Description	Q'ty	Remarks
051	1	PM20PK-C001	TOP CASE	1	
052	2	PM20PK-C002	BOTTOM CASE	1	
053	3	PM20PK-C003	UNIT BOX	1	
054	4		MASTER BOX	1	
055	5	PM20PK-C001	CMP-20 TOTAL ASS'Y	1	
056	6	PM20WH-C005	CABLE SERIAL MINI DIN 8P	1	
057	7	PM20WH-C001	CABLE USB CMP-20	1	
059	9	PM20PK-C001	MANUAL ; CD	1	
060	10	PM20CT-C004	SCREW BELT HOOK	2	
061	11	PM20MD-C009	BELT HOOK	1	
062	12		QUICK MANUAL	1	

## PARTS LIST

## CMP-20 MAIN PCB

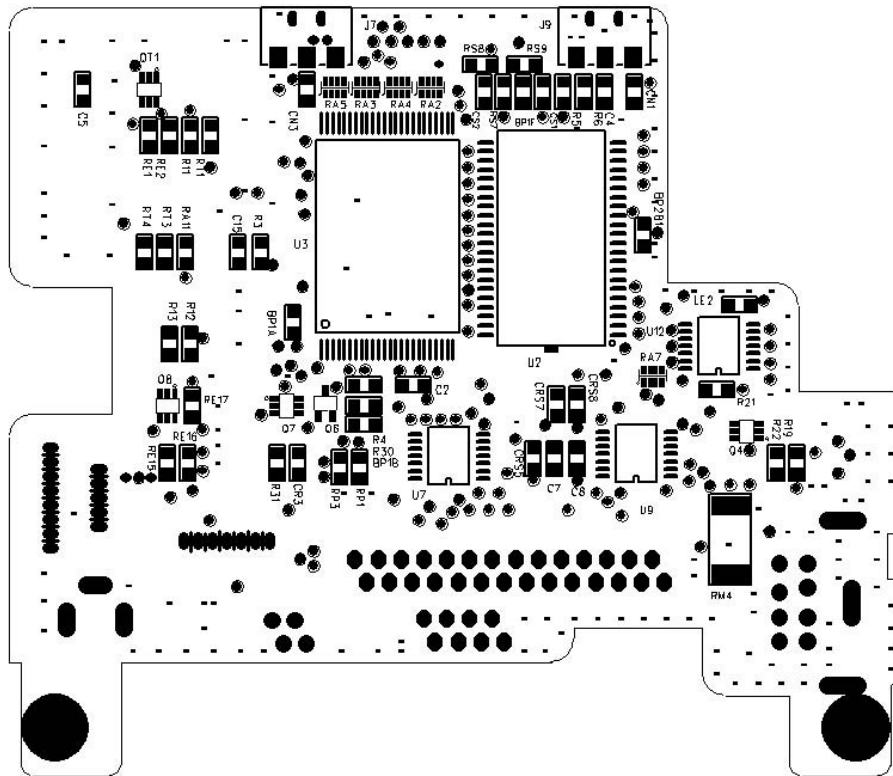
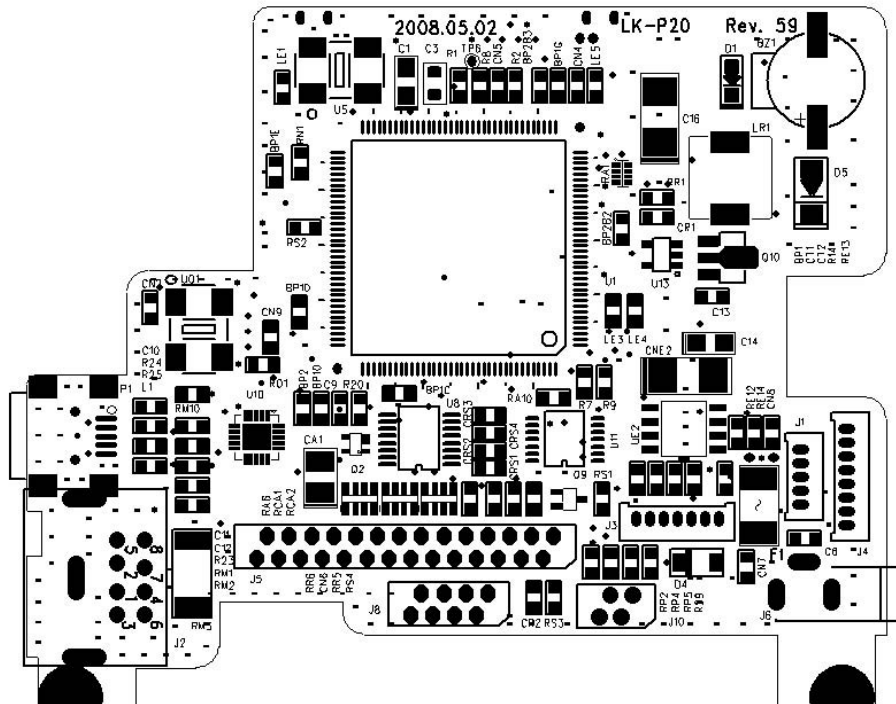
Symbol	Parts No.	Description	Q'ty	Remarks
	PM20BP-C001	PCB	1	
U1	STR710RZF2T6	IC	1	
U2	K6X4016V1C/44	IC	1	
U3	SST39VF1601-70-4C-EKE	IC	1	
U10	A3906	IC	1	
U9,U11,U12	SN74LVC04		3	
U7	SN74LVC08	IC	1	
U8	SP3232	IC	1	
UE2	TPCS81111	IC	1	
U13	S-8521	IC	1	
UO1	48MHZ OSC	OSC	1	
U5	16MHZ OSC	OSC	1	
Q2	S-80930C-G9FT2G	TR	1	
QT1,Q4,Q7,Q8	SUT485J S	TR	4	
Q6,Q9	FJX3904	TR	2	
Q10	KTA1663(SOT-89)	TR	1	
D1	KDS160	DIODE	1	
D5	SS16	DIODE	1	
D4	MBRX0503	DIODE	1	
F1	3.15A/24V	FUSE	1	
BZ1	YC-904S-03	BUZZER	1	
LR1	47uH	CHIP INDUCTOR	1	
L1,LE1,LE2,LE5,R S2	HB-1M1608-102J	BEAD CHIP	5	
LE3,LE4,R8,9,RO 1	HB-1M1608-600J	BEAD CHIP	5	
RA1-5,RA7	RC2012J103 10KΩ	RESISTOR CHIP ARRAY	6	
RCA1-2,RA6	RC3216J151 150Ω	RESISTOR CHIP ARRAY	3	
RP1-5,RE12,R12- 14,R24,25	100Ω	RESISTOR CHIP	11	
R11,RM10,RE17	150Ω	RESISTOR CHIP	3	
RS3	110Ω	RESISTOR CHIP	1	
RM1,RM2,RT1,RN 1,R1,R2,R3,RS1,R E1,RT3,RT4,R4, RR5,RR6,R7,RA1 0,RA11,RE13, RE15,R19,R20, R21,R30,R31	10K	RESISTOR CHIP	24	



## PARTS LIST

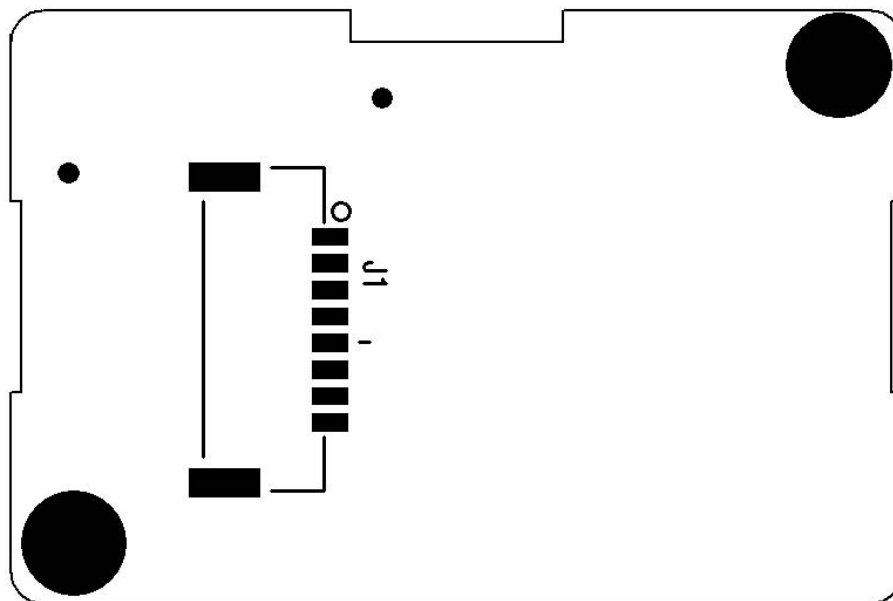
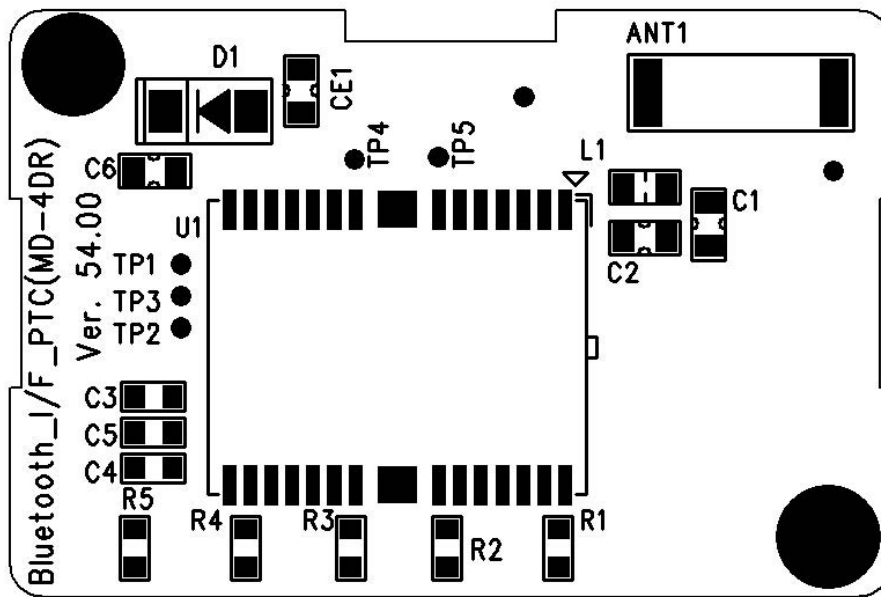
## CMP-20 MAIN PCB

Symbol	Parts No.	Description	Q'ty	Remarks
RS7	5.6K	RESISTOR CHIP	1	
RS8	180	RESISTOR CHIP	1	
RS9	560	RESISTOR CHIP	1	
R22	47K	RESISTOR CHIP	1	
R5	3.3K	RESISTOR CHIP	1	
R23	1.5K	RESISTOR CHIP	1	
RE14,R6	1K	RESISTOR CHIP	2	
RS14,R29	30K	RESISTOR CHIP	2	
RR1,RE2,RE16	470	RESISTOR CHIP	3	
RM3, RM4	0.75Ω	RESISTOR CHIP	2	
CNE2	100uF/10V	CAPACITOR TANTAL	1	
CA1,C14,C1	10uF	CAPACITOR TANTAL	3	
C3	1uF	CAPACITOR TANTAL	1	
C16	220uF	CAPACITOR TANTAL	1	
C9	0.01uF	CAPACITOR CHIP	1	
CS1,2,CT1,2,CRS1, 2,3,4,CR2,3 BP1,2,10,BP2B1,B P2B2,BP2B3,BP1A- G,C4,5,6,7,8, C10,C13,C15, CN1-4,CN6-8	0.1uF	CAPACITOR CHIP	38	
CRS5,CRS,7,CRS8	1nF	CAPACITOR CHIP	3	
C2	33nF	CAPACITOR CHIP	1	
CR1	0.022uF	CAPACITOR CHIP	1	
C11,C12	15pF	CAPACITOR CHIP	2	
J6	DC-002	DC-JACK	1	
J2	MINI DIN 8P	CONNECTOR	1	
J3	12512WS-07	CONNECTOR WAFER	1	
J4	12512WS-08	CONNECTOR WAFER	1	
J1	12512WS-05	CONNECTOR WAFER	1	
J5	FCZ100E-28SS-K	CONNECTOR FFC	1	
J10	FCZ100E-04SS-K	CONNECTOR FFC	1	
J7,J9	BAT_CON	CONNECTOR WAFER	2	
P1	MINI USB	CONNECTOR USB	1	
J8	FCZ100E-08SS-K	CONNECTOR FFC	1	



PARTS LIST  
CMP-20 BLUETOOTH PCB

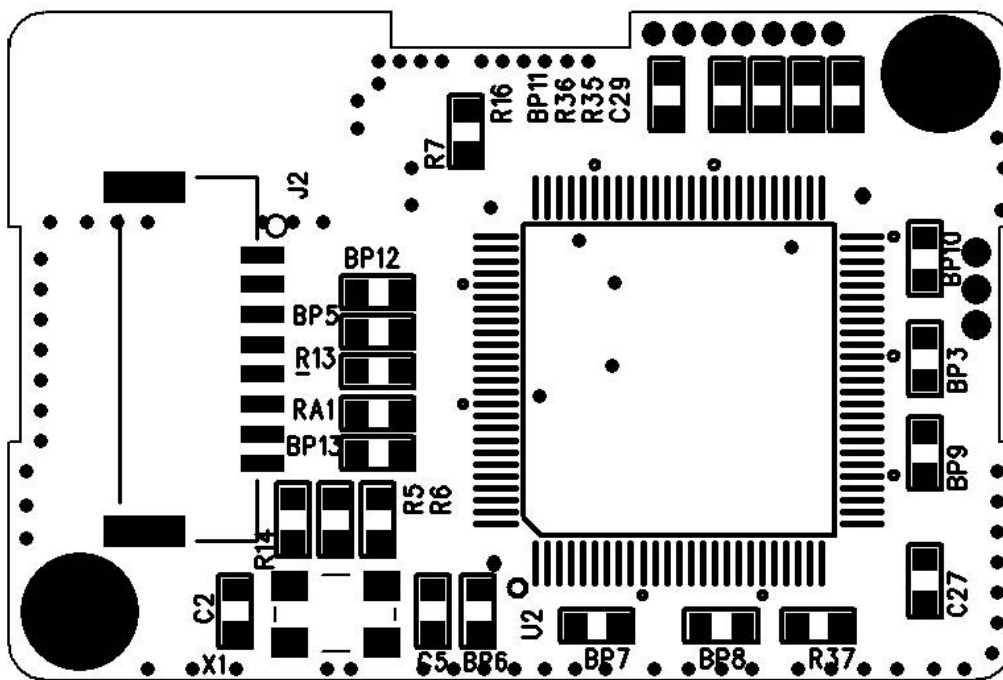
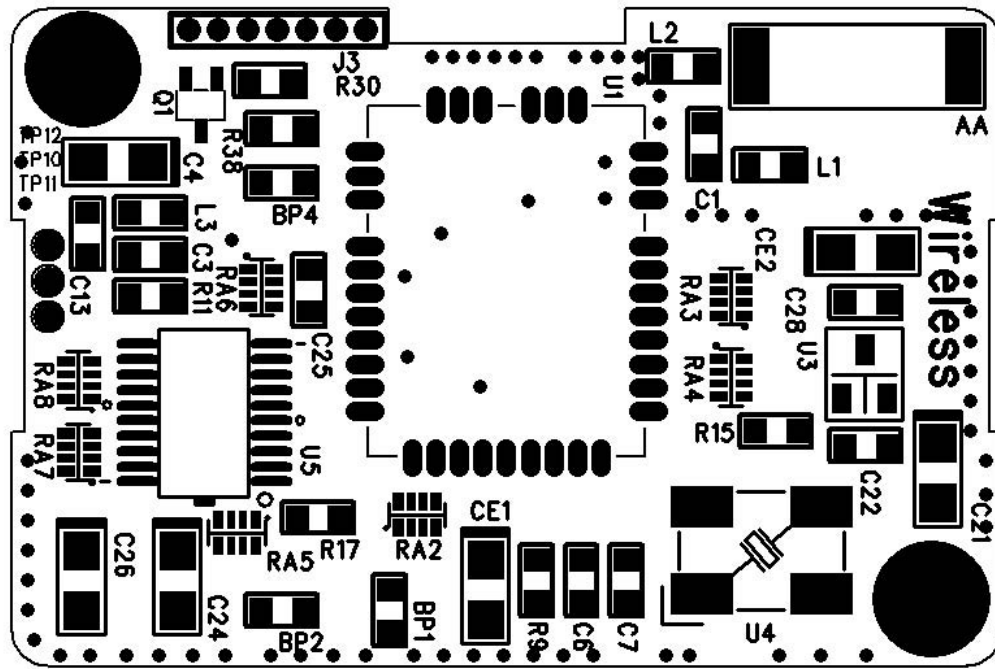
Symbol	Parts No.	Description	Q'ty	Remarks
	PM20PA-B101			
	PM20SH-C101			
	PM20PB-C101			
	PM20PB-C101	PCB REV 54(1.0T)	1	
U1	MD-4DR	MODULE	1	
ANT1	AMAN1130	ANT	1	
R1-R5	100	RESISTOR CHIP	5	
L1	0	RESISTOR CHIP	1	
C3,C4,C5,C6,CE1	0.1uF	CAPACITOR CHIP	5	
D1	SS16	DIODE	1	
J1	12513WR-08A	CONNECTOR WAFER	1	



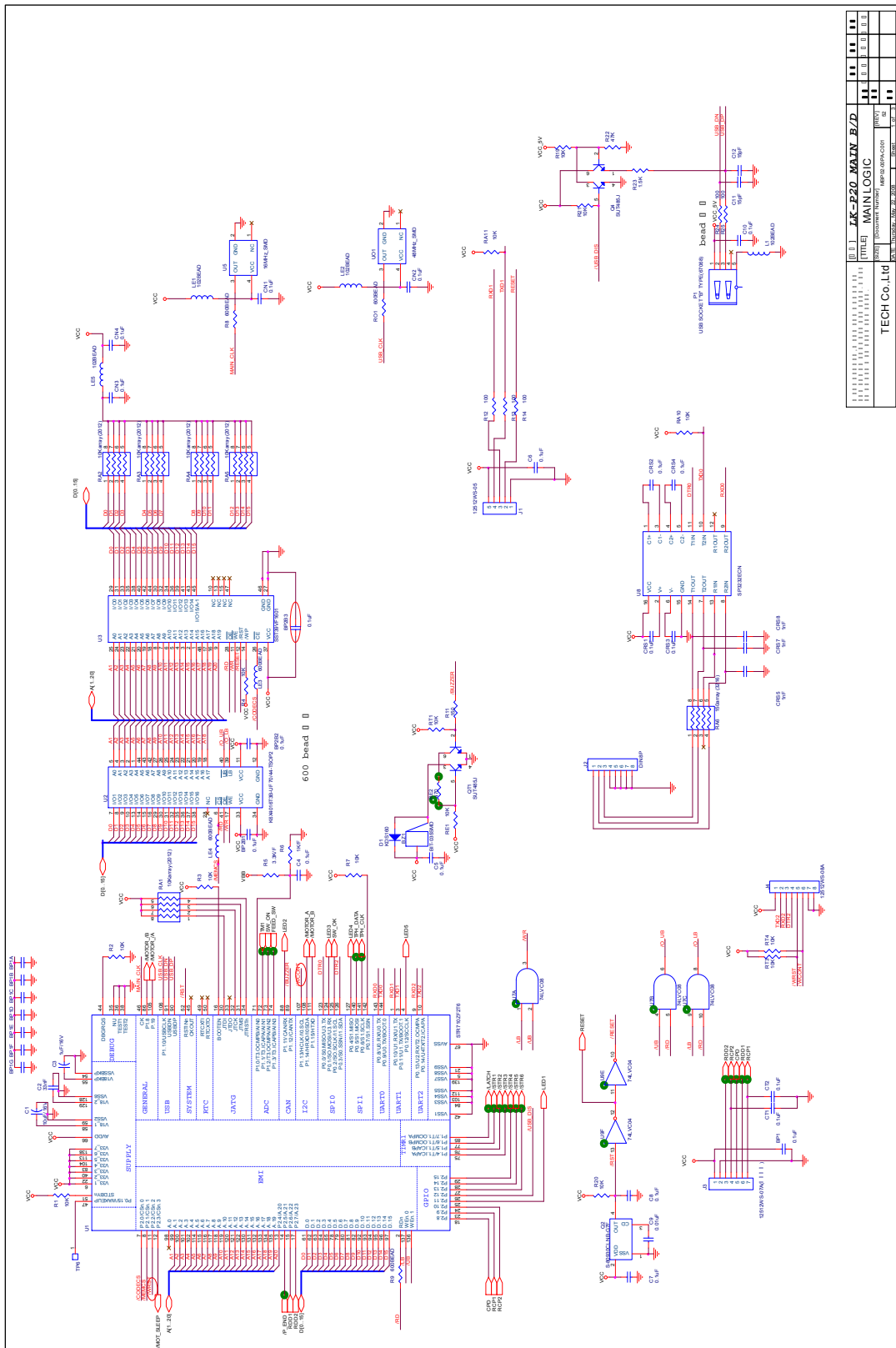
## PARTS LIST

## CMP-20 Wireless

Symbol	Parts No.	Description	Q'ty	Remarks
	PM20PB-C201	PCB	1	
U1	WM001	MODULE	1	
U2	AT91SAM7X512	IC CPU	1	
U3	ELM88181BA(SOT-23)	IC REGULATOR	1	
U5	TXB0108(TSOP20)	IC LEVEL SHIFTER	1	
U4	48MHZ OSC	OSC	1	
X1	11.0592MHz	CRYSTAL	1	
Q1	FJX3904	TR	1	
ANT1	AMAN1130	ANT	1	
R11	100Ω	RESISTOR CHIP	1	
RA1,R30	150Ω	RESISTOR CHIP	2	
R13,R14,R16, R35,R36,R37,R38	10K	RESISTOR CHIP	7	
R17	100K	RESISTOR CHIP	1	
R6	1M	RESISTOR CHIP	1	
R7	50Ω	RESISTOR CHIP	1	
R9	1.5K	RESISTOR CHIP	1	
C1,R15	0Ω	RESISTOR CHIP	2	
RA2-4	10K	RESISTOR CHIP ARRAY	3	
RA5-8	100K	RESISTOR CHIP ARRAY	4	
L1	HB-1M1608-600J	BEAD CHIP	1	
L3	HB-1M1608-102J	BEAD CHIP	1	
BP1-12,C3,C13,C20 C22,C25,C27-29	0.1uF	CAPACITOR CHIP	21	
C2,C5	20pF	CAPACITOR	2	
C6	1nF	CAPACITOR	1	
C7	10nF	CAPACITOR	1	
CE1,CE2,C21,C4	10uF	CAPACITOR TANTAL	4	
C19,C24,C26	1uF	CAPACITOR TANTAL	3	
J2	12513WR-08A	CONNECTOR WAFER	1	



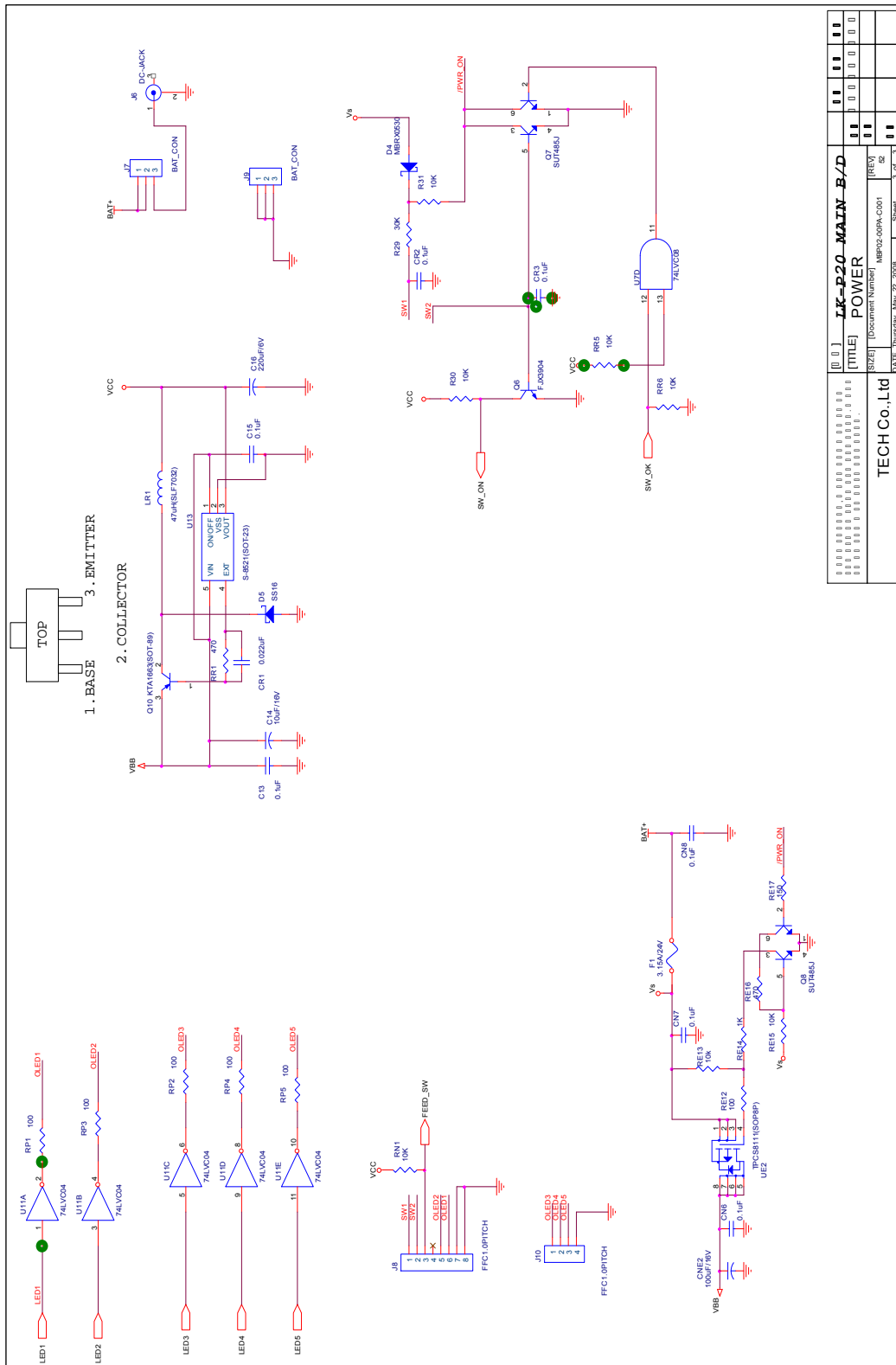
# 3. Circuit Diagram

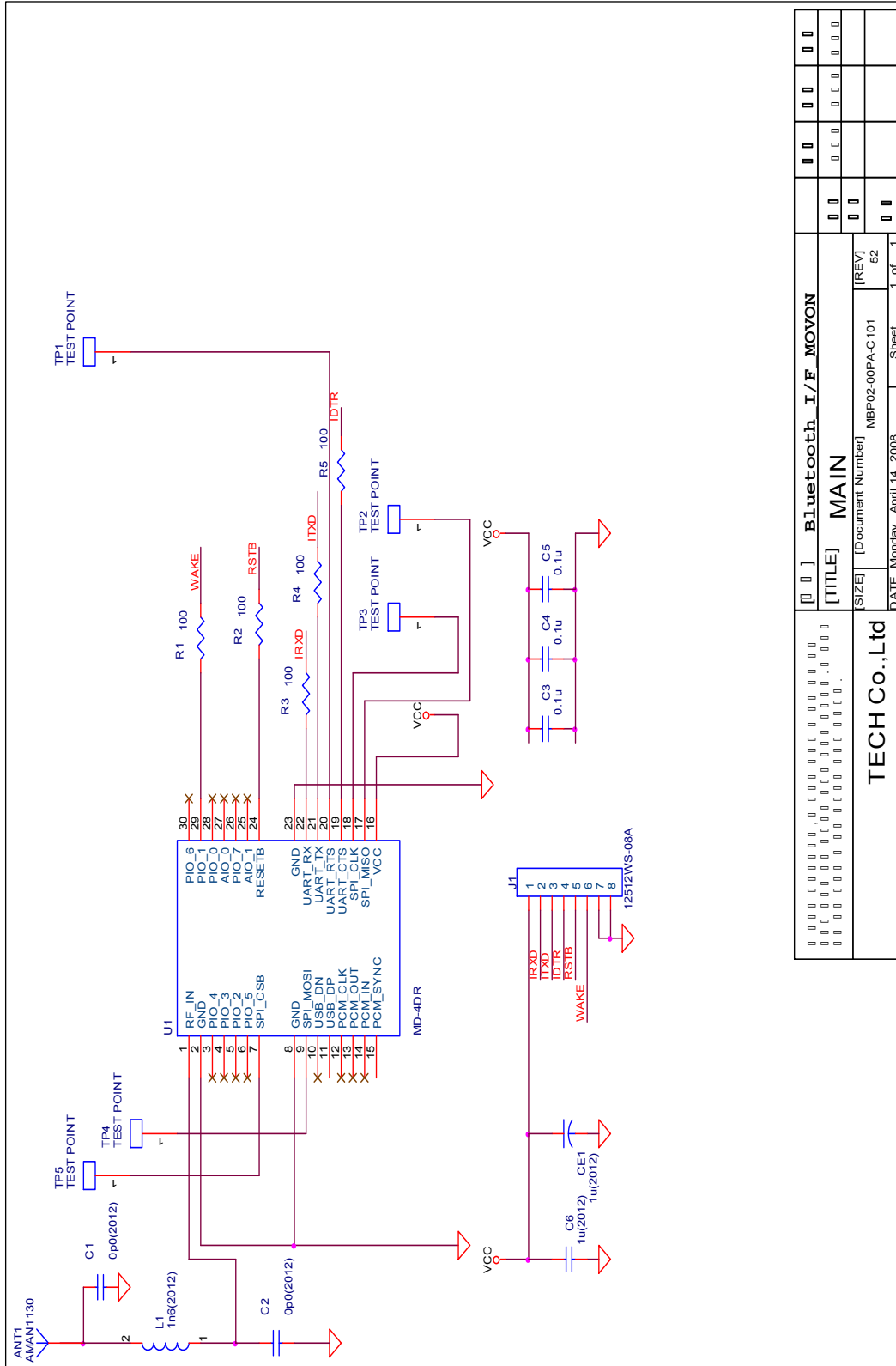


REV: 1.0	DATE: 10/2008	DESIGNER: S.M. ZAKARIA	DRAWN: S.M. ZAKARIA	CHECKED: S.M. ZAKARIA	DATE: 10/2008
TECH Co., Ltd					
PROJECT: CMP-20					
TITLE: MAIN LOGIC					
DESCRIPTION: MAIN LOGIC					
DRAWN BY: S.M. ZAKARIA					
CHECKED BY: S.M. ZAKARIA					
DATE: 10/2008					

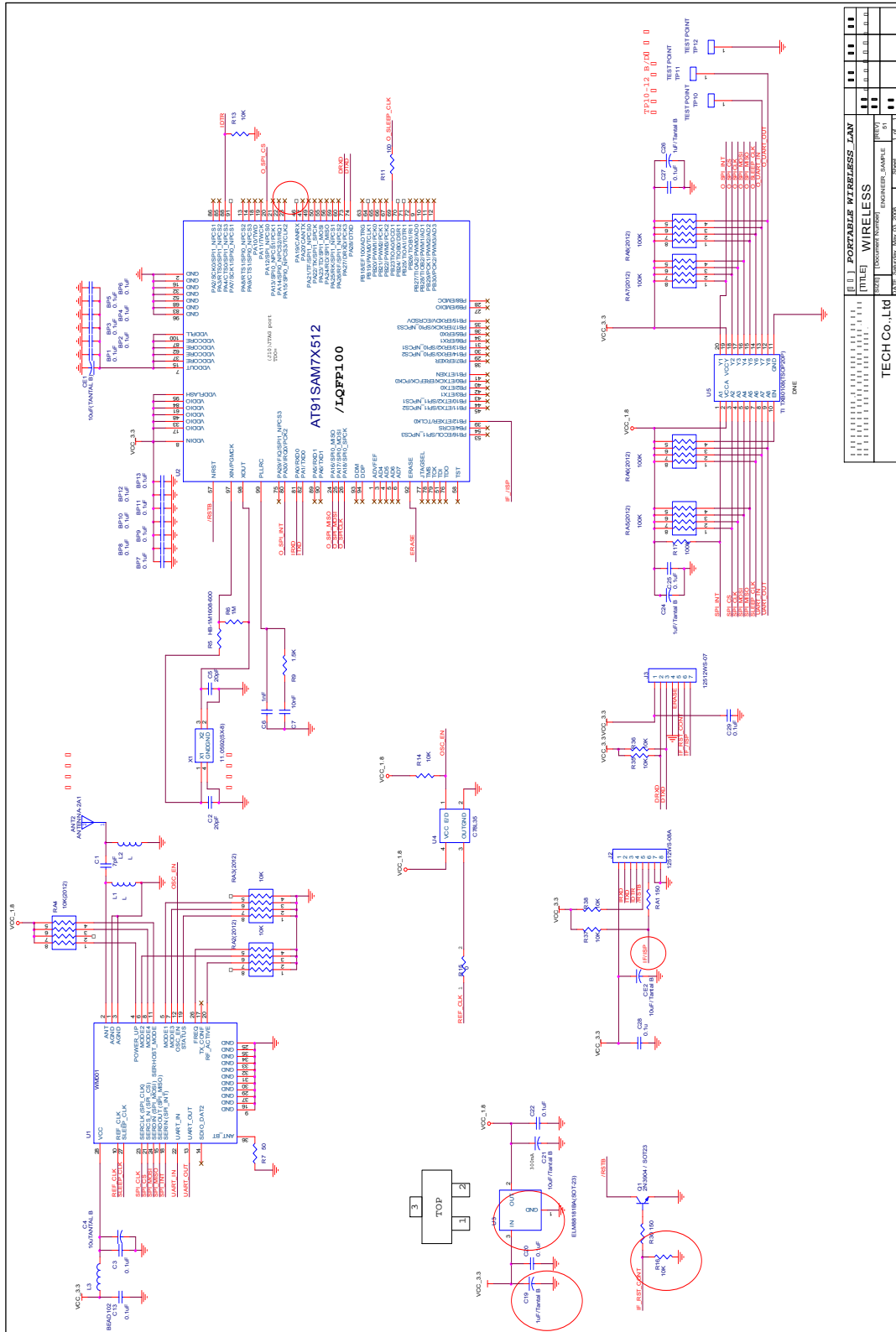








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