

APPROVAL SHEET

ITEM	SK Broadband Bluetooth Remote
DESCRIPTION	Android STB
PART NUMBER	BRM-BA01
RS MODEL	RD12A00
BUYER	SKB
DATE	2019. 08. 05
RCU VERSION	1.4
DOC VERSION	1.6

MAKER : REMOTE SOLUTION CO.,LTD.

CEHCK		APPROVAL
		
2019.08.05	2019.08.05	2019.08.05

DATE : 2019.08.05

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BRM-BA01 Version History (Android)

RCU Ver	Doc Ver	Date	Change Part	Description	Page																																												
1.0	1.0	18.12.14		BRM-BA01 (SKB Android) Approval sheet Initial																																													
1.2	1.1	19.01.10	Software	Software UPDATE - Improved external input button behavior after factory reset - Process Test Mode Update - Improvements related to IR learning function - Improved volume button behavior after BT connectio	9-14																																												
1.3	1.2	19.03.22	Software	Software UPDATE - Improved current C onsumbton problem	9-14																																												
1.3	1.2	19.03.22	hardware	Partialization of parts <table><tr><th></th><th colspan="2">Before</th><th colspan="2">After</th></tr><tr><th>Partname</th><th>Part number</th><th>manufacture</th><th>Part number</th><th>manufacture</th></tr><tr><td rowspan="5">PCB</td><td rowspan="5">RD12A,MAIN(FR-4,4L,1.2T,OSP)</td><td>Sinsung SG</td><td rowspan="5">RD12A,MAIN(FR-4,4L,1.2T,OSP)</td><td>Sinsung SG</td></tr><tr><td>APEX</td><td>APEX</td></tr><tr><td>Pengyu</td><td>Pengyu</td></tr><tr><td>ASK</td><td>ASK</td></tr><tr><td></td><td>GE</td></tr><tr><td rowspan="5">BUZZER SMD</td><td>HR-9027BT352</td><td>HS Tech</td><td>HR-9027BT352</td><td>HS Tech</td></tr><tr><td>BSMT-9032S-3027</td><td>Bosan Hi tech</td><td>BSMT-9032S-3027</td><td>Bosan Hi tech</td></tr><tr><td>BMV-2703</td><td>EL3</td><td>BMV-2703</td><td>EL3</td></tr><tr><td>KDM-09D-3V</td><td>NOSUNG</td><td>KDM-09D-3V</td><td>NOSUNG</td></tr><tr><td></td><td></td><td>BM9027S</td><td>FHD</td></tr></table>		Before		After		Partname	Part number	manufacture	Part number	manufacture	PCB	RD12A,MAIN(FR-4,4L,1.2T,OSP)	Sinsung SG	RD12A,MAIN(FR-4,4L,1.2T,OSP)	Sinsung SG	APEX	APEX	Pengyu	Pengyu	ASK	ASK		GE	BUZZER SMD	HR-9027BT352	HS Tech	HR-9027BT352	HS Tech	BSMT-9032S-3027	Bosan Hi tech	BSMT-9032S-3027	Bosan Hi tech	BMV-2703	EL3	BMV-2703	EL3	KDM-09D-3V	NOSUNG	KDM-09D-3V	NOSUNG			BM9027S	FHD	16 - 18
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			BM9027S	FHD																																													
1.4	1.3	19.04.09	Software	- Fixed a frozen rcu at the factory default with [*] + [3] key combination in empty battery status. - Fixed the CHIPID check to apply the ACC sensor(BMa250e and BMA253). - Fixed an issue where the [total power] key did not work after OTA. - Fixed a automatically exiting in setting mode at auto-search & group search in empty battery status.																																													
1.4	1.4	19.04.26	Design	Case , Manual , Back Label Change	27, 30,31																																												
1.4	1.5	19.05.31	Design	Back Label Chagne	30																																												
1.4	1.5	19.05.31	Mechanic	PE Bag Thickness Change	15,47																																												
1.4	1.6	19.08.02	Design Mechanic	Added Label Manual size tolerance Added Box size tolerance	30,31 48																																												

BRM-BA01 Product Design



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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	1
REFORM :		BRM-BA01	57
DECISION :			

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1. Application Range : This Technical specification was made by Remote solution for IR/BLE Remote control of SK Broadband Android Settop Box.

2. Product Specifications

2-1 Mechanical

2-1-1 Appearance

- 2-1-1-1 There should be no issue for Button Locking
- 2-1-1-2 There should be no stiff and looseness when opening or closing the battery cover
- 2-1-1-3 There should be no issue for attachment of label
- 2-1-1-4 There should be no spread of printing in RCU
- 2-1-1-5 There should be no warpage in RCU
- 2-1-1-6 There should be no stick effect from rubber
- 2-1-1-7 Spring turn count should be matching to Spec
- 2-1-1-8 There should be no electricity issue because of deformation of spring
- 2-1-1-9 Spring should be horizontal when inserting the Battery
- 2-1-1-10 Edge of Spring should be rounded
- 2-1-1-11 There should be no sharpness in case
- 2-1-1-12 The Printing of product should be same as product specification
- 2-1-1-13 When 5Kg of force is applied to each part of the body for 3 seconds, there should be no structural defects such as destruction
- 2-1-1-14 No other specific matters

2-1-2 Decomposition Structure

- 2-1-2-1 Confirmation of internal parts after disassembly should match specification (drawing)
- 2-1-2-2 There should be no abnormality when confirming the incorporation of components and soldering condition after disassembly
- 2-1-2-3 There should be no touching of Mechanical parts and Electronical parts
- 2-1-2-4 It should match the drawing (specification) when comparing with the parts list
- 2-1-2-5 PCB Print contents should match the drawings
- 2-1-2-6 Circuit components should use specified standard products
- 2-1-2-7 The Carbon Contact should not have Flux

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2-1-2-8 There should be no lead

2-1-2-9 Do not expose soldering copper area

2-1-3 Button Specification

2-1-4-1 Touch Feeling : There is no defect when key button is pressed vertically

2-1-4-2 Operating Force : Metal Dome 130g±20g

Rubber Key : Less then 220g±30g (Small Key)

Rubber Key : Less then 250g±30g (Large Key)

2-1-4-3 Operating distance : 0.5±0.1 mm

2-1-4-4 Return force : more then 40% of the operating force Spec[Key center measurement]

2-1-4-5 Load: There should no defect PCB and other general , when applied for 3 seconds
with a force of 3Kg vertically

2-1-4 Battery Specifications

2-1-4-1 There should no defect when battery injecting and ejecting

2-1-4-2 There should no defect of electronical contact when battery insert

2-1-4-4 Gap distance : Gap distance between (+) side and (–) side should be less than 0.4mm

2-1-4-5 Battery should not be energized in reverse

2-1-4-6 There should no battery heating or deformation of the mechanic when reversed
battery inserting

2-1-4-7 There should be no problem when checking battery compatibility by manufacturer
[Compatibility by Size: AAA(L=44.2~43.4, Φ10.5 ~9.5)] , AA (L=50.5~49.0 , Φ14.5 ~ 13.5)]

2-1-5 Dimension

Outside dimension of the product : must meet individual approval specs (overall Length Tolerance:±0.8)

GAP (standard 0.3 mm) - GAP: Front knob and side gap should be less than 0.6 mm.

However, only the total length is measured during import inspection

Product Size : 48mm*175mm*23mm

Weight : 131.7(±2)g (With AA Battery x 2EA)

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2-2 Electronical Specification

2-2-1 General Operating Test

2-2-1-1 There should be no problem in Button operation

2-2-1-2 In case of remote controller with Multi Brand, there should be no problem in operation by each other maker

2-2-1-3 Other buttons does not work when Button is operated

2-2-1-4 There should be no abnormality in continuous key operation

2-2-1-5 In case of various LEDs, there should be no problem when checking the brightness and blurring. [Set limit sample if necessary]

2-2-2 Current consumption

Function	How to Test	Condition	SPEC		
			2.2V	2.5V	3.0V
Sleep Current (before pairing)	Leave after power on	Average	20 uA	20 uA	20 uA
Sleep Current (After pairing)	Leave after power on	Average	40 uA	40 uA	40 uA
IR output	TV Volume (+) button	Peak	50 mA	50 mA	50 mA
IR output (when Back Lighting)	TV Volume (+) button	Peak		70 mA	65 mA
RF output	Volume (+) button	Average	10 mA	10 mA	10 mA
RF output (When Back Lighting)	Volume (+) button	Average		25 mA	25 mA
Buzzer operating	delete + 4	Peak	55 mA	60 mA	60 mA
Streaming Volume Max	Insert ear phone jack	Average	60 mA	55 mA	50 mA
-Watching BTV CH0					
Voice recognition	Press voice recognition button	Peak	15 mA	15 mA	15 mA
Back Lighting	Move the RCU	Peak		25mA	20mA

2-2-3 High Voltage : When inputting 3.4V voltage, there should be no abnormality in remote control key operation

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2-2-4 IR LED Current(2ohm) : Over 300mA (2 Battery)

2-2-5 Power Consumption : Less then 300mW (Battery 3.0V)

2-2-6 Oscillation frequency : Input Voltage : D.C 3.0V (Power supply 3.0V)

: 26.00 Mhz $\pm$ 10ppm

: 32.00 Mhz $\pm$ 10ppm

: 32.768 Khz $\pm$ 20ppm

2-2-7 Oscillation stop voltage: Less than 1.9V

2-2-8 All Key Operation Test

2-2-8-1 All Key operation is abnormal or not checked

2-2-8-2 There should be no abnormality when operating each key ON / OFF more than 10 times
[ON / OFF every 1 second]

2-2-9 Decompression / Boost Operating Voltage

2-2-9-1 There should be no problem in operation when repeating 5 times at 2.2V ~ 3.4V

2-2-9-2 Check the voltage at 0V starting operation

2-2-9-3 Check the operation stop voltage at the voltage drop from 2.2V

[However, when there is no regulation, it should be less than 2.2V]

2-2-10 Contact resistance

2-2-10-1 Conduction / Carbon is inspected according to specification

[Conduction: 200Ω or less / Carbon: 300Ω or less]

2-2-11 Transmission Format (Output Wave Form)

2-2-11-1 Format : uPD6122

2-2-11-2 Carrier : 37.9kHz $\pm$ 3%

2-2-11-3 Frame : Interval(TF) : 108ms $\pm$ 3%

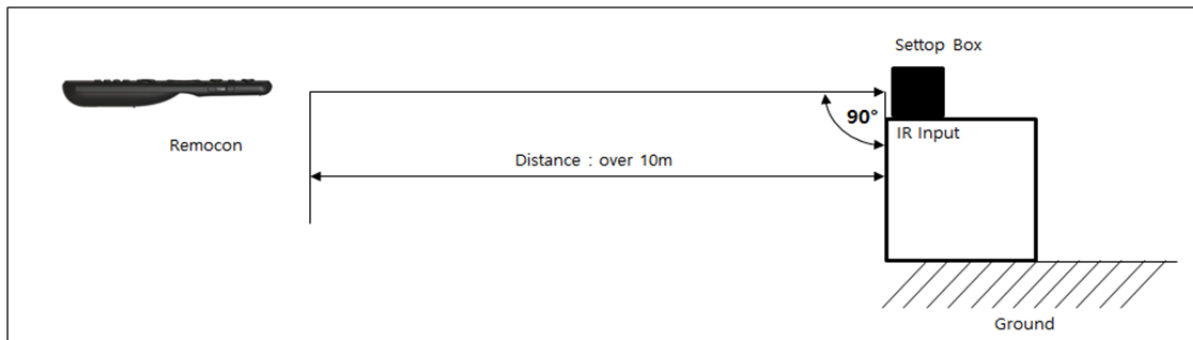
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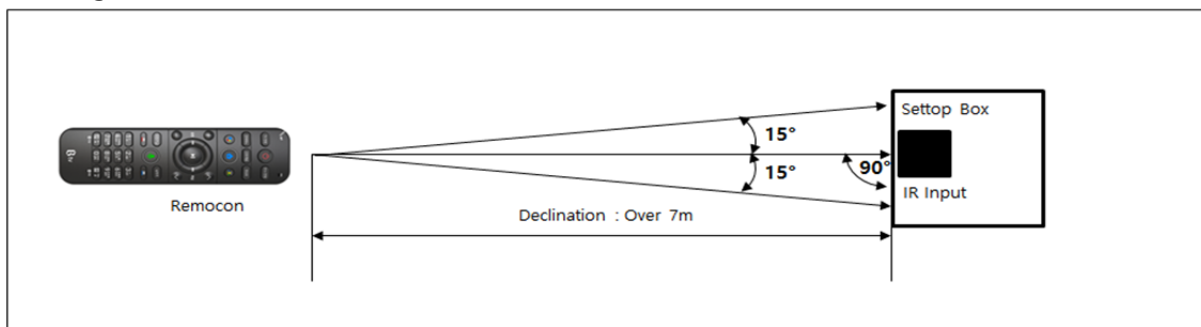
2-2-12 Operating distance and declination Operating distance:

2-2-12-1 Horizontal deflection (on optical axis) Straight line distance

When the receiver of the SET and the Remote Control Unit are horizontally or vertically on the optical axis



2-2-13-2 Remote control unit reference Horizontal deviation 15 ° (left, right, top, bottom) reaching distance (SET fixed)



2-2-12-3 RF straight line reach

RF Button : 10m

RF Voice Transmission : 7m

RF Streaming : 7m

- Measure using the buyer's set-top box. (Illumination : 200Lux, Temp. +25°C)

2-2-13 Streaming Function

2-2-13-1 When it is used for more than 4 hours, it is forcibly terminated automatically.

It works only when you insert it..

2-2-13-2 Earphone Jack Compatibility

- Type that can be inserted into Jack: 3.5mm (1/8 ")

Compatible Polarity Type: Stereo 3-polar or 4-polar (domestic and American type)

2-2-14 Buzzer Spec

Decibel : Measured at 10Cm distance using decibel meter: 85dB ±10dB

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3. Environmental characteristics

3-1 Printing test

3-1-1 Eraser test

3-1-1-1 No abnormality by carrying out the round trip 50 times with the load of 1.6Kg with the eraser

3-1-1-2 There should be no abnormality by scratching the printed surface with the fingernail 5 times.

3-1-2 Tape Test

3-1-2-1 After printing, coating area is attached with Tape with 1Kg load, it is peeled at 45 ° and tested after 3 times test

3-1-3 Alcohol test

3-1-3-1 Gently apply alcohol to the gauze and perform 20 ~ 50 reciprocations with a load of 1 kg.
(CASE: 20 times, RUBBER: 50 times)

3-1-4 Coating property

3-1-4-1 After leaving 2HR at room temperature, 3M SCOTCH Brand No. 600 or more TAPE equivalent or better After close contact, do not pull instantly at 15° from flat surface.

3-2 Reliability Test

3-2-1 Load Life Test

3-2-1-1 After inserting the batteries and operating at a rate of 30 ~ 60 times per minute and operating 100,000 times : There should be no abnormality in function when inspecting.

3-2-2 High temperature operation test

3-2-2-1 50 ° C ± 3 ° C, humidity 65%, and left for 24 hours

The operation inspection shall be carried out at intervals of 12 hours, so that there should be no abnormality in function and appearance

3-2-3 Low-temperature operation test

3-2-3-1 Put a rated load in a thermostat of -5 ± 3 ° C and leave it for 24 hours

The operation inspection shall be carried out at intervals of 12 hours, so that there should be no abnormality in function and appearance.

3-2-4 High temperature and high humidity operation test

3-2-4-1 Leave at rated temperature of 50 ± 3 ° C and humidity 80% for 24 hours

The operation inspection shall be carried out at intervals of 12 hours, so that there should be no abnormality in function and appearance.

3-2-5 High temperature preservation test

3-2-5-1 Leave in a thermostatic chamber at 70 ± 3 ° C for 48 hours in a no-load state, and

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leave it at room temperature and humidity for 1 hour

There should be no abnormality in function and appearance at the time of inspection

3-2-6 Cold storage test

3-2-6-1 Allow to stand for 48 hours in a no-load state in a thermostat at $-20 \pm 3^{\circ}\text{C}$ for 1 hour

There should be no abnormality in function and appearance at the time of inspection

3-2-7 High temperature and high humidity preservation test

3-2-6-1 Temperature $50 \pm 3^{\circ}\text{C}$ Leave in a constant temperature chamber of 95% humidity for 48 hours in a no-load state, and leave for one hour at normal temperature and humidity

There should be no abnormality in function and appearance at the time of inspection

3-2-8 Thermal shock test

3-2-8-1 Temperature: $70 \pm 3^{\circ}\text{C} \sim -20 \pm 3^{\circ}\text{C}$, 50 cycles at intervals of 30 minutes, left at room temperature and humidity for 1 hour

There should be no abnormality in function and appearance at the time of inspection.

3-2-8 Vibration test

3-2-8-1 Vibration frequency: 20Hz ~ 2000Hz ~ 20Hz / 1Cycle Exact width: 1.5 ~ 3mm, Peak acceleration: 20 minutes each in X, Y and Z directions

There should be no abnormality in examination

3-2-9 Drop Test

3-2-9-1 Tested on Hardwood 6 times, once every 4 times [Dropping at 100cm after battery insertion]

3-2-9-1-1 No Top / Bottom Widening and Crack

3-2-9-1-2 No defective energization due to spring deformation

3-2-9-1-3 There should be no stick phenomenon due to the rubber deviation.

3-2-9-1-4 There should be no other unusual phenomenon.

3-2-10 Static test

3-2-10-1 Place the R / C with the battery inserted on the copper plate and perform the static test

3-2-10-1-1 $\pm 10\text{kV}$: No problem in operation

3-2-10-1-2 $\pm 12\text{kV}$: No destruction

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4. Software Specification (1/6)



APAC SKB UE878-based RCU Database Specification

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APAC SKB UE878-based RCU Database Specification

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1 Introduction

1.1 Purpose & Description

This document describes the Database requirements for SKB UE878-based RCU 2018.

- BUE-BA01
- BUE-SR01

1.2 Key Table for BA01

No	Key	Key (English)
1	통합전원	All Power
2	TV 전원	TV Power
3	B tv 전원	B tv(STB) Power
4	전체메뉴	All Menu
5	선호채널	Favorite Channel
6	편성표	Guide
7	TV 음량+	TV Vol +
8	TV 음량-	TV Vol -
9	TV 외부입력	TV Input
10	조용히	Mute
11	구글어시스턴트	Google Assistant
12	홈	Home
13	키즈	Kids Zone
14	음량+	Vol+
15	음량-	Vol-
16	▲(상)	Up
17	▼(하)	Down
18	◀(좌)	Left
19	▶(우)	Right
20	OK	OK
21	채널A	ChannelA
22	채널V	ChannelV
23	이전	Previous
24	나가기	Exit
25	마이크	Mic
26	◀◀(되감기)/R	Rewind / R
27	▶▶(빨리감기)/B	Fast Forward / B
28	1	1
29	2	2
30	3	3
31	4	4
32	5	5
33	6	6
34	7	7
35	8	8
36	9	9
37	*/문자지움	*/Delete
38	0	0
39	#/문자변환	#/Language



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APAC SKB UE878-based RCU Database Specification

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1.3 IR Configuration

1.3.1 Default Devices & Settings

Device	Default Code
Cable	C6026(Default Codeset), C6027 (Mode 2)
TV	T1860 + T2051 (LG + Samsung Combo Codeset)

1.3.2 Library Requirements

1.3.2.1 STB Codeset

- Standard NEC protocol
- However, Some keys, like <All Power>, <Home>, use the combo signal to send the SKB-specific IR code (this is handled by RCU FW separately)
- <HOME> key requires Break code (not All other keys should not have Break code)

1.3.2.2 TV Codesets

- Embedded codeset required

1.3.3 Device Mode Mapping

Device	Default Code	Device Type
Universal TV	T	1

1.4 STB IR / RF Key Physical Key Table

No	Key name	Key Name	STB	TV	MODE1 CUSTOM 0x807F	MODE2 CUSTOM 0xF5A0	Page	Usage ID
		(in English)			C6026	C6027		
1	통합전원	All Power	V	V	BTV Power + TV Power	BTV Power + TV Power		
2	TV 전원	TV Power		V	[0x02FD]+[0x08F7]	[0x02FD]+[0x08F7]		
3	B tv 전원	B tv(STB) Power	V		0x01FE	0x01EF	0x07	0x0100
4	전체메뉴	All Menu	V		0x47B8	0x478B	0x07	0x4700
5	선호채널	Favorite Channel	V		0x56A9	0x569A	0x07	0x5600
6	편성표	Guide	V		0x6D92	0x6D29	0x07	0x6D00
7	TV 음량+	TV Vol +		V	[0x07F8]+[0x02FD]	[0x07F8]+[0x02FD]		
8	TV 음량-	TV Vol -		V	[0x0BF4]+[0x03FC]	[0x0BF4]+[0x03FC]		
9	TV 외부입력	TV Input		V				
10	조용히	Mute	V		0x45BA	0x45AB	0x07	0x4500
11	구글어시스턴트	Google Assistant	V		0xD42B	0xD4B2	0x07	0x2102
12	홈	Home	V		0x02FD	0x02DF	0x07	0x0200
13	키즈	Kids Zone	V		0x58A7	0x587A	0x07	0x5800
14	음량+	Vol+	V		0x43BC	0x43CB	0x07	0x4300

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Database Specification

15	음량-	Vol-	v	0x42BD	0x42DB	0x07	0x4200
16	▲(상)	Up	v	0x49B6	0x496B	0x07	0x4900
17	▼(하)	Down	v	0x4AB5	0x4A5B	0x07	0x4A00
18	◀(좌)	Left	v	0x4BB4	0x4B4B	0x07	0x4B00
19	▶(우)	Right	v	0x4CB3	0x4C3B	0x07	0x4C00
20	OK	OK	v	0x46B9	0x469B	0x07	0x4600
21	채널^	Channel^	v	0x40BF	0x40FB	0x07	0x4000
22	채널v	ChannelV	v	0x41BE	0x41EB	0x07	0x4100
23	이전	Previous	v	0x4EB1	0x4E1B	0x07	0x4E00
24	나가기	Exit	v	0x34CB	0x34BC	0x07	0x3400
25	마이크	Mic	v	0xD12E	0xD1E2	0x07	0x2300
26	◀◀(되감기)/ R	Rewind / R	v	0x609F	0x60F9	0x07	0x6000
27	▶▶(빨리감기) / B	Fast Forward / B	v	0x639C	0x63C9	0x07	0x6300
28	1	1	v	0x21DE	0x21ED	0x07	0x2100
29	2	2	v	0x22DD	0x22DD	0x07	0x2200
30	3	3	v	0x23DC	0x23CD	0x07	0x2300
31	4	4	v	0x24DB	0x24BD	0x07	0x2400
32	5	5	v	0x25DA	0x25AD	0x07	0x2500
33	6	6	v	0x26D9	0x269D	0x07	0x2600
34	7	7	v	0x27D8	0x278D	0x07	0x2700
35	8	8	v	0x28D7	0x287D	0x07	0x2800
36	9	9	v	0x29D6	0x296D	0x07	0x2900
37	*/문자지움	*/Delete	v	0x2AD5	0x2A5D	0x07	0x2A00
38	0	0	v	0x20DF	0x20FD	0x07	0x2000
39	#/문자변환	#/Language	v	0x2BD4	0x2B4D	0x07	0x2B00
Virtual Key Table							
40	I ◀◀뒤건너뛰기	Skip Reverse	v	0x649B	0x64B9	0x07	0x6400
41	▶/II (재생/일시정지)	Play/Pause	v	0x629D	0x62D9	0x07	0x6200
42	▶▶ I (앞건너뛰기)	Skip Forward	v	0x659A	0x65A9	0x07	0x6500
43	123	123	v	0x2CD3	0x2C3D	0x07	
44	음량 STB 로 설정	Volume lock to STB	v	0x916E	0x91E6	0x07	
45	음량 TV 로 설정	Volume lock to TV	v	0x926D	0x92D6	0x07	
46	선호채널 Up	Favorite Channel Up	v	0x956A	0x95A6	0x07	
47	선호채널 Down	Favorite Channel Down	v	0x9669	0x9696	0x07	
48	Channel Toggle	Ch for All Ch (a)	v	0x936C	0x93C6	0x07	0x9300
49		Ch for Fav Ch (B)	v	0x946B	0x94B6	0x07	0x9400
Special Key Table							
1	Normal Battery	Normal Battery	v	0x3AC5	0x3A5C	0x07	0x3A00
2	Low Battery	Low Battery	v	0x3BC4	0x3B4C	0x07	0x3B00

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APAC SKB UE878-based RCU

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Database Specification

3	Empty Battery	Empty Battery	V	0x3CC3	0x3C3C	0x07	0x3C00
4	EarJack Insert	EarJack Insert	V	0x3DC2	0x3D2C	0x07	0x3D00+0x FFFF
5	Break Data Code	Break Data Code	V	0xFF00	0xFF00	0x07	0xFFFF
6	동조 시작	TV Sync Start	V	0x54AB	0x54BA	0x07	0x5400+0x FFFF
7	동조 종료	Sync Stop	V	0x55AA	0x55AA	0x07	0x5500+0x FFFF
8	드래그 모드(상)	Drag Mode – Up	V	0x8778	0x8787	0x07	0x8700+0x FFFF
9	드래그 모드(하)	Drag Mode – Down	V	0x827D	0x82D7	0x07	0x8200+0x FFFF
10	드래그 모드(좌)	Drag Mode – Left	V	0x837C	0x83C7	0x07	0x8300+0x FFFF
11	드래그 모드(우)	Drag Mode - Right	V	0x847B	0x84B7	0x07	0x8400+0x FFFF
12	IR_RCU_NOT_CO NN	IR_RCU_NOT_CONN	V	0xD22D	0xD2D2	N/A	N/A
13	RTT Voice Start	RTT Voice Start	V	0x906F	0x90F6	0x07	0x9000
14	(Reserved) - TBD	(Reserved)	V	0xD32C	0xD3C2	0x07	0xD300

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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	14
REFORM :		BRM-BA01	57
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APAC SKB UE878-based RCU Database Specification

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1.5 TV Key code Load List

T0001	T0354	T1377	T2297	T4646	T7134
T0003	T0374	T1378	T2300	T7098	T7135
T0027	T0391	T1474	T2308	T7099	T7136
T0035	T0402	T1480	T2377	T7106	T7137
T0036	T0425	T1524	T2434	T7107	T7138
T0044	T0463	T1543	T2731	T7108	T7139
T0060	T0482	T1569	T2799	T7109	T7140
T0066	T0491	T1606	T2855	T7110	T7141
T0068	T0571	T1697	T2877	T7111	T7142
T0092	T0627	T1703	T3115	T7112	T7143
T0093	T0634	T1728	T3129	T7113	T7144
T0095	T0653	T1867	T3291	T7114	T7145
T0145	T0672	T1895	T3382	T7115	T7146
T0153	T0683	T1907	T3418	T7116	T7147
T0154	T0698	T1911	T3498	T7118	T7148
T0158	T0810	T1920	T3506	T7119	
T0170	T0813	T1924	T3559	T7120	
T0172	T0835	T1934	T3582	T7121	
T0177	T0841	T1935	T3676	T7122	
T0178	T0876	T1959	T3785	T7123	
T0180	T1046	T1985	T3787	T7124	
T0186	T1130	T2050	T3908	T7125	
T0208	T1152	T2051	T4165	T7127	
T0214	T1244	T2062	T4182	T7128	
T0232	T1273	T2165	T4195	T7129	
T0254	T1294	T2256	T4206	T7130	
T0264	T1298	T2262	T4399	T7131	
T0279	T1371	T2275	T4590	T7132	
T0329	T1373	T2283	T4613	T7133	

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5. Part List

5.1 Mechanical List

No.	Part Name	Spec	Q'ty	Maker	비고
1	TOP CASE	ABS HF-0680, K21383(BLACK), SILK1	1	Ilsang Elect	
2	BOTTOM COVER	ABS HF-0680, K21383(BLACK)	1	Ilsang Elect	
3	BATTERY COVER	ABS HF-0680, K21383(BLACK)	1	Ilsang Elect	
4	IR WINDOW	PC SC-1220R, 40697 B (D/Red)	1	Ilsang Elect	
5	CH VOL KNOB	ABS HF-0680, K21383(BLACK), SILK1	1	Ilsang Elect	
6	INDICATOR LED	PC Milky, LD7800, W1020J(MILKY) / TP-1020, LDW542(MILKY)	1	Ilsang Elect	
7	RING LED	PC Milky, LD7800, W1020J(MILKY) / TP-1020, LDW542(MILKY)	2	Ilsang Elect	
8	SIDE KEY MUTE	ABS HF-0680, K21383(BLACK), SILK1	1	Ilsang Elect	
9	SIDE KEY VOLUME	ABS HF-0680, K21383(BLACK), SILK1	1	Ilsang Elect	
10	RUBBER KEYPAD	SILICONE, 성형1도(CLEAR), SILK5, SPRAY2, LASER, SOFT COATING	1	RS HK	
11	METAL DOME SHEET	Φ5DR, 130G, 35KEY	1	J&TECH	
12	(+)SPRING	SUS 304 NI-CO Φ0.6	1	DS-hitech	
13	(-)SPRING	SUS 304 NI-CO Φ0.6	1	DS-hitech	
14	COMMON SPRING	SUS 304 NI-CO Φ0.6	1	SG Spring	
15	MESH	MESH, RC56,0.05T	2	Alotech	
16	PE BAG	80X265X0.08T, RECYCLE MARK	1	Gun-A Tech	
17	CARTON BOX	553*415*282 (80EA/1Box)	0.0125	DH	
18	BACK LABEL	BOPP,30X42,SILK2	1	Top print	
19	MANUAL	SMILAR PAPER,250X170	1	Morning Print	
20	LABEL	ART PAPER, 16X4	1	Top print	
21	PASS LABEL	ART PAPER,15X30,SILK2	1	Top print	
22	TAPE	TAPE, RB50	1	J&Tech	

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5.2 Electronical Part List

PART NAME	PART NUMBER	Manufacture	Q'ty	Location
BLUETOOTH IC	UE878NMEG_R(QFN40P)	UEI	1	U1
BLUETOOTH IC	CSR8630B04(QFN56)	Qualcomm	1	U3
IO EXPANDER IC	PI4IOE5V6408ZTAEX-UQFN16	Diodes	1	U2
BAND PASS FILTER	LFB182G45CL3D264	Murata	1	U4
HEADPHONE AMP IC	TPA6132A2RTER(WQFN16)	TI	1	U7
ACCELEROMETER IC	LIS2DH12TR(LGA-12)	STmicro	1	U8
ANTENNA CHIP	ACA3216A1CCS	INPAQ	2	ANT1,ANT2
PHOTO TRANSISTOR	PT12-21B-TR8(SMD,R/A)	Everight	1	PT1
ELECTRO CAP CHIP	47UF,16V,±20%,5053	Samhwa Samyoung Teapo GuoYu BaiYang Liron	1	CE1
LED	BL-HZ336G-L8-TRB(WHITE,T4-4J,1608) 19-217UTD/S759/TR8(WHITE,C,1608) HL-PT-1608H322W-L(WHITE,HF4,1608)	Bright LED Everight Hong-Li	23	LED2,LED3,LED4,LED5,LED6,LED7,LED8,LED9,LED10,LED11,LED12,LED13,LED14,LED15,LED16,LED17,LED18,LED19,LED20,LED21,LED22,LED23,LED24
LED DUAL	BL-HGEJE36HTRB(RED/YG,15,1612)		1	LED1
IR LED SMD	BIR-HMC33K-TRB(30DEG,1206)		1	IR2
IR LED SMD	BIR-HMC33M-TRC-SIDE(30DEG)		1	IR1
TACT SWITCH SMD	SKRTLAE010(1.6N,R/A)	Alps Eastun Ele.	4	KB15,KB22,KB28,KB34
MIC	F1-(A)HDMO-D100R26-5P F4-(A)HDMO-D100R26-5P ZTS6071	BSE BSE ZillTek	1	MIC1
X-TAL SMD	32MHZ,10PPM,9PF,QS3225	H&S Sunny Partron Seiko	1	X2
X-TAL SMD	26MHZ,10PPM,12PF,SX-32,3225		1	X3
X-TAL SMD	32.768KHZ,20PPM,12.5PF,KS3215		1	X1
TRANSISTOR NPN	MMBTSD123(SOT23) STD123S(SOT23)	PANJIT KEC IMS Semtech Diodes Onsemi Fairchild UTC Vishay Changjiang First silicon	4	Q5,Q6,Q7,Q8
SCHOTTKY DIODE	MBR0540W-HAF(SOD123FL) MBR0540(SOD123) MBR0540T1-D(SOD123)		1	D1
FET P-CH	FTK2301(SOT23) IMP2301A(SOT-23) CJ2301(SOT23-3)		1	Q1
FET N-CH	2N7002K(SOT23) MMBT7002K(SOT23)		3	Q2,Q3,Q4
BUZZER SMD	HR-9027BT3S2 BSMT-9032S-3027 BMY-2703 KDM-09D-3V BM9027S	HS Tech Bosan EL3 FHD	1	BZ1
DC-DC IC	TPS61097A-33DBVR IM8132S	Ti IMS	1	U6

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SERIAL EEPROM	M24C64-FMN6TP(SOIC8) GT24C64A AT24C64A IM24C64P	ST Giantec Atmell IMS Semtech AIT	1	U5
BEAD	1.5K,±25%,0.1A,1005	TDK MAX-ECHO Murata Sunlord Chilisin Samsung Fenghua INPAQ Pikcor Darfon	1	FB1
PHONE JACK SMD	PJ-357 PJ-356 PJ-3571-L6G PJ-3571-L1G	IRIS YUQIU Hantech nosung Gana	1	J2
INDUCTOR	4.7UH,±20%,750MA,2012	H&S Sunlord Murata	3	L7,L8,L9
INDUCTOR	2.4NH,±0.3NH,300MA,1005	TDK INPAQ MAXECHO	1	L6
INDUCTOR	2.7NH,±0.3NH,1005	Samsung Chilisin Fenghua	1	L2
INDUCTOR	1.5NH,±0.3NH,300MA,1005	Pikcor Darfon	1	L3
MLCC	22NF,X7R,±10%,1005	MURATA TDK Samsung YAGEO Taiyouden WALSIN Darfon samhwa AVX Kyocera KEMET Eyang Fenghua NIC Compenets Pikcor	1	C2
MLCC	1.2PF,NP0,±0.25PF,1005		2	C7,L1
MLCC	10UF,X5R,±20%,1608		5	C5,C35,C37,C38,C39
MLCC	1PF,NP0,±0.25PF,1005		3	C8,C9,C10
MLCC	150PF,X7R,±10%,1005		1	C55
MLCC	15PF,C0G,±5%,1005		4	C13,C14,C15,C16
MLCC	1UF,X5R,±10%,1005		4	C29,C34,C45,C53
MLCC	2.2UF,X5R,±20%,1608		7	C19,C20,C21,C30,C41,C46,C48
MLCC	220NF,X7R,±10%,1005		4	C42,C43,C44,C47
MLCC	10NF,X5R,±10%,1005		3	C3,C40,C49
MLCC	100NF,X5R,±10%,1005		15	C1,C4,C11,C12,C22,C23,C25,C26,C27,C32,C33,C50,C51,C52,C54
MLCC	4.7UF,X5R,±20%,1608		3	C24,C28,C36
MLCC	470NF,X5R,±10%,1005		1	C31
MLCC	1NF,X5R,±10%,1005		1	C17
MLCC	2PF,NP0,±0.25PF,1005		1	L5
RESISTOR CHIP	0 OHM,1/10W,±5%,1608	ABCO, YAGEO Tyco, Cosmtech, Samsung ROHM, TA-I	1	R29
RESISTOR CHIP	22K OHM,1/16W,±5%,1005		3	R4,R8,R35
RESISTOR CHIP	100K OHM,1/16W,±5%,1005		4	R19,R20,R31,R68
RESISTOR CHIP	4.7K OHM,1/16W,±5%,1005		5	R6,R7,R12,R69,R70
RESISTOR CHIP	1 OHM,1/10W,±5%,1608		2	R77,R78
RESISTOR CHIP	470 OHM,1/16W,±5%,1005		3	R30,R32,R67

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RESISTOR CHIP	180 OHM,1/16W,±5%,1005	WALSIN	7	R1,R45,R46,R47,R48,R49,R50
RESISTOR CHIP	2 OHM,1/10W,±5%,1608	PIKCOR	1	R34
RESISTOR CHIP	100 OHM,1/16W,±5%,1005	Fenghua,	1	R65
RESISTOR CHIP	15K OHM,1/16W,±5%,1005	AVX	1	R75
RESISTOR CHIP	10K OHM,1/16W,±5%,1005	MURATA	3	R41,R66,R79
RESISTOR CHIP	1K OHM,1/16W,±5%,1005	TDK	4	R24,R25,R26,R33
RESISTOR CHIP	1M OHM,1/16W,±5%,1005	Taiyouden	5	R21,R23,R27,R38,R71
RESISTOR CHIP	10M OHM,1/16W,±5%,1005	Darfon	1	R5
RESISTOR CHIP	2.2K OHM,1/16W,±5%,1005	Eyang	3	R15,R16,R17
RESISTOR CHIP	22 OHM,1/16W,±5%,1005	Fenghua	4	R13,R22,R39,R40
RESISTOR CHIP	330 OHM,1/16W,±5%,1005	KEMET	2	R57,R58
RESISTOR CHIP	2 OHM,1/16W,±5%,1005	Kyocera	1	R18
RESISTOR CHIP	270 OHM,1/16W,±5%,1005	NIC	8	R55,R56,R59,R60,R61,R62,R63,R64
RESISTOR CHIP	560 OHM,1/16W,±1%,1005	Compenets	7	R42,R43,R44,R51,R52,R53,R54
RESISTOR CHIP	47 OHM,1/16W,±5%,1005	DARFON	1	R2
RESISTOR CHIP	47K OHM,1/16W,±5%,1005		4	R9,R10,R11,R36
PCB	RD12A,MAIN(FR-4,4L,1.2T,OSP)	Sinsung SG	1	
		APEX		
		Bongwoo		
		ASK		
		GE		
ALKALINE BAT	1.5V,2.2A,AA,BEXEL	BEXEL	2	
		DURACELL		
		ROCKET		

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REFORM :

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SPECIFICATION

(TRANSMITTER REMOCON)

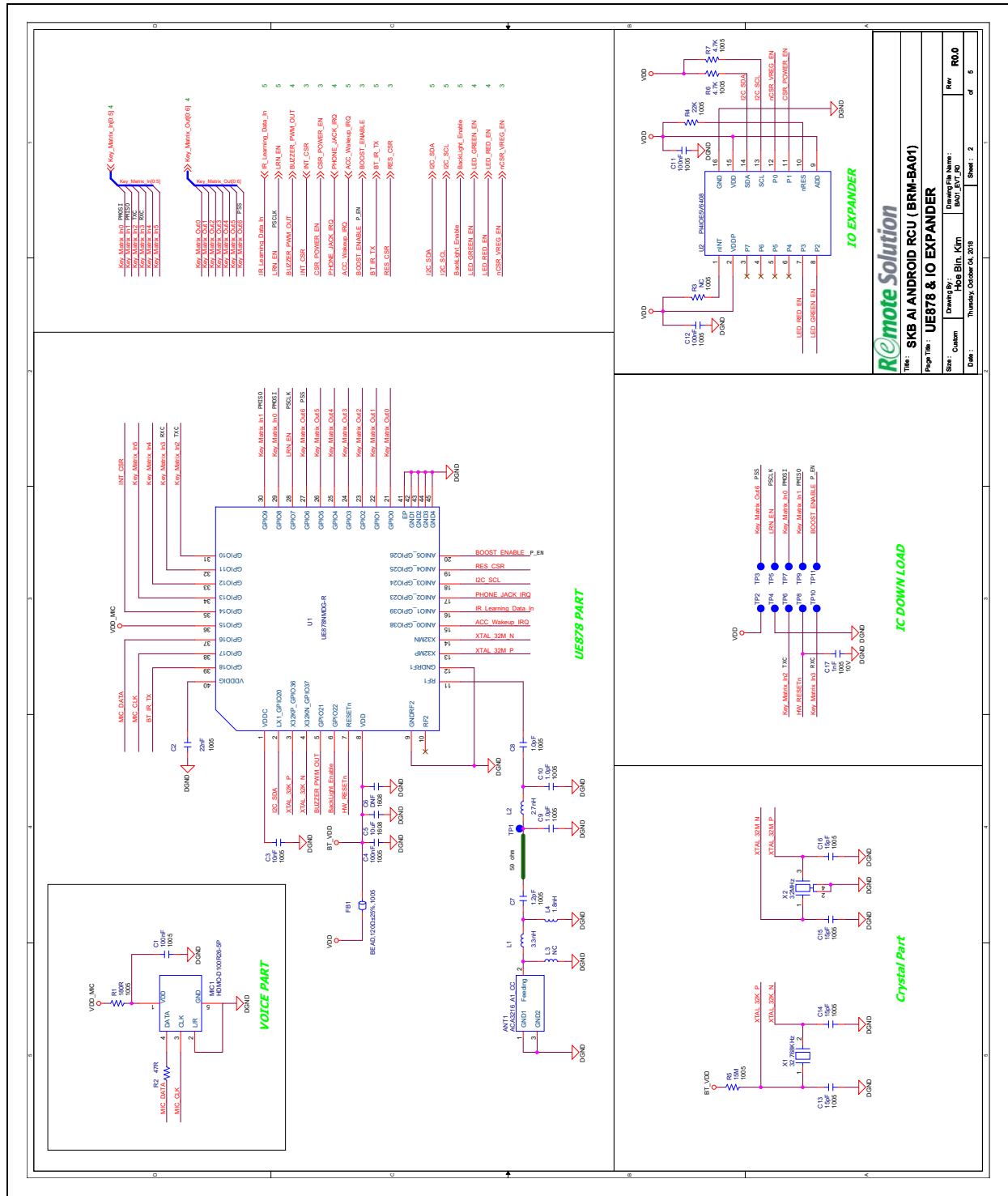
MODEL NO : 19

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6. Schematics

6.1 RTL8762 BLE PART



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SPECIFICATION

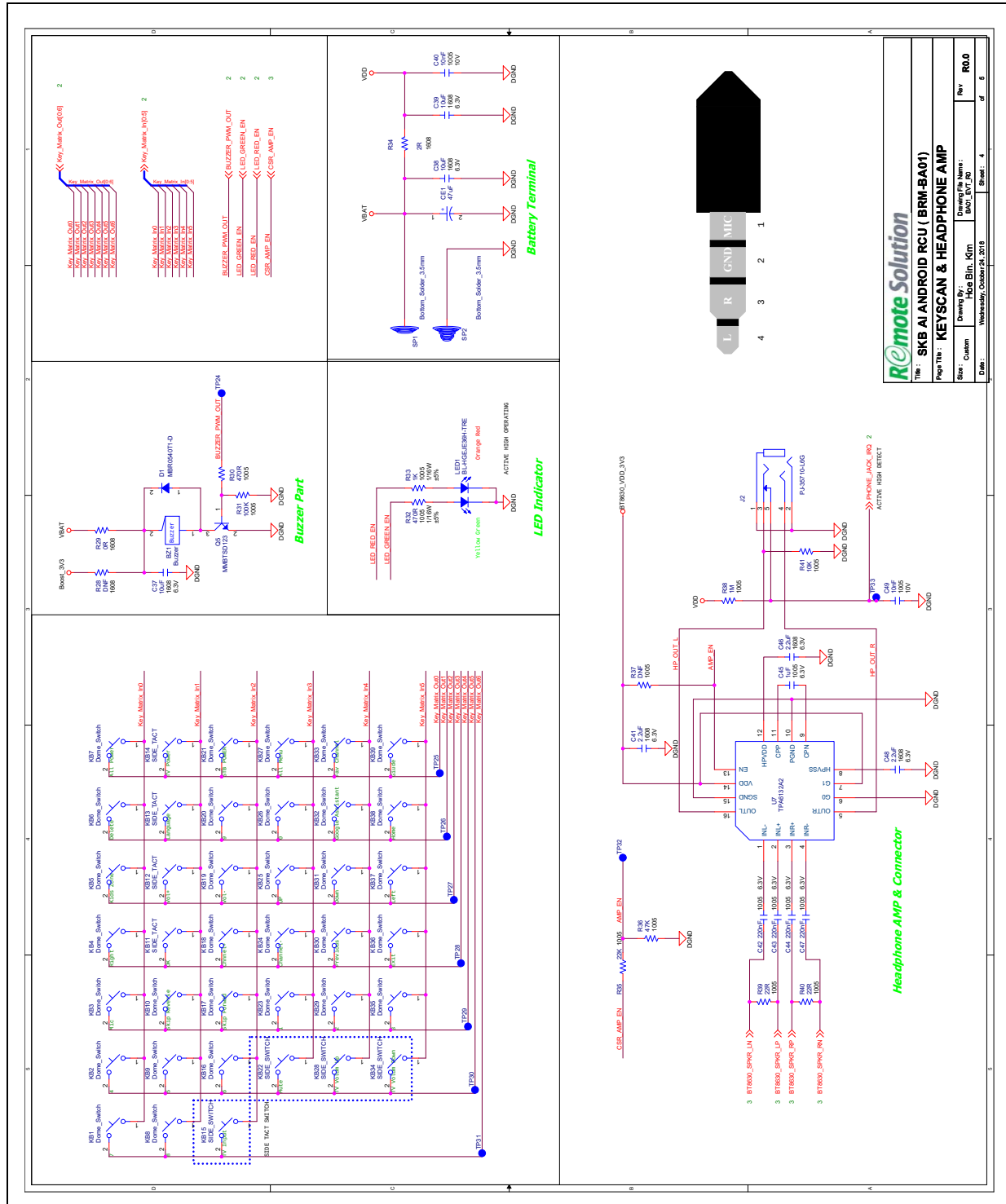
(TRANSMITTER REMOCON)

MODEL NO : 21

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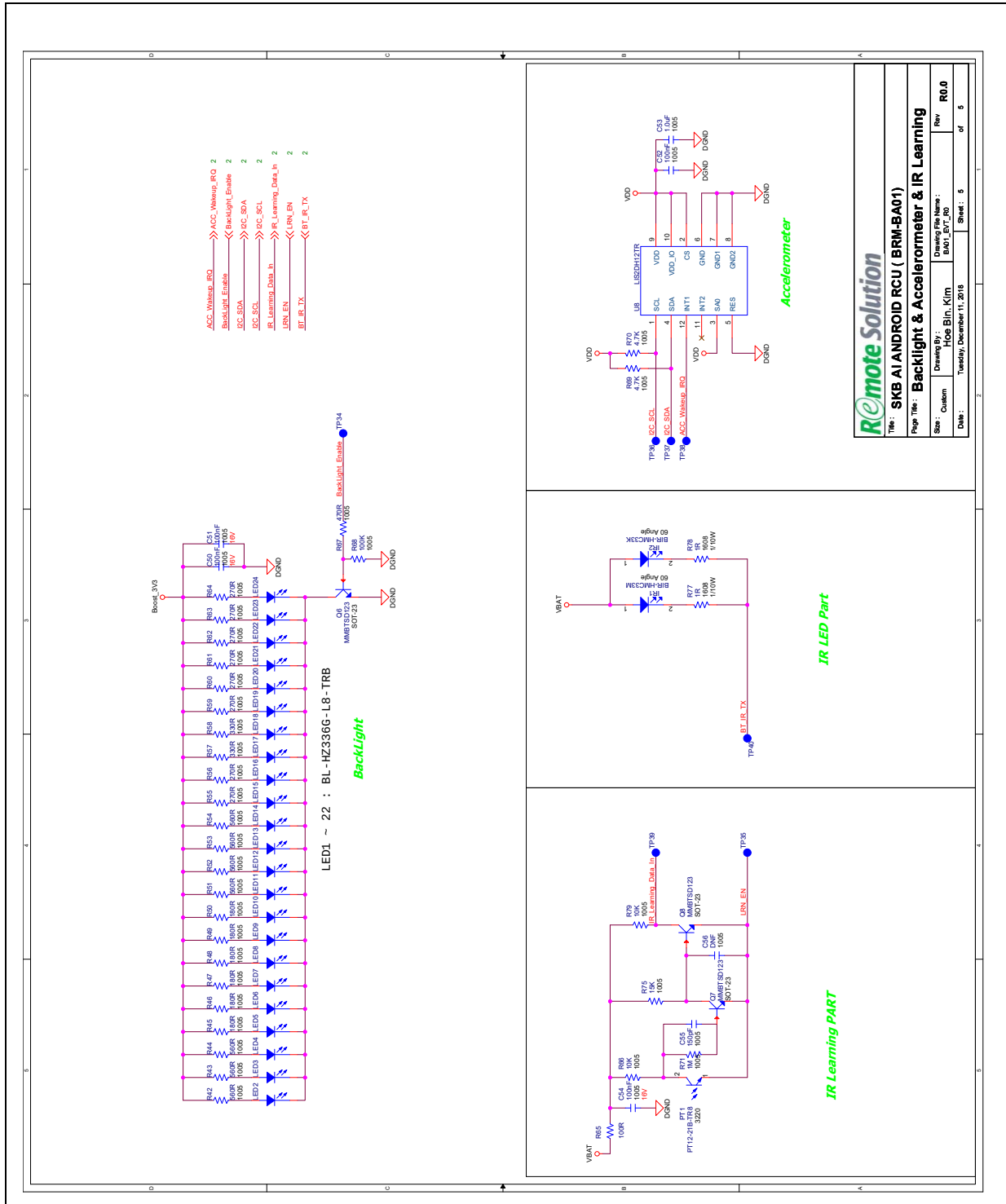
6.3 Key & Amp & LED & Buzzer Part



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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	22
REFORM :			
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6.4 Backlight & Acceleror Meter & IR LED & Learning PART Part

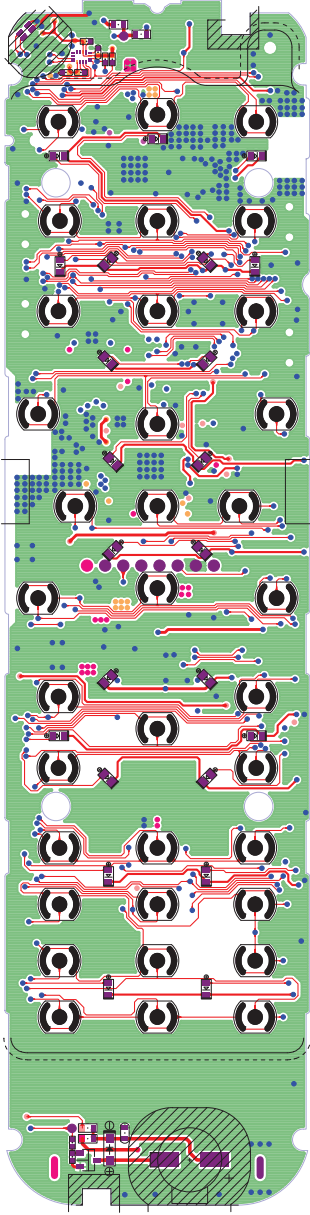


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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 23	57
REFORM :			
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7. PCB Diagram

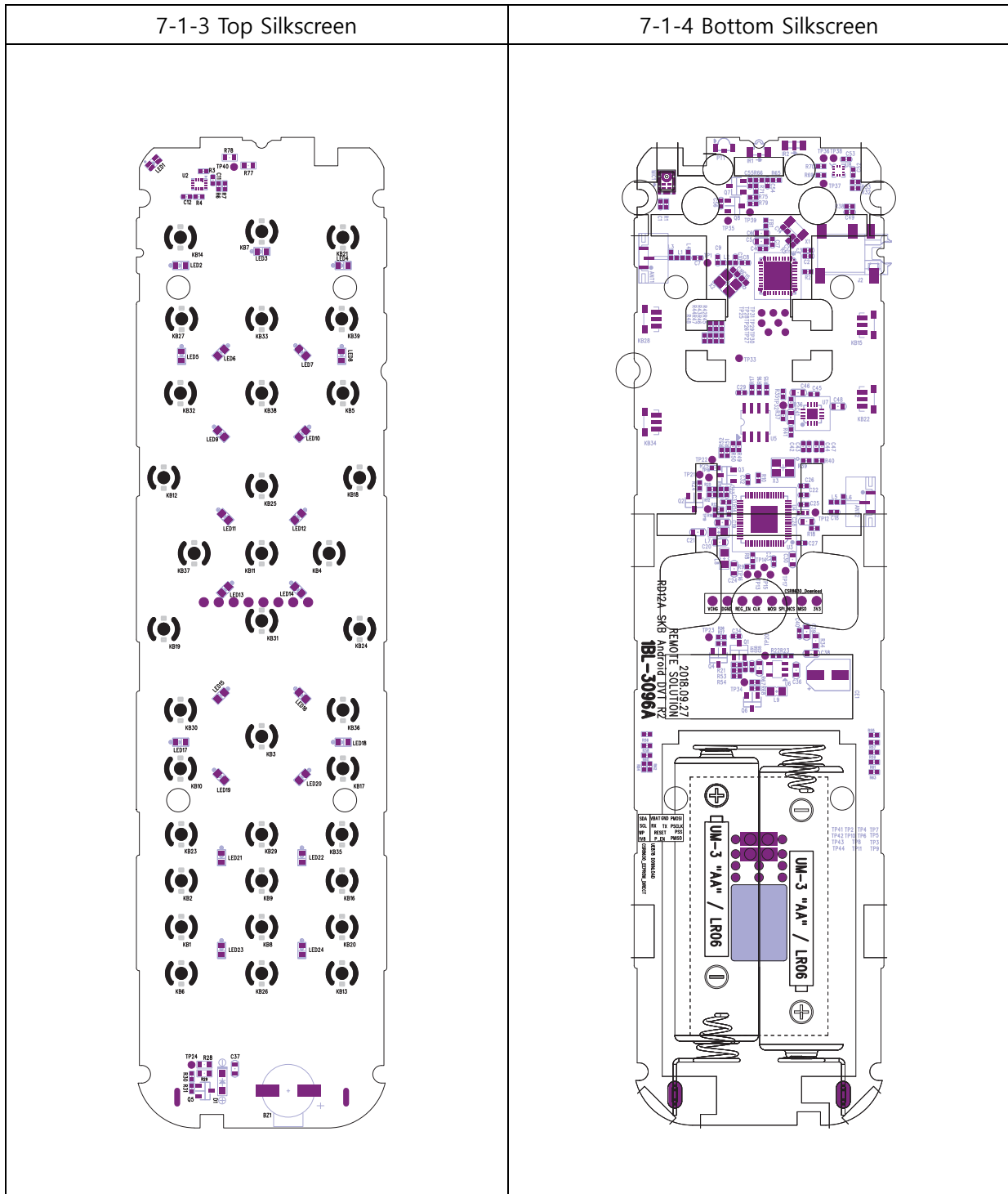
7.1 Main PCB (1/3)

7-1-1 Top Layer	7-1-2 Bottom Layer
	

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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	24
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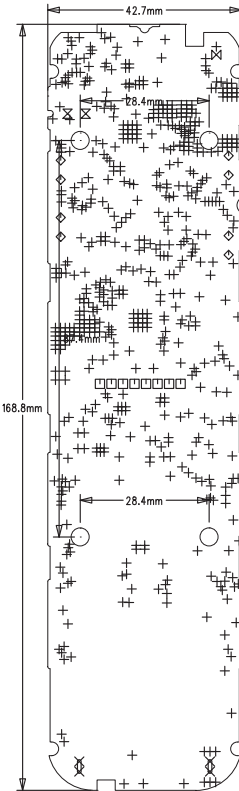
7.2 Main PCB(2/3)



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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	25
REFORM :			
DECISION :		BRM-BA01	57

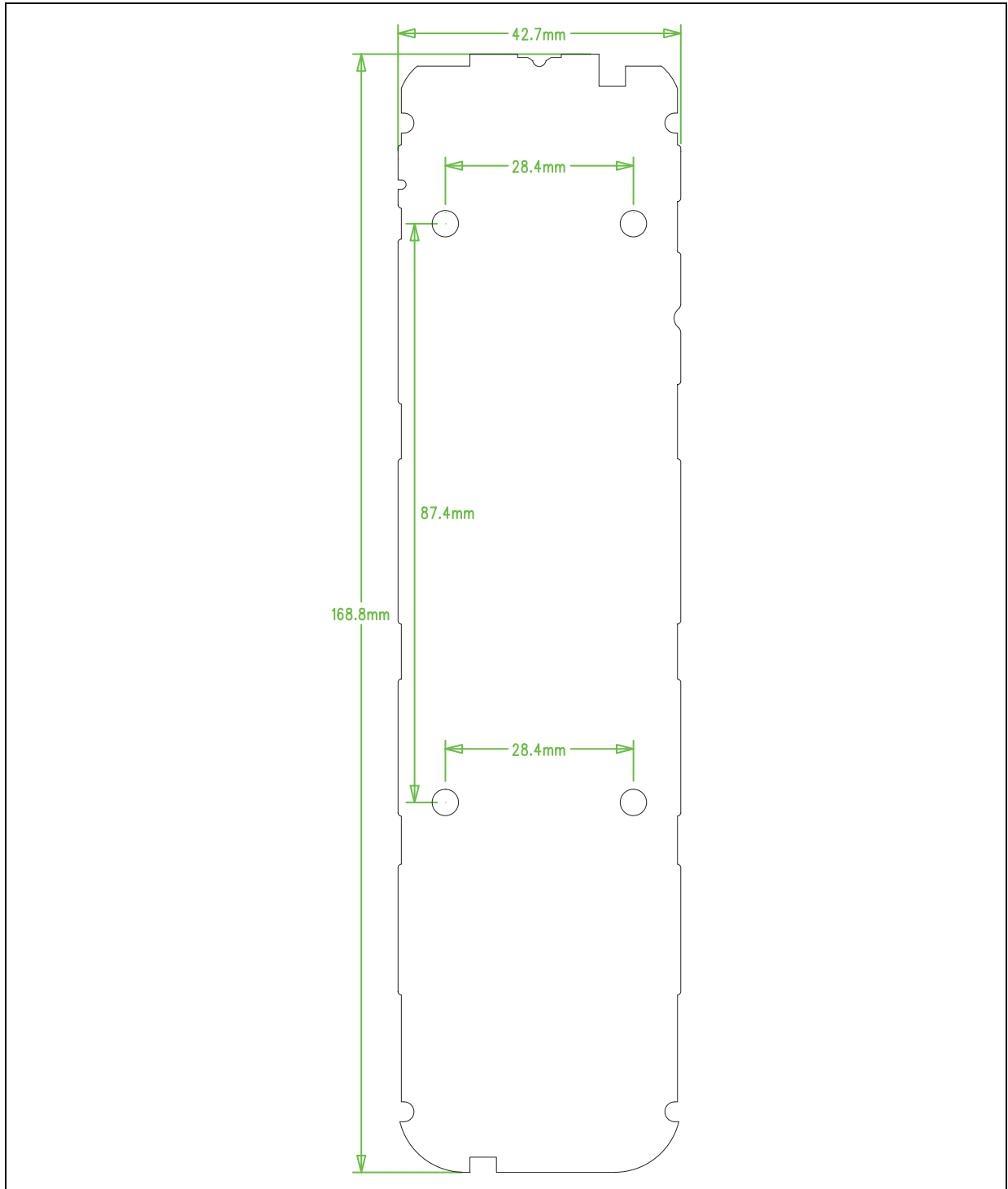
7.3 Main PCB (3/3)

7-1-5 Drill Chart	7-1-6 Main PCB Spec																																			
 <table><thead><tr><th>SIZE</th><th>QTY</th><th>SYM</th><th>PLATED</th><th>TOL</th></tr></thead><tbody><tr><td>0.3</td><td>622</td><td>+</td><td>YES</td><td>+/-0.0</td></tr><tr><td>0.8 x 3</td><td>2</td><td>⊗</td><td>YES</td><td>+/-0.0</td></tr><tr><td>0.5</td><td>8</td><td>□</td><td>YES</td><td>+/-0.0</td></tr><tr><td>0.8</td><td>8</td><td>◇</td><td>NO</td><td>+/-0.0</td></tr><tr><td>1.5</td><td>2</td><td>⊗</td><td>NO</td><td>+/-0.0</td></tr><tr><td>0.5</td><td>1</td><td>⊠</td><td>NO</td><td>+/-0.0</td></tr></tbody></table>	SIZE	QTY	SYM	PLATED	TOL	0.3	622	+	YES	+/-0.0	0.8 x 3	2	⊗	YES	+/-0.0	0.5	8	□	YES	+/-0.0	0.8	8	◇	NO	+/-0.0	1.5	2	⊗	NO	+/-0.0	0.5	1	⊠	NO	+/-0.0	1) PCB Material : FR-4 4-Layer 2) PCB Thickness : 1.2T 3) Copper Foil Thickness : - Out Layer 0.5 OZ - Inner Layer 1.0 OZ 4) PCB Size Single - 42.7mm x 168.8mm Array - 221.5mm x 188.8mm (5 In 1) 5) SilkScreen Color : White 6) PSR Ink Color : Green 7) Surface : OSP 8) Dome Key : Carbon 9) PCB Version : 1BL-3082A
SIZE	QTY	SYM	PLATED	TOL																																
0.3	622	+	YES	+/-0.0																																
0.8 x 3	2	⊗	YES	+/-0.0																																
0.5	8	□	YES	+/-0.0																																
0.8	8	◇	NO	+/-0.0																																
1.5	2	⊗	NO	+/-0.0																																
0.5	1	⊠	NO	+/-0.0																																

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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	26
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8. PCB Outline Specification – Main PCB

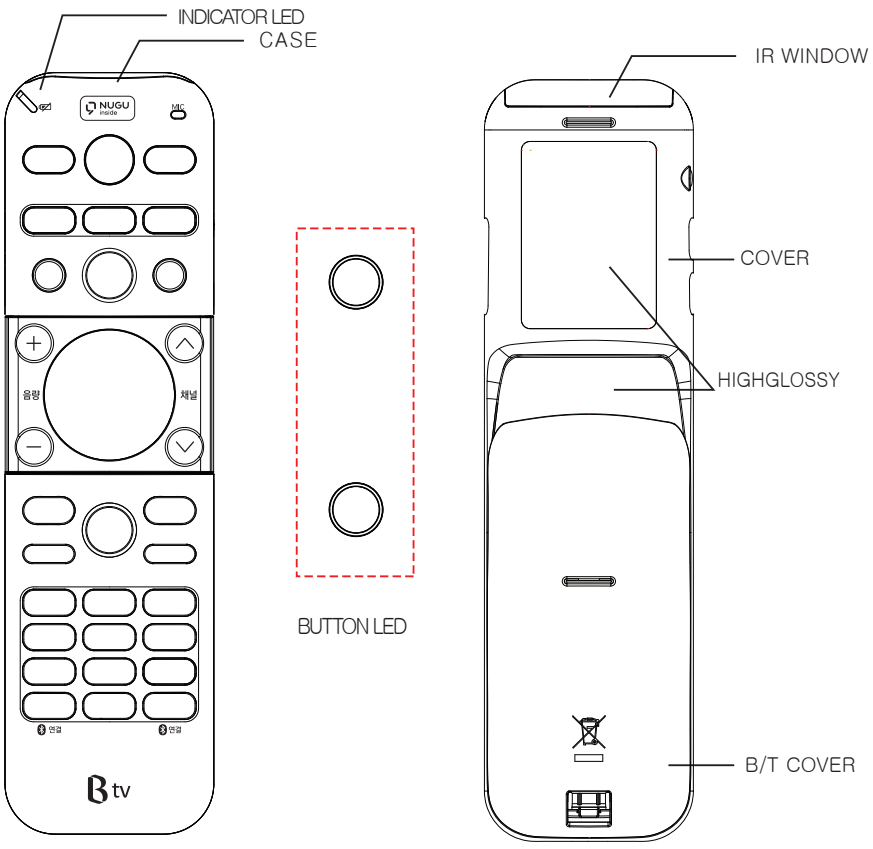


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INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 27	57
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9. Design & Mechanical Specification

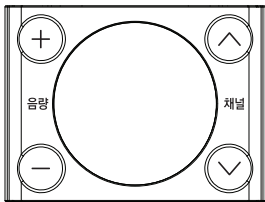
9.1 Design (1/5) – Mold

DESIGN SPECIFICATION		Model : RD12A00
		
1. MOLD 1.1 MOLD COLOR * CASE,B/T COVER : ABS, HF-0680, K21383(Black), TEXTURE * COVER : ABS, HF-0680, K21383(Black), TEXTURE & HIGH GROSSY * IR WINDOW : PC, SC-1220R, 40697B(D/Red), HIGH GROSSY * INDICATOR,BUTTON LED : PC, LD7800, W1020J (Milky), TEXTURE 1.2 SILK COLOR * COOLGREY 3C		

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	28
REFORM :			
DECISION :		BRM-BA01	57

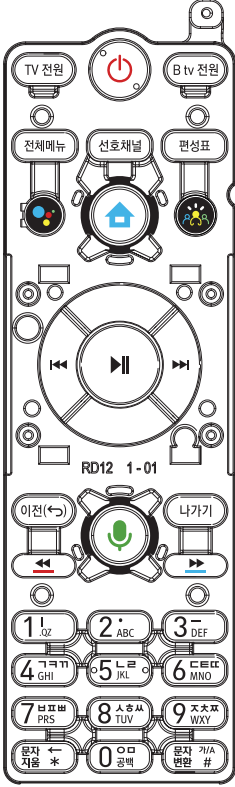
9.1 Design (2/5) – KNOB

DESIGN SPECIFICATION		Model : RD12A00
 CH/VOL KNOB  SIDE KNOB		
2.KNOB		
2.1 MOLD COLOR * ABS, HF-0680, K21383(Black), TEXTURE		2.2 SILK COLOR * COOLGREY 3C

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 29	57
REFORM :			
DECISION :		BRM-BA01	

9.1 Design (3/5) – RUBBER

DESIGN SPECIFICATION		Model : RD12A00
 RD12 1-01	P/T 179C(RED)    P/T 7738C(GREEN)    P/T 1225C(YELLOW)    P/T 2173C(BLUE)    	
	TV 전원  B tv 전원  전채메뉴  신호채널  편성표  이전(←)  나가기  1! 2· 3- 4 GH 5 LK 6 MN 7 PRS 8 TUV 9 WXY 문자 ← 0 공백 문자 → # COOLGREY 3C 이전(←)  나가기  1! 2· 3- 4 GH 5 LK 6 MN 7 PRS 8 TUV 9 WXY 문자 ← 0 공백 문자 → # (LASER)	
ALL BACK LIGHTING		
3.RUBBER		
3.1 RUBBER COLOR 3.1.1 TRANSLUCENCE WHITE 3.2 SPRAY & SILK COLOR COOLGREY 3C SPRAY SILK-179C,7738C,1225C,2173C BLACK SPRAY LASER ETCHING SOFT COATING		

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 31	57
REFORM :		BRM-BA01	
DECISION :			

9.1 Design (5/5) – MANUAL

DESIGN SPECIFICATION

Model : RD12A00

Passed Label

6.PASSED LABEL

6.1 Material : Art Paper
6.2 Size : 30 X 15mm(±0.1mm)
6.3 Silk Color : Text-Black, P/T 2728C
Background – White

7.MANUAL

7.1 Material : 80 Vellum Paper
7.2 Size : 170 X 250mm(±0.2mm)
7.3 Silk Color : Offset 4 Color

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11

REFORM :

DECISION :

SPECIFICATION

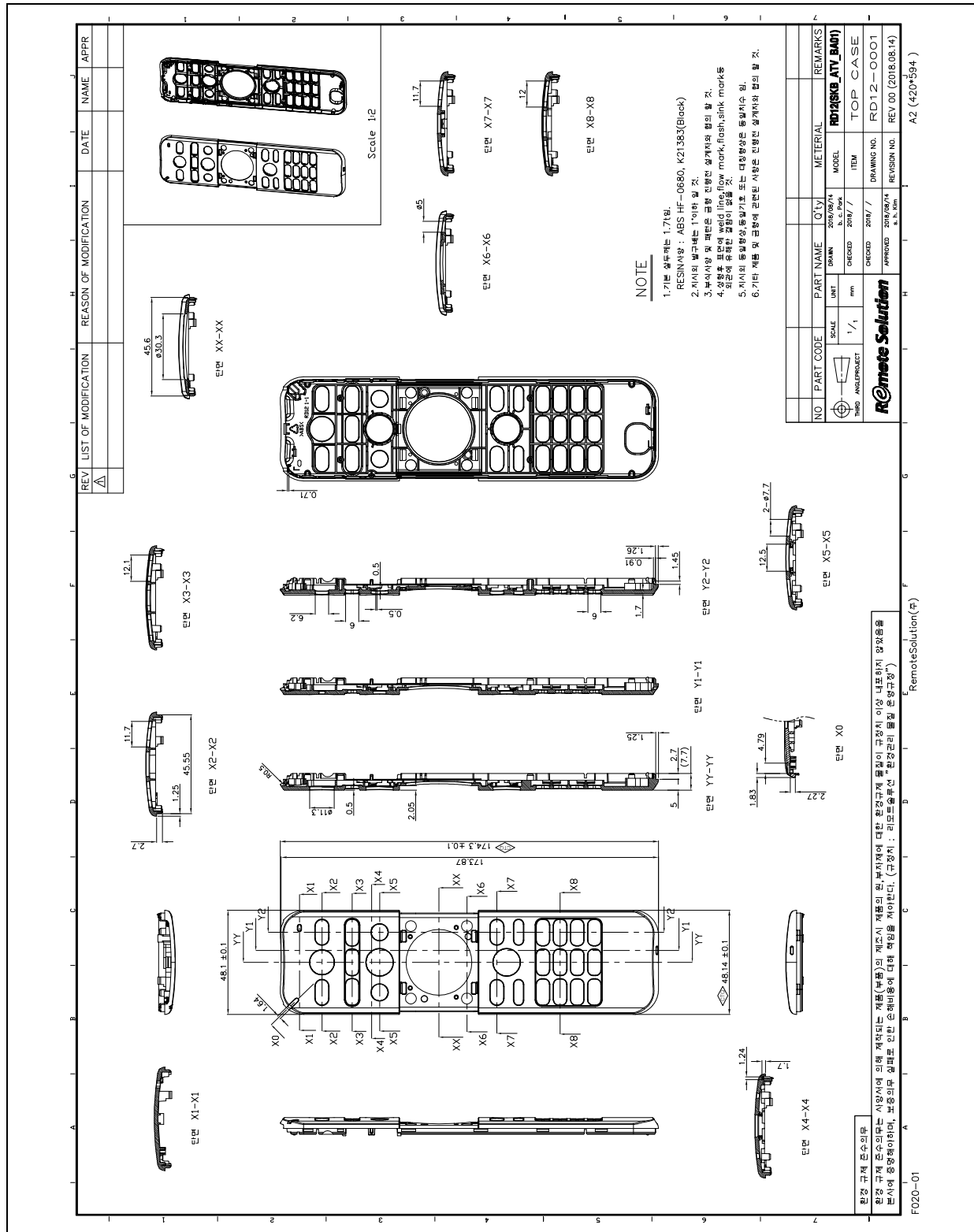
(TRANSMITTER REMOCON)

MODEL NO : 32

BRM-BA01

57

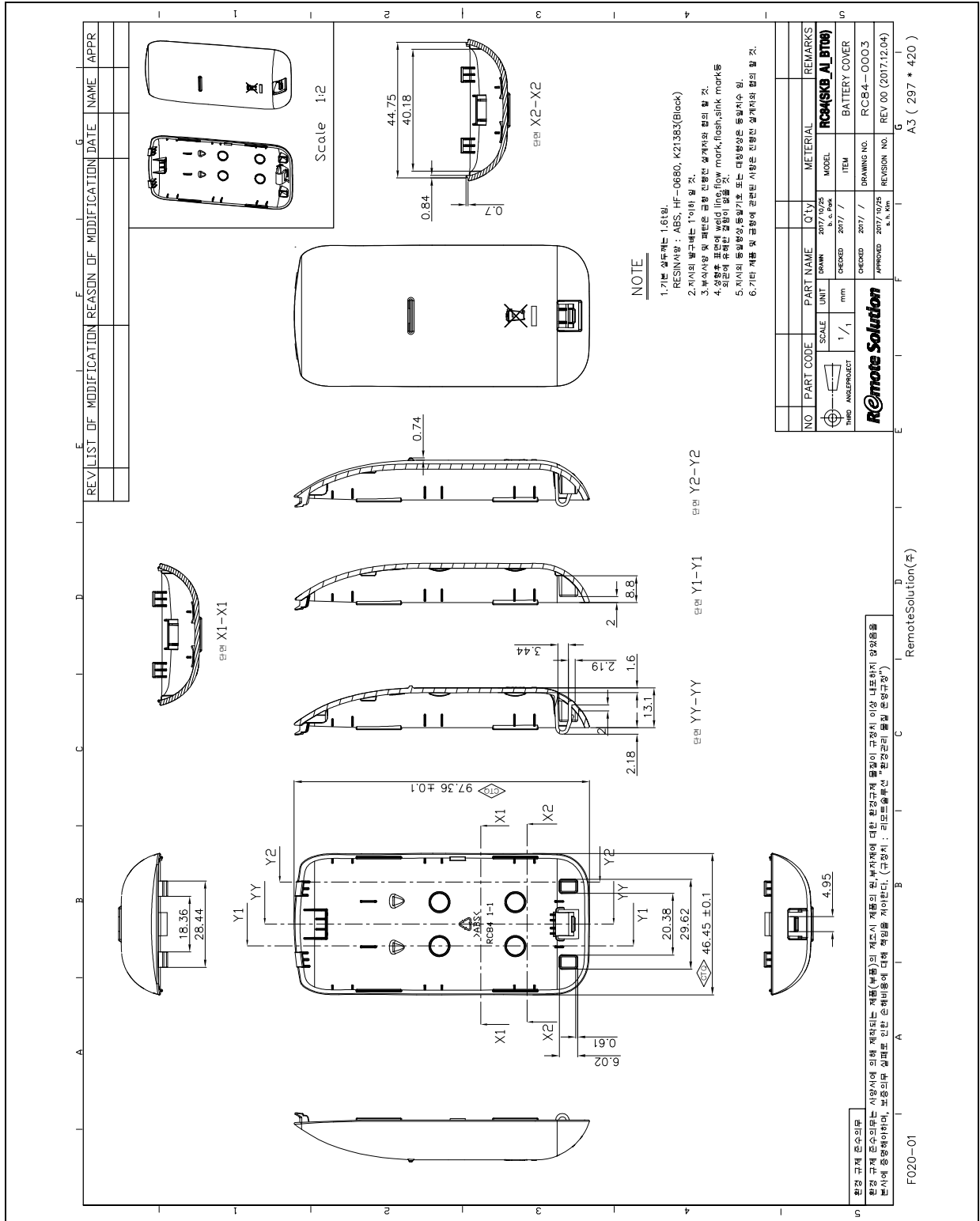
9.2 Mechanical Spec (1/16) – TOP CASE



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 34	57
REFORM :			
DECISION :		BRM-BA01	

9.2 Mechanical Spec (3/16) – BATTERY COVER



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11

REFORM :

DECISION :

SPECIFICATION

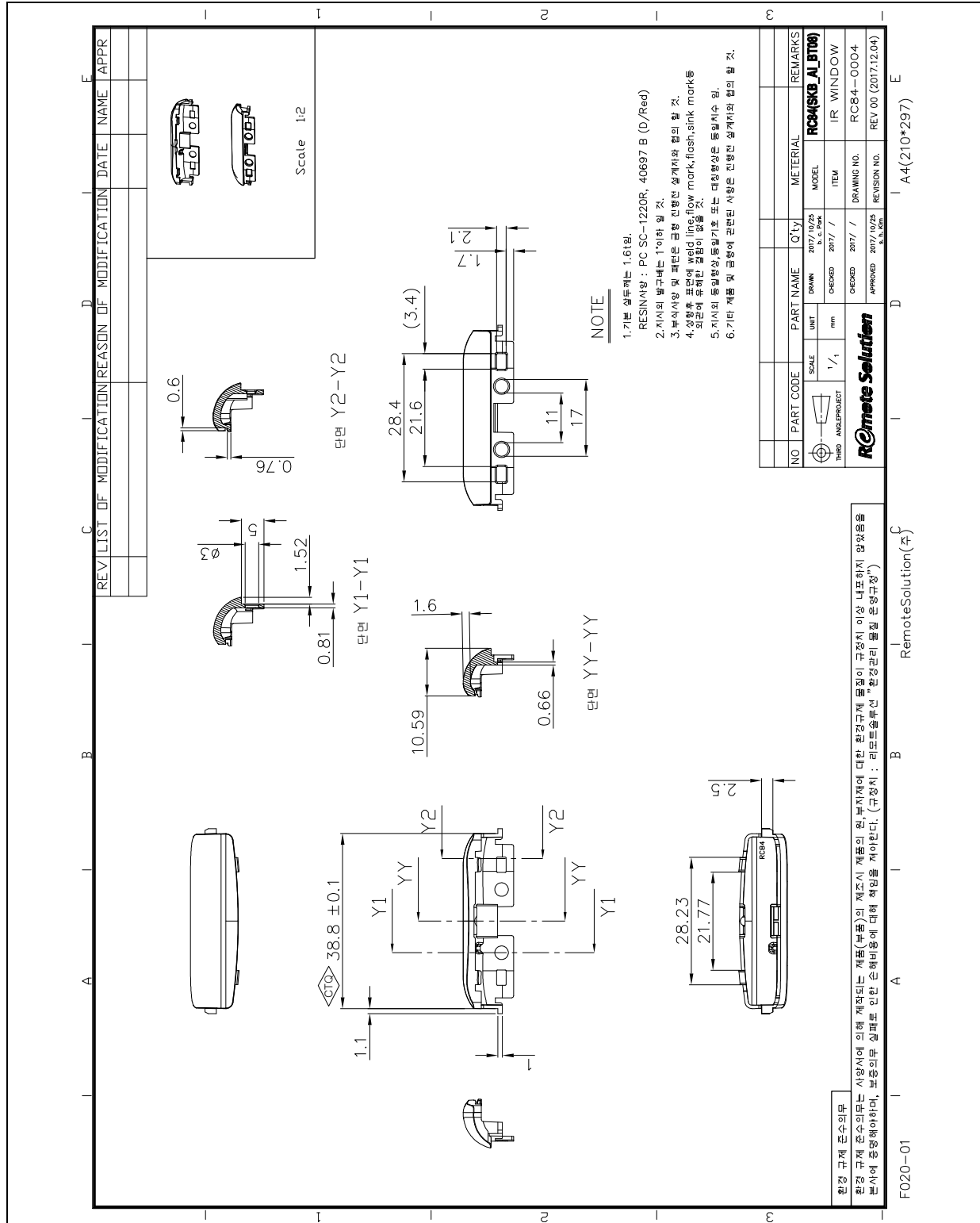
(TRANSMITTER REMOCON)

MODEL NO : 35

BRM-BA01

57

9.2 Mechanical Spec (4/16) – IR WINDOW



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	36
REFORM :		BRM-BA01	57
DECISION :			

9.2 Mechanical Spec (5/16) – CH , VOL KNOB

[illegible]

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11

REFORM :

DECISION :

SPECIFICATION

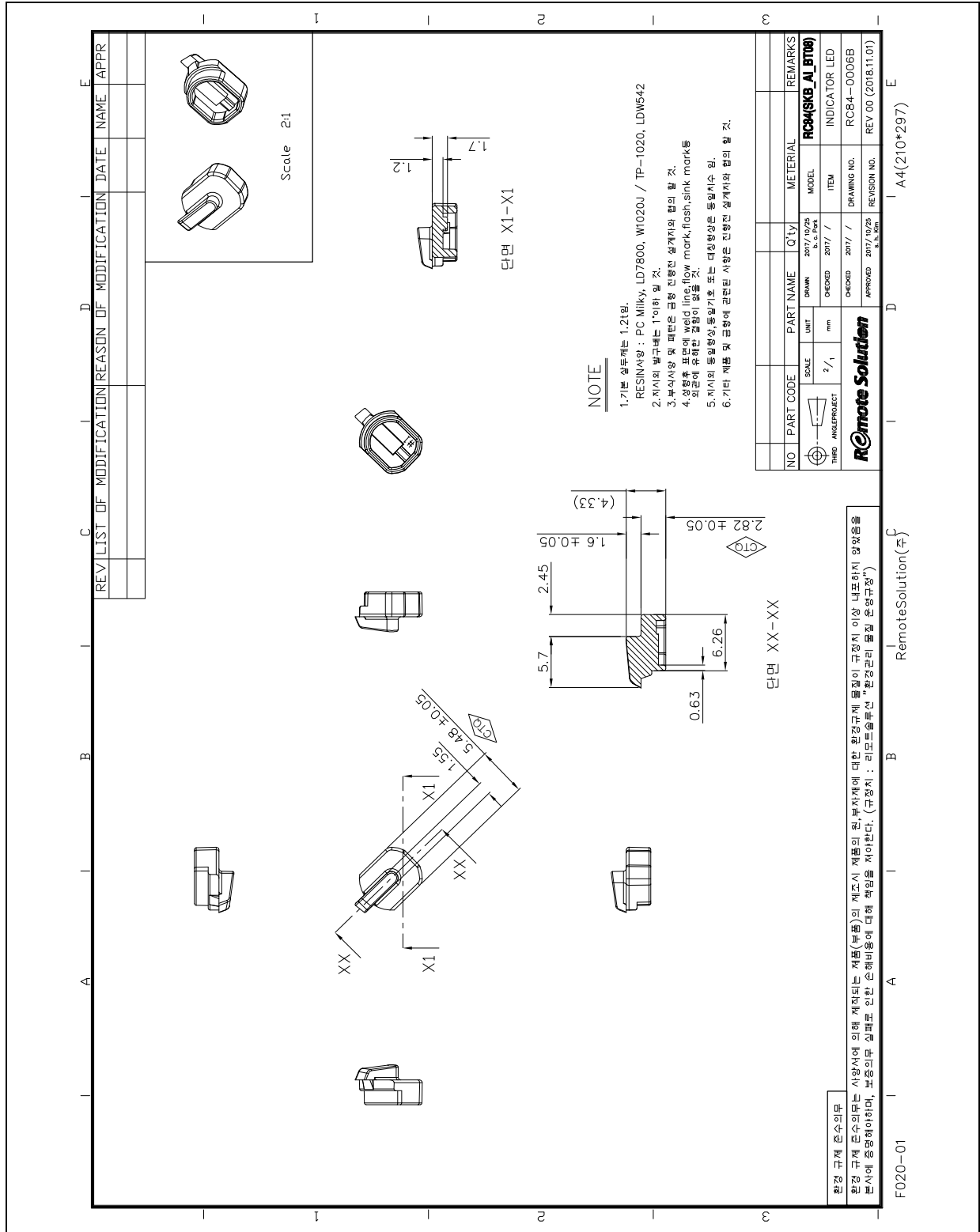
(TRANSMITTER REMOCON)

MODEL NO : 37

BRM-BA01

57

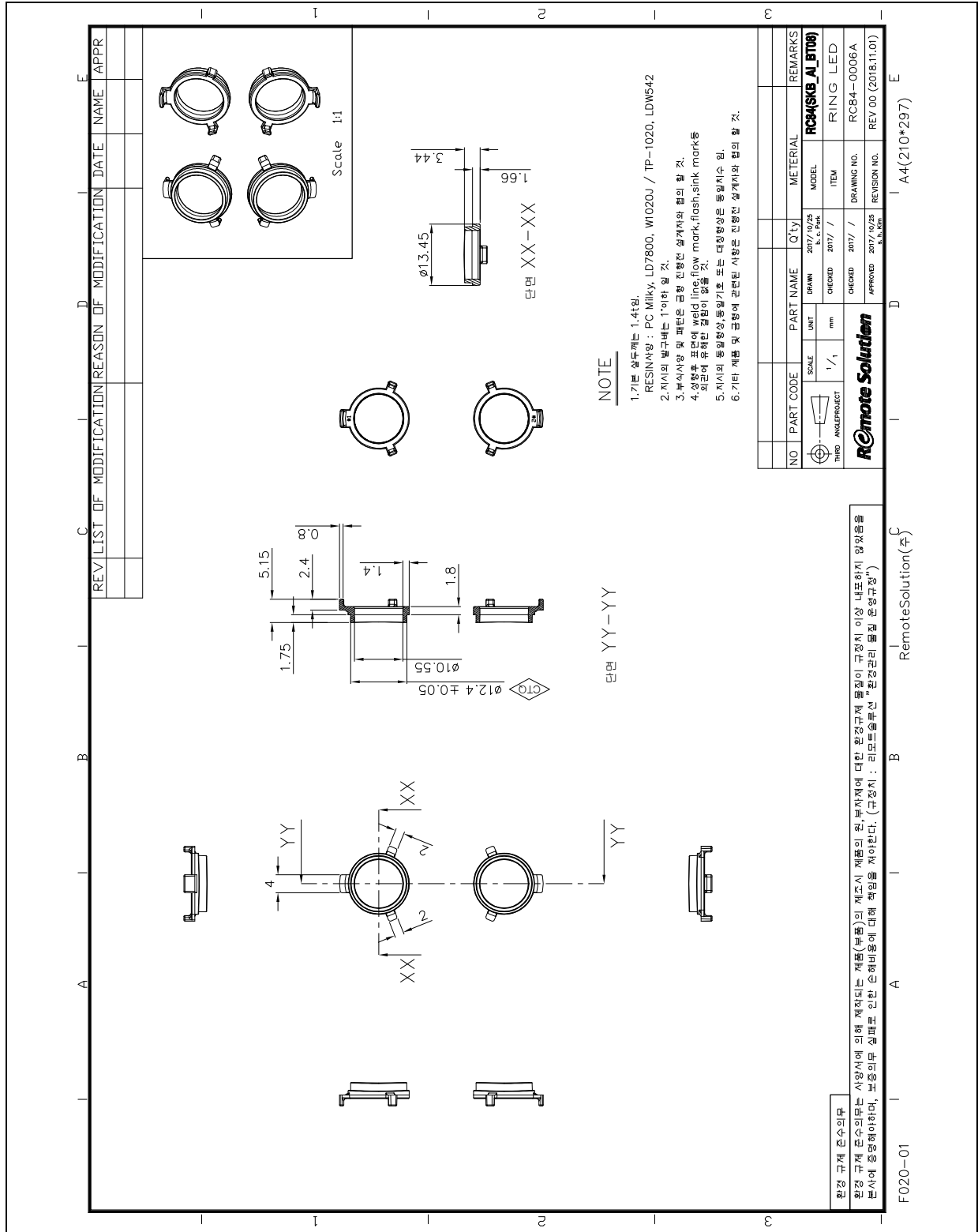
9.2 Mechanical Spec (6/16) – INDICATOR LED



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 38	57
REFORM :			
DECISION :		BRM-BA01	

9.2 Mechanical Spec (7/16) – RING LED



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11

REFORM :

DECISION :

SPECIFICATION

(TRANSMITTER REMOCON)

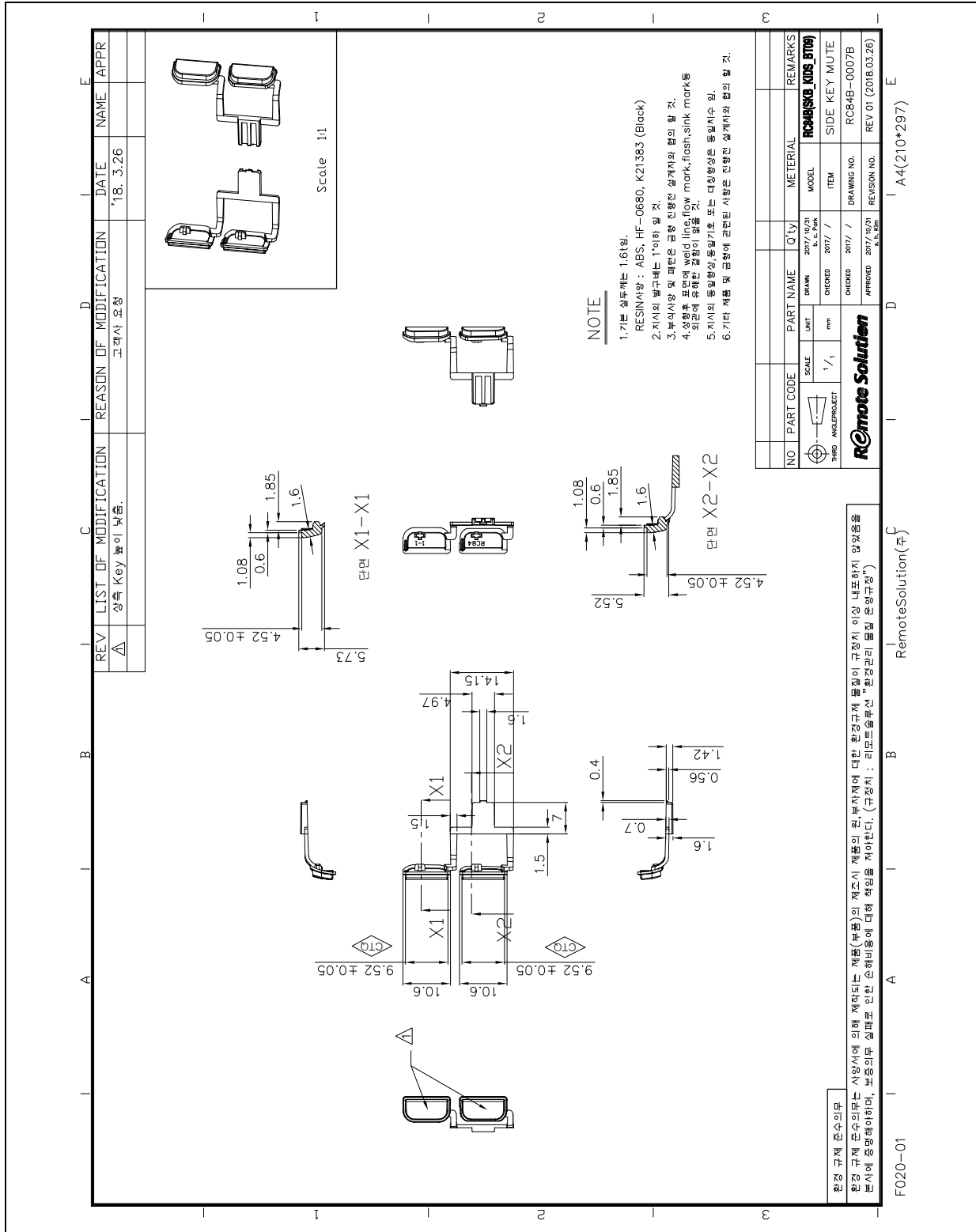
MODEL NO :

39

BRM-BA01

57

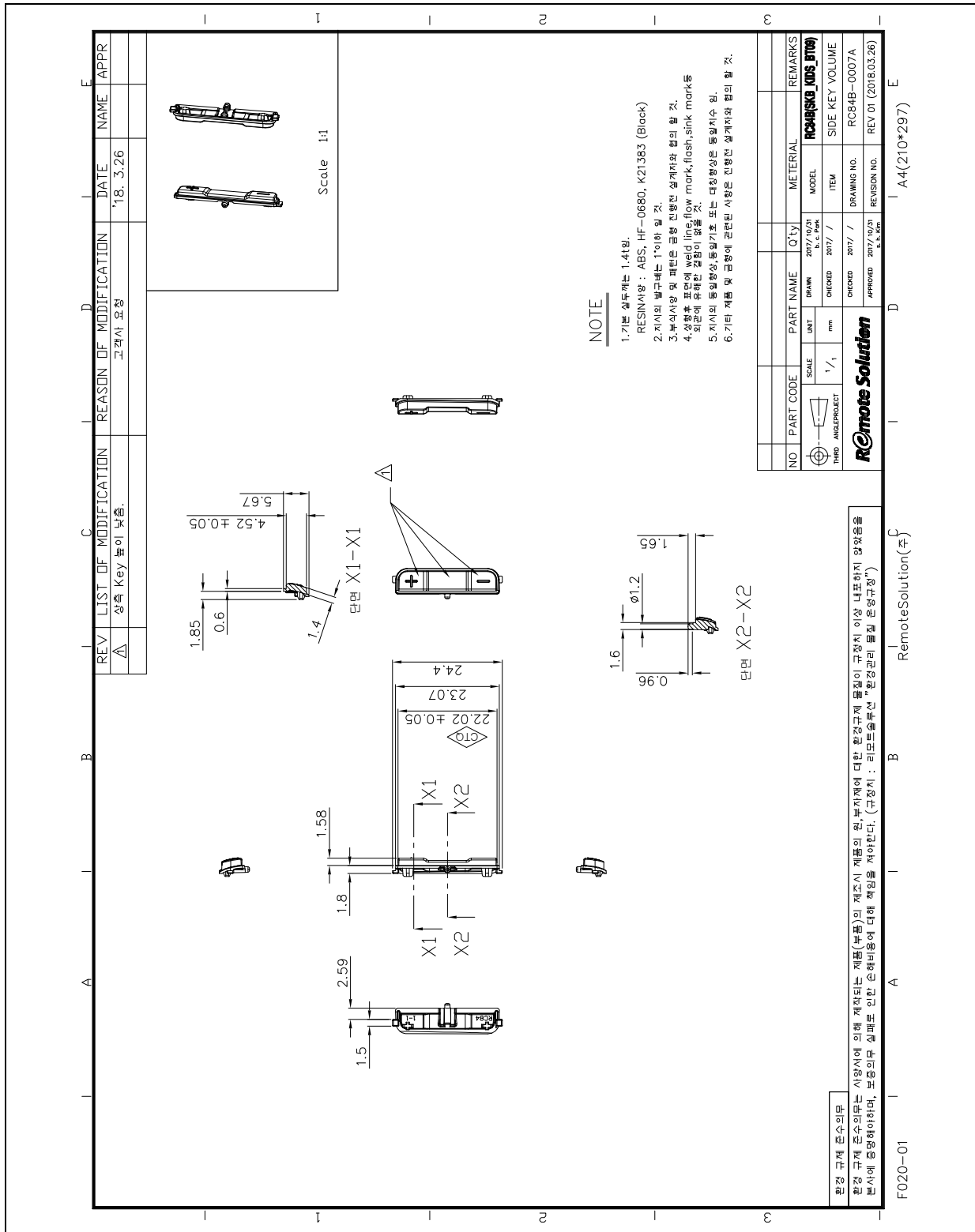
9.2 Mechanical Spec (8/16) – SIDE KEY MUTE



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	<u>SPECIFICATION</u> (TRANSMITTER REMOCON)	MODEL NO :	40
REFORM :			
DECISION :		BRM-BA01	57

9.2 Mechanical Spec (9/16) – SIDE KEY VOLUME



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11

REFORM :

DECISION :

SPECIFICATION

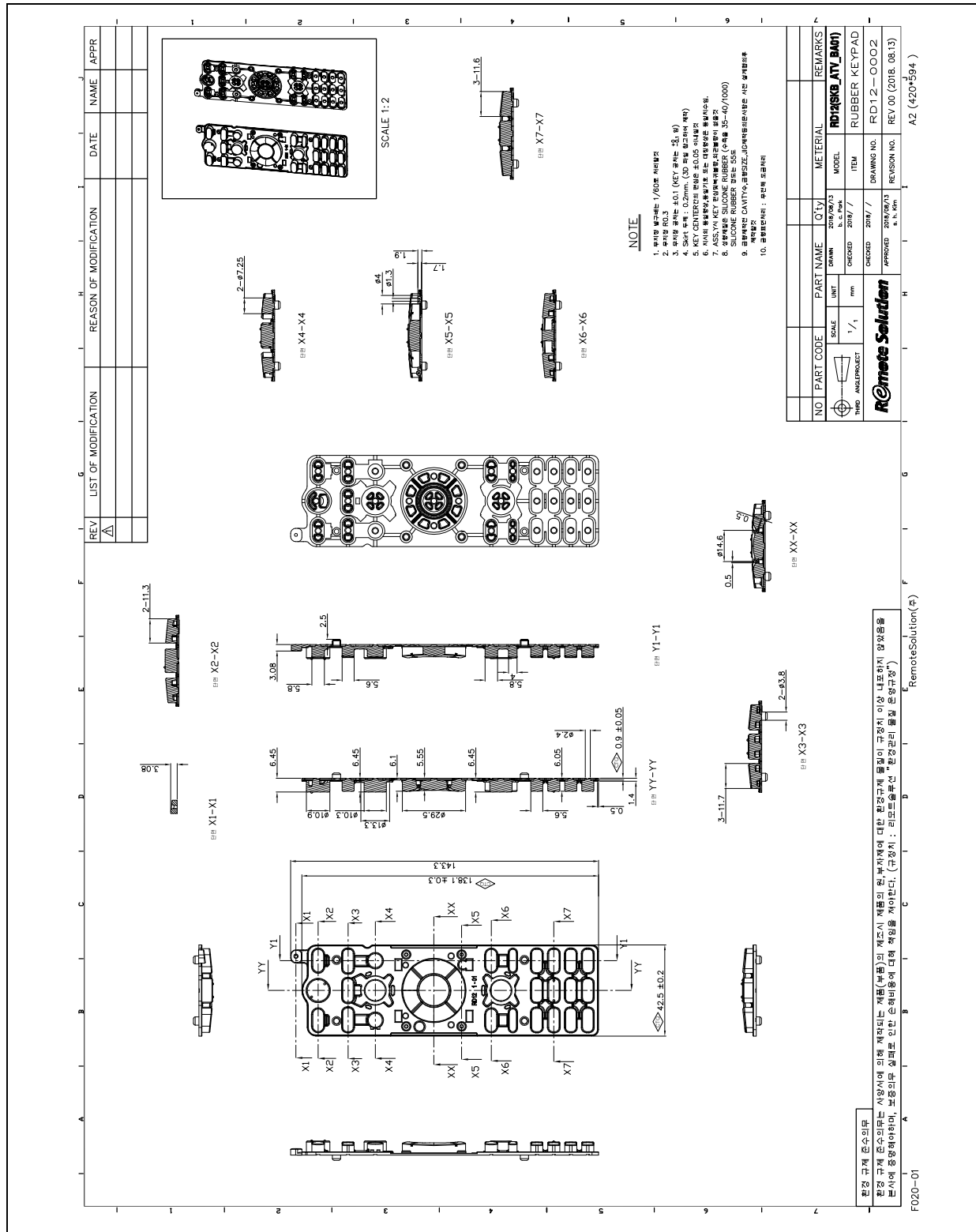
(TRANSMITTER REMOCON)

MODEL NO :	41
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BRM-BA01

57

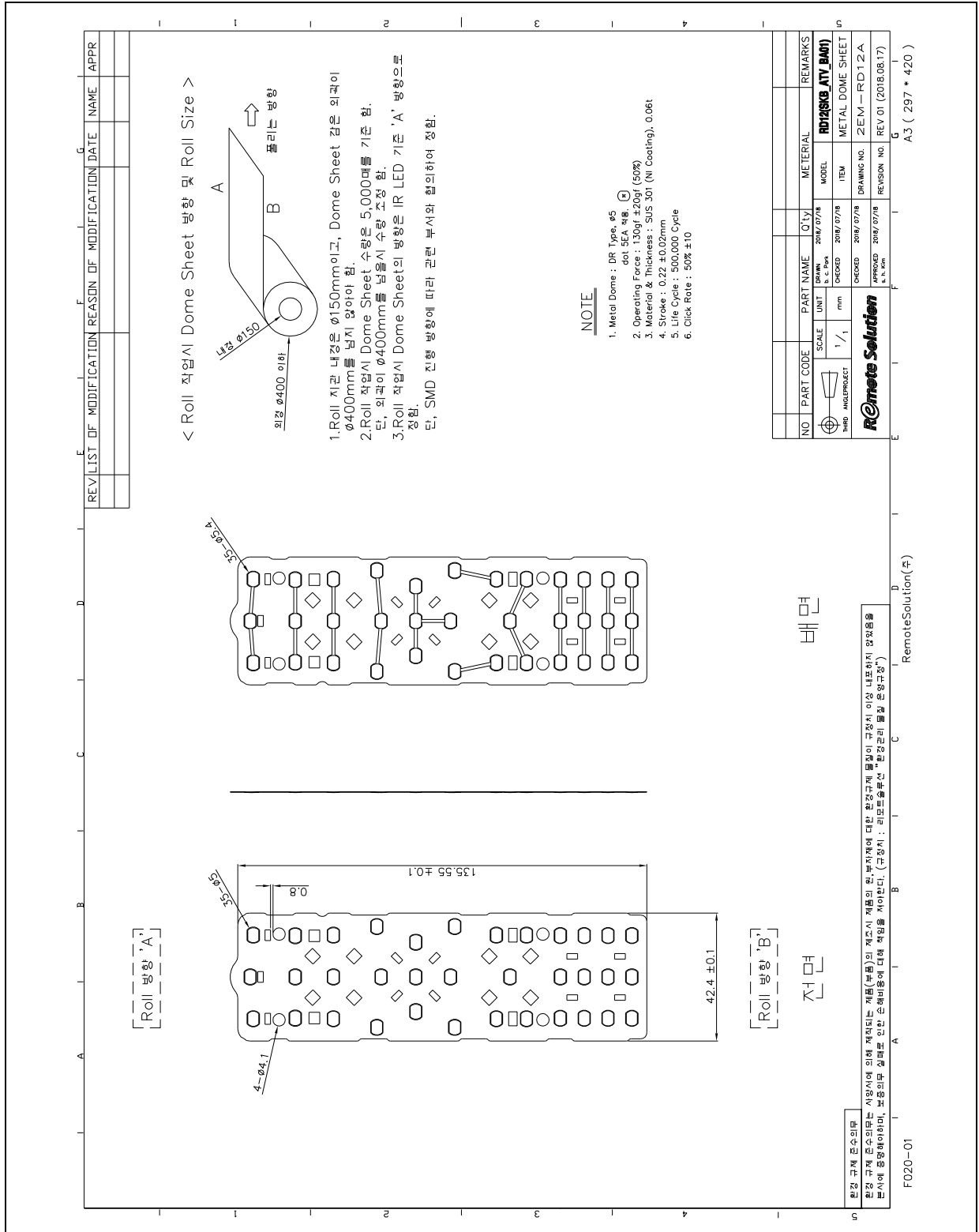
9.2 Mechanical Spec (10/16) – RUBBER KEYPAD



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 42	57
REFORM :			
DECISION :		BRM-BA01	

9.2 Mechanical Spec (11/16) – METAL DOME



환경 규제 준수요약

환경 규제 준수요약은 사용서에 의해 제시되는 제품(부품)의 제조시 제품의 본, 부자재에 대한 환경규제 물질이 규정치 이상 (내부하지 않았을) 분자에 함유되어있으며, 보증과 관련된 문의사항에 대해 책임을 지어준다. (규정치 : 리모콘을 위한 환경규제 물질 함유규정)

F020-01

RemoteSolution(주)

A3 (297 * 420)

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 43	57
REFORM :			
DECISION :		BRM-BA01	

9.2 Mechanical Spec (12/16) – (+) SPRING

NO	MODEL	TITLE	MATERIAL	FINISH	REMARK
1					
2					

종 류	압 축 SPRING	총 권 수	2.25 권
재 질	SUS304-WPB NI-CO	권 방 향	우
선 경	Ø0.6	자유장 길이	1.2±0.2

NOTE

- ① 지시치수 중점관리할것
- 재료 절단부 처리 주의할것
- BENDING 부 직각 유지 할 것
직각부는 필히 자연 "R" 가공 할 것

환경 규제 준수 의무

환경 규제 준수 의무는 사양서에 의해 제작되는 제품(부품)의 제조시 제품의 원,부자재에 대한 환경규제 물질이 규정치 이상 내포하지 않았음을 본사에 증명해야하며, 보증의무 실패로 인한 손해비용에 대해 책임을 져야한다. (규정치 : 리모트솔루션 "환경관리 물질 운영규정")

NO	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS

SCALE 2/1 UNIT mm

DRAWN 2017/10/19 b. c. Park

CHECKED 2017/10/19 s. b. Lim

CHECKED 2017/10/19

APPROVED 2017/10/19 s. h. Kim

(+)SPRING

RC84(SKB_AI_BT08)

2SP-RC84

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 45	57
REFORM :		BRM-BA01	
DECISION :			

9.2 Mechanical Spec (14/16) – (±) SPRING

NO	M O D E L	TITLE	MATERIAL	FINISH	REMARK
1					
2					

종 류	압 축 SPRING	총 권 수	A	2.25권	B	4.25 권
재 질	SUS304-WPB NI-C□	권 방 향	A	좌	B	우
선 경	φ0.6	자유장 길이	A	1.2 ⁺⁰ _{-0.2}	B	8 ±0.2

NOTE

- ① 지시치수 중점관리할것
- 재료 절단부 처리 주의할것
- BENDING부 직각유지할것
직각부는 필히 자연"R"가공할것

환경 규제 준수의무

환경 규제 준수의무는 사양서에 의해 제작되는 제품(부품)의 제조시 제품의 원,부자재에 대한 환경규제 물질이 규정치 이상 내포하지 않았음을 본사에 증명해야하며, 보증의무 실패로 인한 손해비용에 대해 책임을 져야한다. <규정치 : 리모트솔루션 "환경관리 물질 운영규정">

NO	PART CODE	PART NAME	Q'ty	METERIAL	REMARKS

	SCALE	UNIT	DRAWN	2015/06/01	COMMON SPRING RC65(SKB_Smart) 2SC-RC65
	2/1	mm	CHECKED	2015/06/01	
			CHECKED	2015/06/01	
			APPROVED	2015/06/01	

Remote Solution

리모트솔루션(주)

ISSUE

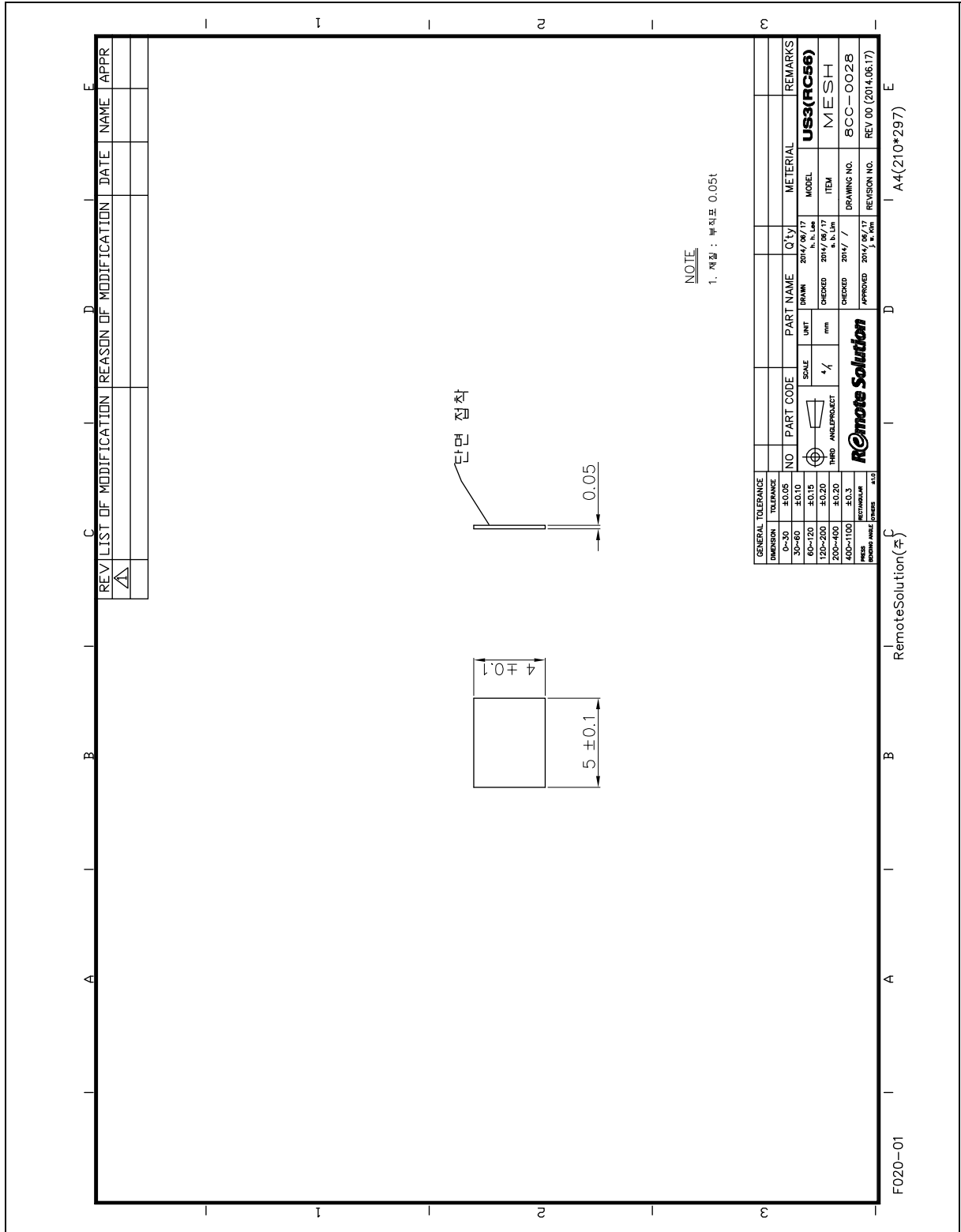
F020-01

A4 (210 * 297)

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 46	57
REFORM :			
DECISION :		BRM-BA01	

9.2 Mechanical Spec (15/16) – MESH



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 47	57
REFORM :		BRM-BA01	
DECISION :			

9.2 Mechanical Spec (16/16) – PE BAG

NO	MODEL	TITLE		MATERIAL	FINISH
1					

△	ISSUE NO	MM/DD/YY	SIGNATURE	CHANGE NO	CHANGE CONTENTS
			SCALE	UNIT	
			N / S	mm	
			DRAWN	2014/12/10	h. h. Lee
			CHECKED	2014/12/10	s. b. Lim
			DRAWN	2014/12/10	j. w. Kim

PE BAG
CJ(RC60)
7PP-0052T

양식 F020-01
리모트솔루션(주)
A4 (210 * 297)

REMOTE SOLUTION CO., LTD.

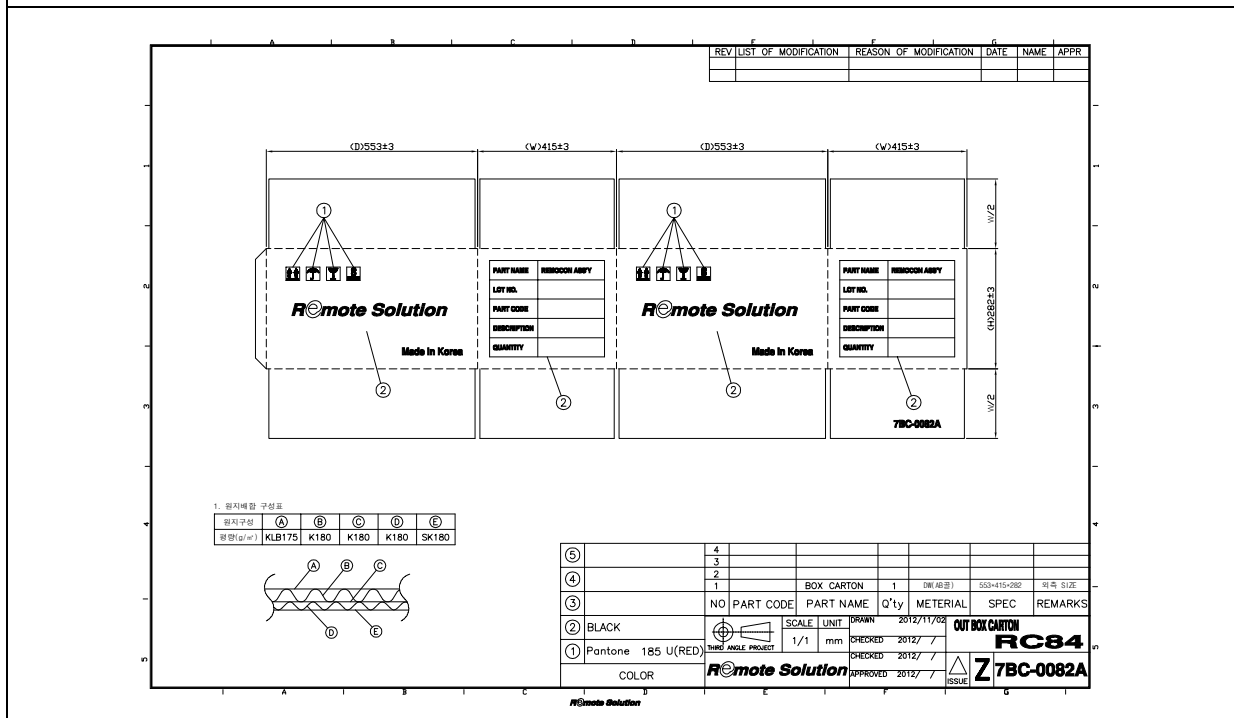
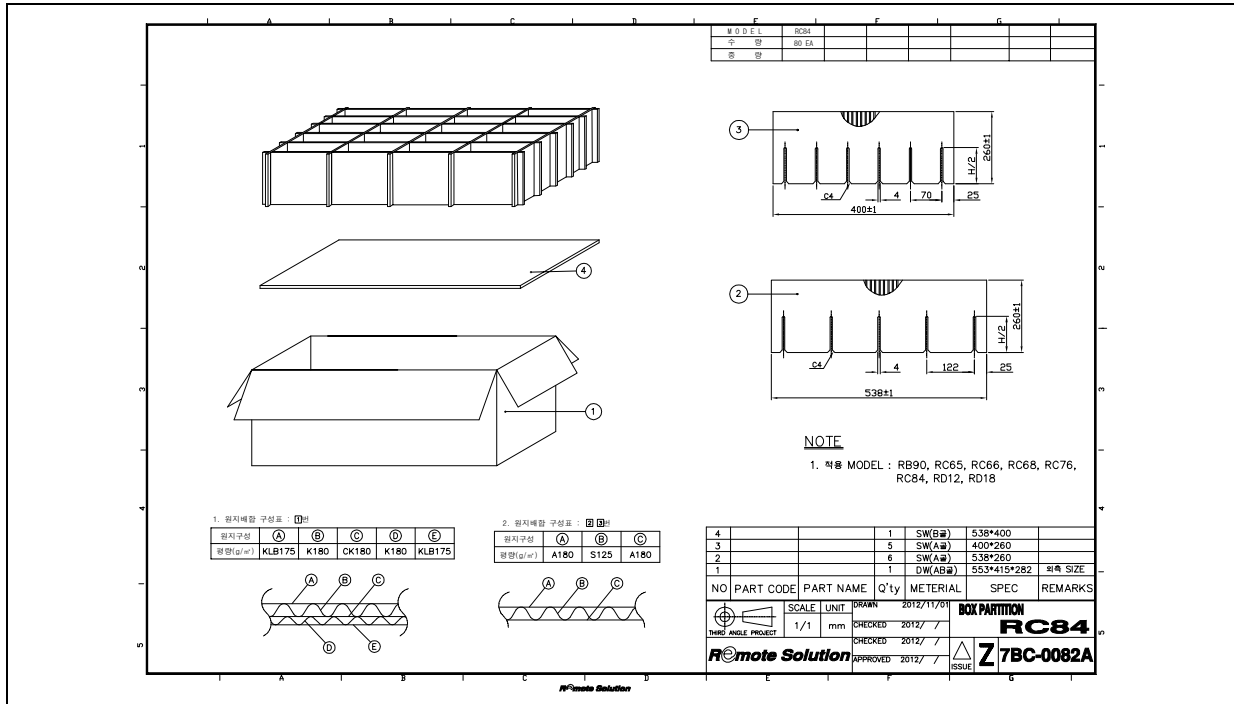
INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 48	57
REFORM :			
DECISION :		BRM-BA01	

10. Packaging Specification

10-1 MATERIAL : CARTON

10-2 SIZE : 553(L)*415(W)*282(H) (Out Side)

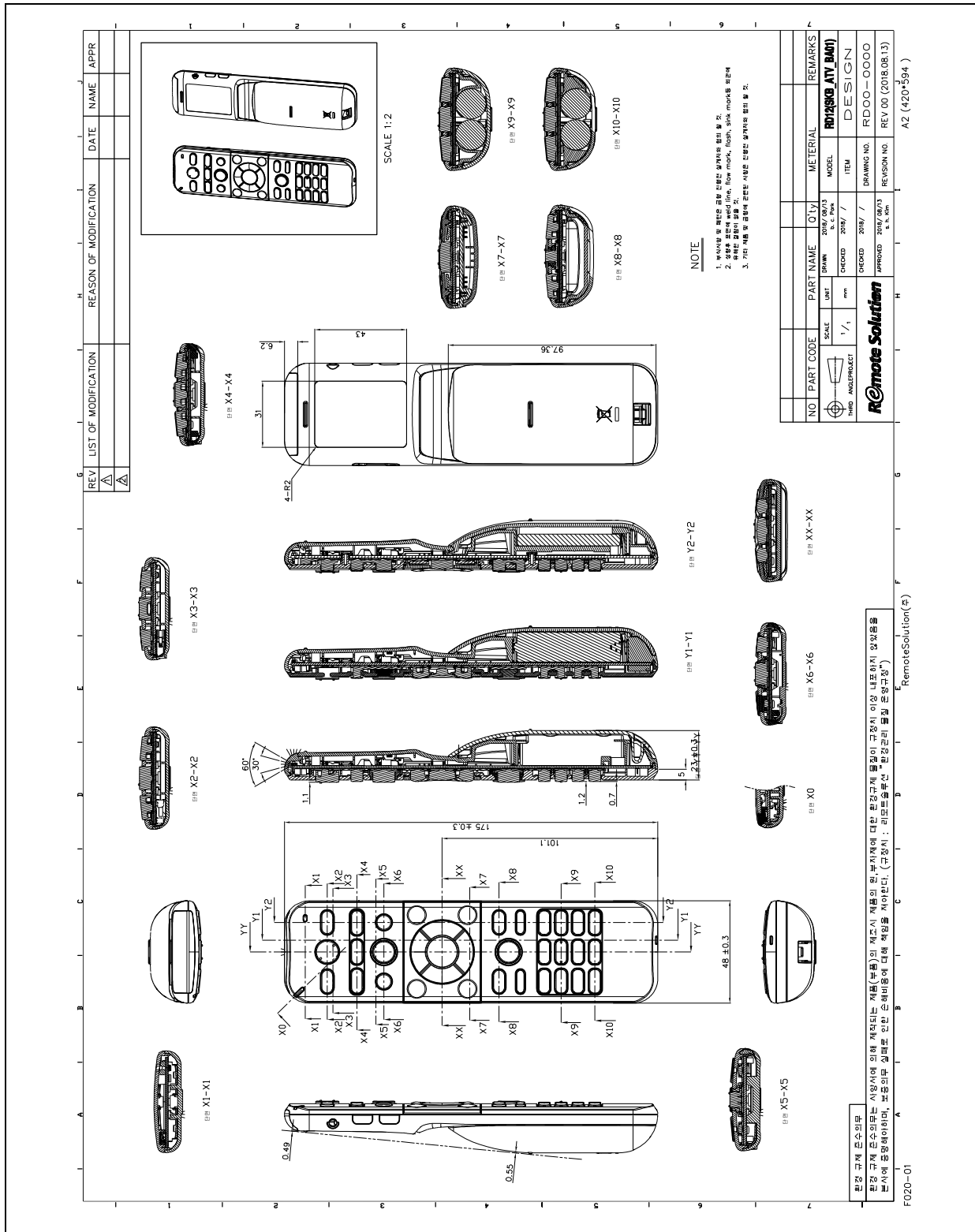
10-3 QUANTITY : 80EA



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	49
REFORM :		BRM-BA01	57
DECISION :			

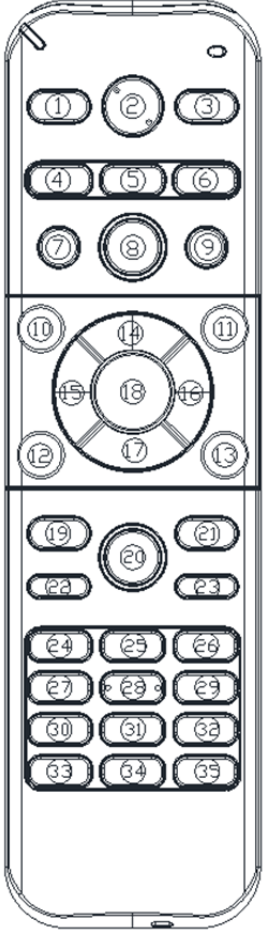
11. Assembling Specification



REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO :	50
REFORM :		BRM-BA01	57
DECISION :			

12. Rubber Tension Test

	NO.	Tension	Return	NO.	Tension	Return
	1	240	144	25	230	138
	2	240	144	26	240	144
	3	230	138	27	240	144
	4	220	132	28	230	138
	5	230	138	29	220	132
	6	240	144	30	240	144
	7	240	144	31	230	138
	8	230	138	32	230	138
	9	220	132	33	240	144
	10	250	150	34	220	132
	11	260	156	35	230	138
	12	250	150			
	13	250	150			
	14	260	156			
	15	250	150			
	16	260	156			
	17	250	150			
	18	280	168			
	19	240	144			
	20	240	144			
	21	230	138			
	22	240	144			
	23	230	138			
	24	230	138			
	Tension Spec :		Small Key : 220 ±30gr			
			Large Key(10,11,12,13,14,15,16,17,18번 Key) : 250 ±30gr			

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 51	57
REFORM :		BRM-BA01	
DECISION :			

13. Manufacturing Process Flow Chart (1/3) - SMD

고객명	SKB	공정흐름 및 배치도			문서NO	RS-W-R1-A244	작 성		
제품명	BA01				작성일	2018. 10. 24	검 토	권태걸	
모델명	RD12A				PART명	SMD	승 인		
기호	개정일자	개정내역			확인	기호	개정일자	개정내역	확인
내 역 배 분	01	02	03	04	05	06	07	08	
내 역 배 분	외주								
	MAIN								
	SUB								
	작업원	-	-		-	-	-	-	
공 정 명	LOADER	SCREEN PRINTER	Worktable	CHIP MOUNTER	CHIP MOUNTER	REFLOW	UNLOADER	VISION 검사	
작 업 내 용	.PCB 단품 실장	.PCB 납땜면 솔더 크림 인쇄	.Spring 삽입.	.PCB에 부품안착	.PCB에 부품안착	.PCB에 일정한 열을 가하여 솔더를 용융함.	.PCB 안착	.PCB에 부품안착 및 납땜성 확인.	
설비명	LOADER	SCREEN PRINTER	.	CHIP MOUNTER	CHIP MOUNTER	REFLOW	UNLOADER	VISION 검사기	
치공구명	.	.	.Spring 삽입 봉	.	.	.	.	.	
검사구	.	.3D 측정정비	.	.	.	.	.	.	
중 정 관 리 항 목	.PCB 안착 위치	.솔더크림 두께	.Spring 역삼 주의	.좌표값	.좌표값	.온도 관리	.PCB 안착 위치	.판정 기준 입력	

RSC-200-001(Rev.0)

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 52	57
REFORM :		BRM-BA01	
DECISION :			

13. Manufacturing Process Flow Chart (2/3) - PBA

고객명	SKB	공정흐름 및 배치도			문서NO	RS-W-R1-A244	작 성		
제품명	BA01				작성일	2018. 10. 24	검 토	권태걸	
모델명	RD12A				PART명	PBA	승 인		
기호	개정일자	개정내역			확인	기호	개정일자	개정내역	확인
공 정 번 호		01	02	03	04	05	06	07	08
내역에연속	외주								
	MAIN								
	SUB								
	작업원								
공 정 명		Dome Sheet 부착	CSR Writing	UE878 Writing	누설 전류검사	IR 동작검사	날짜인쇄마킹	외관검사	
작 업 내 용		.Dome Sheet 부착	.CSR Writing	.UE878 Writing	. 누설 전류검사	.IR 동작확인	.날짜 인쇄 마킹	.외관검사	
설비명		.Dome Sheet 부착	.Writing jig,PC	.Writing jig,PC	. 누설전류측정 PC	.성능검사 PC	.인쇄마킹장비		
치공구명		.이온아이저 .Dome Sheet 부착tool			.전류계 .POWER Supply	.전류계 .POWER Supply		.메거전	
검사구									
중 점 관 리 항 목		.Dome Sheet 부착상태	.Writing 파일 확인	.Writing 파일 확인	.부적합품 구분	.IR CODE 확인 .부적합품 구분	.인쇄상태확인	.부적합품 구분	

RSC-200-001(Rev.0)

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 53	57
REFORM :		BRM-BA01	
DECISION :			

13. Manufacturing Process Flow Chart (3/3) – Assembly

고객명	SKB	공정흐름 및 배치도				문서NO	RS-W-R1-A244	작 성		
제품명	BA01					작성일	2018.10.24	검 토	권대걸	
모델명	RD12A					PART명	조립	승 인		
기호	개정일자	개정내역			확인	기호	개정일자	개정내역		확인
공 정 번 호		01	02	03	04	05	06	07	08	
내재영역	외주									
	MAIN									
	SUB									
	작업원									
공 정 명		TOP CASE 조립	TOP CASE 조립	back case 조립	TOP CASE 조립	형합	학습	IR CODE 검사	PCB RMC 성능검사	
작 업 내 용		.Indicator LED 결속. .채널/음량 KEY 삽입 .라이트링 1점 삽입	.Mike mesh 2점 부착 .라이트링 1점 삽입	.SIDE KEY 삽입 .Rubber 안착	.SIDE KEY 삽입 .PCB 파쇄 및 안착	.필터 삽입 .형합.	.건전지 삽입. .네비키 삽입. .학습 진행. .필터 보호피 부착	.IR CODE 검사 .Back Label 부착. .SIDE KEY 검사 .Back Light 검사	.Pairing 검사 .Rssi 검사 .음성 검사 .부지 검사 .Audio 검사	
설비명		.	.	.	.	.형합기	.PC	4IN1 장비	.PC	
치공구명		.	.	.	.	.	.IR 수신부	.IR 수신부	.Pairing 동글	
검사구		.	.	.	.	.	.	.	.모니터	
중 점 관 리 항 목		.규형 및 이물확인	.규형 및 이물확인	.규형 및 이물상태 확인	.규형 및 이물 확인	.형합 상태 확인	.IR CODE 확인. .LED 검사.	.IR CODE 확인. .LED 검사.	.Rssi 검사 .PAIRING 검사 .음성 검사 .Unpairing 검사	
공 정 번 호		09	10							
내재영역	외주									
	MAIN									
	SUB									
	작업원									
공 정 명		외관검사.	포장							
작 업 내 용		.BATTERYCOVER 삽입 .외관검사.	.PE BAG 포장 .CARTON BOX .MANUAL 삽입 .건전지 삽입및 동작							
설비명			.							
치공구명			.							
검사구			.							
중 점 관 리 항 목		.BATTERYCOVER 삽입 .외관검사	.포장수량 확인							

RSC-200-001(Rev.0)

RSC-200-001(Rev.0)

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 54	57
REFORM :			
DECISION :		BRM-BA01	

14. Manufacturing Control Plan (1/2)

양산 관리 계획서 (Control Plan)

리모트솔루션㈜

*공정 : SMD → PBA → 조립

단 계	품 종	Remote Control	NO	개정일자	개정사유	작성	검토	승인	작성 일자 : 2018. 12. 04		
☐ 시제품	품 명	SK Broadband Andriod TV STB RCU (BA01)	△						결 재 12/4 - 12/4		
☐ 양산선형	품 번	RD12	△								
☒ 양산단계	상호기능원	기구 박방산 책임 / 회로 김희민 선임 / 소프트웨어 김광현 선임 디자인 서준호 책임 / 품질 김소영 사원 / 생기 송민수 책임 생산 이성희 부장 / 구매 유진영 차장 / PM 김동욱 주임	△								
업체코드	고객기술 승인/일자(요구시)	고객품질 승인/일자(요구시)									
공정 번호	공정명	설비명	관 리 항 목	특 별 특 성	관 리 기 준	확인방법	주 기	관리방안	관리분담	이상 발생시 조치사항	비고
	원자재 입고		1 원자재	형역업체 (입고)							
10	수입검사	육안	1 원자재	외관검사 (Design)	유해한 결함이 없을 것	육안검사	Sampling	검사 기준서	○	격리,반품, 부적합 발행	
		바니어 캘리퍼스	2 원자재	지수 검사	기구를 도면에 만족 할 것 - 천장치수 관리	측정 Data	Sampling	검사 기준서	○	격리,반품, 부적합 발행	
		Tension Gauge	3 원자재	특성 검사	기구를 도면에 만족 할 것	측정 Data	Sampling	검사 기준서	○	격리,반품, 부적합 발행	
		육안	4 원자재	형합 검사	형합 이상 없을 것	조립	Sampling	검사 기준서	○	격리,반품, 부적합 발행	
		Chamber	5 원자재	신뢰성 시험	신뢰성 시험 규격에 만족 할 것	측정 Data	1회/월	시험규격	○	격리,반품, 부적합 발행	
		EA 1000AⅢ	6 원자재	유해물질 측정	유해물질 관리 기준	측정 Data	1ea/Lot	유해물질 관리기준	○	격리,반품, 부적합 발행	
20	자재 입/출고	자재 운반 대차	1 원자재	선입선출	자재 규격 확인 선입선출관리	현품표 바코드	매 Lot	전산 (SAP)		격리,반품	
S1	정전기 방지	정전기 Checker	1 정전기	정전기관리 (제전부,제전화,어스 링)	Good Zone 이내 일 것	제전 측정기	1회/1일	Check Sheet	○	제전화 및 어스링 교체	
S2	슬더크림 교환	슬더크림 교환기 (DMS200), 점도계	1 슬더크림	슬더크림 보관	5±3℃ 냉장보관	온도계	1회/1일	온도 측정시트	○	재설정,조정	
			2 슬더크림	상온 방지	25±5℃, 2Hr ~ 12Hr (자동방지치기 : fool-proof)	타이머	사용전	입출고 관리대장	○	재설정,조정	
			3 슬더크림	교환 시간	교환 관리기준 준수(45sec)	타이머	사용전	입출고 관리대장	○	재설정,조정	
30	PCB공급	Vaccum Loader (SBSF-200)	1 PCB	정렬 상태	진행방향 정렬	육안	전수	-	○	재 정렬	
			2 PCB	PCB 정착	PCB Pick up후 떨어짐이 없을 것	육안	전수	-	○	재 정착	
40	PCB 세척	PCB Cleaner	1 PCB	PCB 이물 세척	브러쉬 위치 및 Air 작동 이상 없을 것	육안	전수	-	○	재 설정	
50	슬더크림 도포	Screen Printer (HP-520S), 정온유지장치 (HTC-1380)	1 슬더크림	스피즈 압력	14-16kgf	설비 확인	전수	설비점검 대장	○	설비 재설정	
			2 슬더크림	스피즈 스피드/각도	35 ~ 100mm/sec, 60도 (Normal : 70~80mm/sec)	설비 확인	전수	설비점검 대장	○	설비 재설정	
			3 슬더크림	크림슬더 인쇄상태	과남,미남,불어짐 없을 것	육안검사 (확대경)	전수	매Time	○	설비 재설정	
			4 슬더크림	내부 정온유지	25 ±2℃ (23 ~ 27℃)	설정 Display	전수	-	○	온도 재설정	
			5 슬더크림	메탈 마스크 자동 세척	개구부 찌꺼기,막힘이 없을 것 (1회/2Hrs 수동세척 실시)	설비 확인	1회/5회	설비	○	조건 재설정	
S3	슬더 3D 측정	3D측정기 (SPI2500)	1 슬더크림	슬더 두께 측정 CSR 0630, UE878 IC	Metal Mask Thickness 별 도포량 관리 0.13T: 155±35µm 0.10T: 125±20µm 과남,미남,불어짐 없을 것	설비 확인	매 Time	3D측정 시트	○	조건 재설정	
60	SMD 부품실장	Chip Mount (SM471) 이형 Mount (SM421)	1 Chip부품	Air / Nozzle 압력	Air : 4.50 ~ 5.50 Mpa Nozzle : -80±10mmHg	압력계	1회/일	설비점검 대장	○	조건 재설정	
			2 Chip부품	자재 규격 일치	Feeder List (MONITOR) *혼입방지 시스템	바코드 스캔	Model 교체시	Model 스캔	○	Program 재설정	
			3 Chip부품	부품 Pick up 위치	부품 넓이의 5~25%	설비 확인	Model 교체시	설비점검 대장	○	Program 재설정	
			4 Chip부품	Air / Nozzle 압력	Air : 4.50 ~ 5.50 Mpa Nozzle : -100±10mmHg	압력계	1회/일	설비점검 대장	○	조건 재설정	
			5 Chip부품	부품 실장 상태	LAND 범위의 1/3이내	생품비교, 확대경	Model 교체시	설비점검 대장	○	조건 재설정	
70	스프링 삽입	-	1 원자재	부품 실장 상태	스프링 이탈, 누락 없을 것	육안	전수	작업 지도서	○	수정,제작업	
80	Reflow Soldering	Reflow Oven (1809 EXL)	1 SMD제품	예열구간	Temperature : 150 ~ 200℃ Soldering time : 90 ~ 130sec	예열온도 Check	1회/일	Reflow Profile	○	조건 재설정	
			2 SMD제품	Soldering	temperature : 200℃ 이상 (peak:245~255℃) - PCB 1.2t Soldering time : 40 ~ 70sec	Profile Check	1회/일	Reflow Profile	○	조건 재설정	
			2 SMD제품	Soldering	temperature : 200℃ 이상 (peak:245~255℃) - PCB 1.2t Soldering time : 40 ~ 70sec	Profile Check	1회/일	Reflow Profile	○	조건 재설정	
			2 SMD제품	Soldering	temperature : 200℃ 이상 (peak:245~255℃) - PCB 1.2t Soldering time : 40 ~ 70sec	Profile Check	1회/일	Reflow Profile	○	조건 재설정	
90	PCB Out	SMB-220	1 SMD제품	냉각	PCB 정렬 (결함 없을 것)	육안	전수	-	○	조건 재설정	
100	비전 검사	비전 검사기 (MV-3L)	1 Main PCBA	부품실장, 납땜 상태 검사	SMD 외관검사 표준	설비 확인	전수	SMD 외관 검사 표준	○	식별,격리,수리	
S4	부적합품 분석 및 수리	확대경, 인두기	1 SMD제품	인두기온도 관리	인두기 실측온도 관리 (380~420℃) 납땜 및 부품 규격 이상 없을 것	온도측정	2회/일	인두기온도 체크시트	○	인두기 교체	

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	SPECIFICATION (TRANSMITTER REMOCON)	MODEL NO : 55	57
REFORM :			
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14. Manufacturing Control Plan (2/2)

공정 번호	공정흐름도 SUB MAIN	공정명	설비명	관 리 항 목			특별 특성	관 리 기 준				관리분담	이상 발생시 조치사항	비고
				NO	재 품	공정 내용		규 격	확인방법	주 기	관리방안			
110		Metal Dome sheet 부착	Metal Dome sheet M/C	1	원자재	Metal Dome sheet 부착	부착상태 이상 없을 것	설비	전수	설비	○	식별, 격리, 수리		
120		CSR IC Writing	Writing M/C	1	Main PCBA	CSR IC Writing	Writing 이상 없을 것	설비	전수	설비	○	식별, 격리, 수리		
130		UE878 IC Writing	Writing M/C	1	Main PCBA	UE878 IC Writing	Writing 이상 없을 것	설비	전수	설비	○	식별, 격리, 수리		
140		누설전류 검사	Function Test M/C	1	Main PCBA	누설 전류 측정	누설전류 Spec 만족할 것	설비	전수	설비	○	식별, 격리, 수리		
150		IR/RF 출력 및 동작전류 검사	Function Test M/C	1	Main PCBA	IR/RF 동작 검사 [저전압 : 2.3V 인가]	IR/RF 동작 이상 없을 것	설비	전수	설비	○	식별, 격리, 수리		
				2	Main PCBA	동작전류 검사	동작전류 Spec 만족할 것	설비	전수	설비	○	식별, 격리, 수리		
160		생산일자 마킹	Marking	1	Main PCBA	생산일자 마킹	마킹상태 문제 없을 것	설비	전수	설비	○	식별, 격리, 수리		
170		제품 포장	매거진	1	PCB Assy	제품포장	모텔 혼입 없을것 식별 확인	육안	전수	설비	○	재 포장		
55		부적합품 분석 및 수리	확대경, 인두기, 검사 JIG	1	Main PCBA	인두기 온도 관리	인두기 실측 온도 관리 (380~420℃)	온도 측정	1회/일	인두기온도 체크시트	○	인두기 교체		
				2	Main PCBA	분석 및 수리	재 검사시 양품 판정일것, 납땜 이상 없을 것	기능검사 전류류상	부적합품 관리대장	○	수리후 재검사, 폐기			
180		Top Case 조립	수작업	1	Top Case, Keypad, Main PCBA	Top Case + Keypad + Main PCBA	Keypad 및 Main PCBA 안착시 들뜸 없을것	육안	전수	작업 지도서	○	수정, 재작업		
190		완제품 형합	수작업	1	Bottom Cover, Filter	Top Case Assy + Bottom Cover 형합	Spring 이탈, 단차, 벌어짐 없을 것 필터 결함 상태 확인 할 것 가형함 후 완전 형합 할 것 가형함시 분석 파손 주의	육안	전수	작업 지도서	○	수정, 재작업		
200		학습 검사	수작업	1	원제품	리모컨 Learning 확인 + IR Filter부 보호피 부착 후 상태 확인 할 것	Learning 기능이 이상이 없을 것 IR Filter부 보호피 부착 후 상태 확인 할 것	육안	전수	작업 지도서	○	식별, 격리, 수리		
210		IR 동작검사	4IN1 검사JIG	1	원제품	Back Label 부착 Side key 검사	Full Key IR 출력 미검출 없을 것 LED 점등 확인 할 것 Side key 이상 없을 것	설비	전수	작업 지도서	○	식별, 격리, 수리		
220		Back Light 검사	암실박스	1	원제품	리모컨 Back Light 확인	Back Light 점등에 이상이 없을 것	육안	전수	작업 지도서	○	식별, 격리, 수리		
230		RF 동작검사	RF 검사JIG	1	원제품	패어링	패어링 상태 및 부저음 확인 RSSI 강, SW, PW 버튼 확인 Voice 및 누설전류 확인 버전라벨(제조일자) 부착	육안	전수	작업 지도서	○	격리, 수리		
240		오디오 Streaming 검사	PC 검사JIG 월드 Box	1	원제품	오디오 패어링	패어링 이상 없을 것	육안	전수	작업 지도서	○	격리, 수리		
				2	원제품	오디오 동작	오디오 책 삽입 및 LED 점소등 확인 Streaming 동작 이상 없을 것	육안	전수	작업 지도서	○	격리, 수리		
250		PE-BAG 용착	검사JIG	1	원제품	PE-BAG 건전지 용착	PE-BAG 용착 상태 이상 없을 것	육안	전수	작업 지도서	○	격리, 수리		
260		외관검사	육안	1	원제품	외관 상태	형합상태(Gap, 단차) 이상 없을 것 IR Filter부 보호피 부착 상태 이상 없을 것 사양 이상 없을 것, 이물질 등 없을것	육안	전수	검사 기준서	○	격리, 수리		
				2	원제품	PE-BAG 건전지 삽입	PE-BAG 에 건전지 삽입	육안	전수	작업 지도서	○	격리, 수리		
270		제품포장	수작업	1	원제품	매뉴얼, PE-Bag	매뉴얼 누락 및 헛어짐 없을 것	육안	전수	작업 지도서	○	격리, 수정		
				2	원제품	Carton Box 포장	혼입 및 정량 이상 없을것 (Box : 80EA)	육안	Box	작업지도서 배포드라벨	○	격리, 수정		
56		부적합품 분석 및 해체	수작업	1	원제품	분석 및 해체	기구물과 성능 불량 관리, 해체시 부품 파손 주의 및 확인	육안/ 식별 라벨	부적합품 관리대장	○	수리 후 재검사, 폐기			
				2	원제품	식별관리	양품과 부적합품 혼입되지 않을것	육안/ 식별 라벨	부적합품 관리대장	○	수리 후 재검사, 폐기			
280		출하검사	패어링 Dongle, 검사 P/G, JIG, Power Supply, 전류계, 확대경	1	원제품	외관검사 (Design)	디자인 사양 및 승인 샘플과 일치할 것 유해한 결함이 없을것	표준샘플 / 육안	검사 기준서	○	선별, 재작업, 부적합 발행			
				2	원제품	성능 검사	패어링, 음성, 오디오, LED 점등, 부저, Back Light, Full Key 동작 이상 없을 것	검사 P/G	검사 기준서	○	선별, 재작업, 부적합 발행			
				3	원제품	전기적 특성	1. RF(통신)동작 전류 : 25mA 이하 2. IR(TV통신) 동작전류 : 65mA 이하 3. 누설 전류 - 패어링 전 : (AVR) 20 uA 이하 - 패어링 후 : (AVR) 40 uA 이하 4. 동작전압 : 2.2 ~ 3.4V	Power Supply, 전류계	검사 기준서	○	선별, 재작업, 부적합 발행			
			4	원제품	분해검사	Pattern Open/Short, 동특물품, 납땜, 소납, 내부이물질, 부품 미삽, 파손 등이 없을 것	육안, 확대경	n=1, c=0	검사 기준서	○	선별, 재작업, 부적합 발행			
			5	원제품	제품포장상태	포장재 헛어짐, 이물질이 없을것 식별 및 정량, 정량 이상 없을것	육안	Sampling Check	검사 기준서	○	선별, 재작업, 부적합 발행			
57	출하	지게차, 납품차	1	원제품	제품 재고 관리	재고 수량, 제품 혼입 및 보관 상태 이상 없을 것	현품표	출하 대기품	전산 (SAP)					

※ 기호 설명

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	<u>SPECIFICATION</u> (TRANSMITTER REMOCON)	MODEL NO :	56
REFORM :		BRM-BA01	57
DECISION :			

15. TV Brand List (1/2)

[illegible]

REMOTE SOLUTION CO., LTD.

INSTITUTION : 2018.12.11	<u>SPECIFICATION</u> (TRANSMITTER REMOCON)	MODEL NO :	57
REFORM :		BRM-BA01	57
DECISION :			

15. TV Brand List (2/2)

063	063	SHARP	063	SHARP
064	064	SHARP	064	SHARP
065	065	SONY	065	SONY
066	066	SONY/VIEWCAM	066	SONY/VIEWCAM
067	067	SONY	067	SONY
068	068	태그 (TAG) / KAMAKURA	068	태그 (TAG) / KAMAKURA
069	069	태그 (TAG)	069	태그 (TAG)
070	070	TECH	070	TECH
071	071	TECH	071	TECH
072	072	TECH	072	TECH
073	073	TECH	073	TECH
074	074	TECH	074	TECH
075	075	TECH	075	TECH
076	076	TECH	076	TECH
077	077	TECH	077	TECH
078	078	TECH	078	TECH
079	079	TECH	079	TECH
080	080	TECH	080	TECH
081	081	TECH	081	TECH
082	082	TECH	082	TECH
083	083	TECH	083	TECH
084	084	TECH	084	TECH
085	085	TECH	085	TECH
086	086	TECH	086	TECH
087	087	TECH	087	TECH
088	088	TECH	088	TECH
089	089	TECH	089	TECH
090	090	TECH	090	TECH
091	091	TECH	091	TECH
092	092	TECH	092	TECH
093	093	TECH	093	TECH
094	094	TECH	094	TECH
095	095	TECH	095	TECH
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097	097	TECH	097	TECH
098	098	TECH	098	TECH
099	099	TECH	099	TECH
100	100	TECH	100	TECH
101	101	TECH	101	TECH
102	102	TECH	102	TECH
103	103	TECH	103	TECH
104	104	TECH	104	TECH
105	105	TECH	105	TECH
106	106	TECH	106	TECH
107	107	TECH	107	TECH
108	108	TECH	108	TECH
109	109	TECH	109	TECH
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119	119	TECH	119	TECH
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122	122	TECH	122	TECH
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124	124	TECH	124	TECH
125	125	TECH	125	TECH
126	126	TECH	126	TECH
127	127	TECH	127	TECH
128	128	TECH	128	TECH
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130	130	TECH	130	TECH
131	131	TECH	131	TECH
132	132	TECH	132	TECH
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134	134	TECH	134	TECH
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136	136	TECH	136	TECH
137	137	TECH	137	TECH
138	138	TECH	138	TECH
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140	140	TECH	140	TECH
141	141	TECH	141	TECH
142	142	TECH	142	TECH
143	143	TECH	143	TECH
144	144	TECH	144	TECH
145	145	TECH	145	TECH
146	146	TECH	146	TECH
147	147	TECH	147	TECH
148	148	TECH	148	TECH
149	149	TECH	149	TECH
150	150	TECH	150	TECH
151	151	TECH	151	TECH
152	152	TECH	152	TECH
153	153	TECH	153	TECH
154	154	TECH	154	TECH
155	155	TECH	155	TECH
156	156	TECH	156	TECH
157	157	TECH	157	TECH