

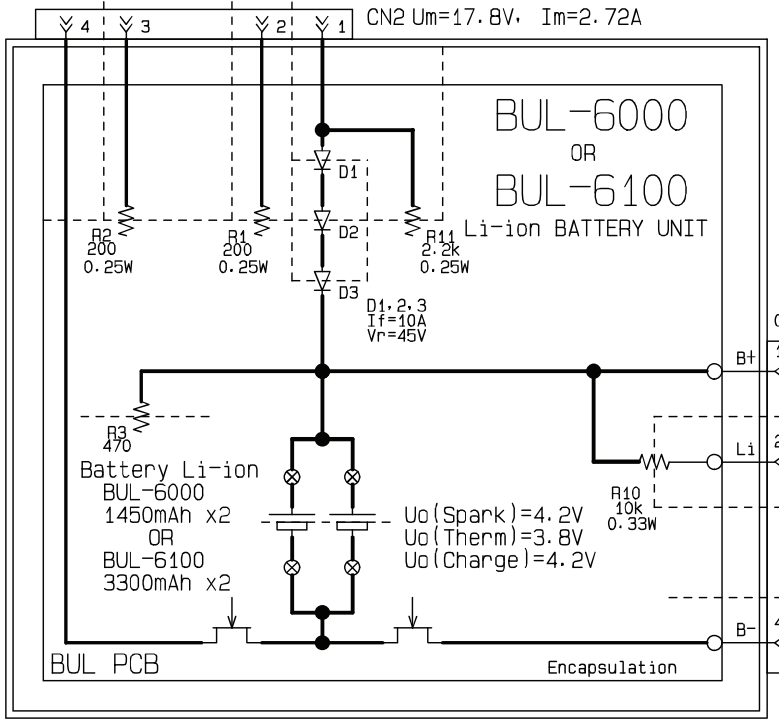
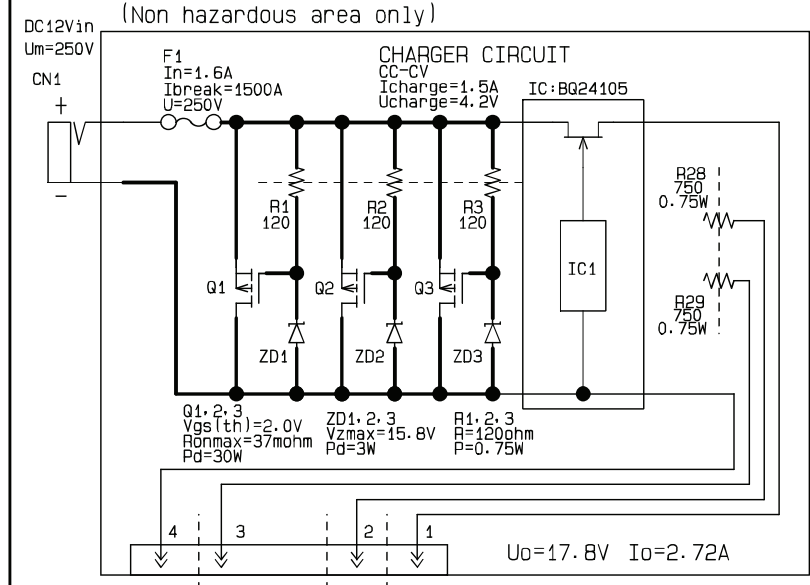
		DRAWING NAME	DRAWING No.	REV	DATE
	01	BLOCK DIAGRAM FOR MODEL GX-6000	E3-6991-5393-30-01K	1	2023.1.20
	02	DIAGRAM FOR I.S. KEEP FOR MODEL GX-6000	E3-6991-5361-10-01K	3	2023.1.20
	03	OUTER STRUCTURE GX-6000	M3-4777-01-01K	1	2023.1.20
	04	MAIN UNIT GX-6000	M2-4777-01-01K	2	2023.1.20
	05	SCHEMATIC MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-01K	0	2014.7.14
	06	SCHEMATIC MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-02K	0	2014.7.14
	07	SCHEMATIC MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-03K	0	2014.7.14
	08	SCHEMATIC MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-04K	0	2014.7.14
	09	SCHEMATIC MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-05K	0	2014.7.14
	10	PARTS LIST OF MAIN PCB	PLT-6991-5372-80 (1/4)	0	2014.7.14
	11	PARTS LIST OF MAIN PCB	PLT-6991-5372-80 (2/4)	3	2014.12.16
	12	PARTS LIST OF MAIN PCB	PLT-6991-5372-80 (3/4)	1	2014.11.5
	13	PARTS LIST OF MAIN PCB	PLT-6991-5372-80 (4/4)	0	2014.7.14
	14	MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-01A	0	2014.7.14
	15	MAIN PCB FOR MODEL GX-6000	E3-6991-5372-80-02A	0	2014.7.14
	16	SCHEMATIC SENSOR PCB FOR MODEL GX-6000	E3-6991-5373-50-01K	1	2014.11.5
	17	PARTS LIST OF SENSOR PCB	PLT-6991-5373-50 (1/1)	2	2014.12.16
	18	SENSOR PCB FOR MODEL GX-6000	E4-6991-5373-50-01A	1	2014.11.5
	19	SENSOR to MAIN WIRE FOR MODEL GX-6000	E4-6991-5382-70-01K	0	2014.7.14
	20	PUMP RP-12	M4-4181-61-01K	3	2013.1.29
	21	Buzzer BZ-9K	E4-6991-5008-70-01K	0	2011.2.28
	22	COMBUSTIBLE GAS SENSOR NC SENSOR	M3-4462-64-05K	3	2012.4.17
	23	TOXIC GAS SENSOR	M4-4084-92-03K	0	2014.7.30
	24	OXYGEN SENSOR	M4-4080-82-07K	0	2014.7.30
	25	SMART SENSOR Type-ESS	M4-4486-01-01K	0	2014.7.30
	26	TOXIC GAS SENSOR	M4-4084-30-08K	0	2014.7.30
	27	ESS SENSOR PCB	E3-6991-5384-10-01K	0	2014.7.14
	28	SMART SENSOR Type-DES	M4-4630-20-01K	0	2014.7.24
	29	DES SENSOR PCB	E3-6991-5385-90-01K	1	2015.5.25
	30	DES DIGITAL PCB	E3-6991-5386-60-01K	1	2015.2.24

		DRAWING NAME	DRAWING No.	REV	DATE
	31	T- 3/4 BPA LAMP OL-8270BPA	E4-6991-5129-60-01K	0	2012.2.24
	32	SMART SENSOR Type-PIS	M4-4830-01-01K	1	2015.3.25
	33	PIS SENSOR PCB	E4-6991-5387-30-01K	2	2015.3.25
	34	PIS DIGITAL PCB	E3-6991-5388-10-01K	1	2015.3.25
	35	BUL-6000	M3-4777-03-01K	0	2014.7.28
	36	BUL PCB	E3-6991-5389-80-01K	1	2014.9.5
	37	BUD-6000 / BUD-6100	M3-4777-04-01K	2	2023.1.20
	38	BUD PCB	E4-6991-5390-50-01K	1	2014.9.5
	39	DIAGRAM FOR I.S. KEEP FOR MODEL BC-6000 / SDM-6000	E4-6991-5395-80-01K	1	2014.9.5
	40	LABEL	M4-4777-01-01K	8	2023.1.20
	41	LABEL BC-6000 / SDM-6000	M4-4777-01-02K	0	2014.7.28
	42	SCHEMATIC CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01K	0	2014.12.16
*	43	CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01A	1	2023.3.8
	44	SCHEMATIC CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01K	1	2015.3.5
	45	CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01A	2	2015.6.12
	46	SMART SENSOR Type-OSS	M4-4080-01-01K	0	2015.2.24
	47	OSS SENSOR PCB	E4-6991-5457-00-01K	0	2015.2.24
	48	OSS DIGITAL PCB	E3-6991-5458-70-01K	0	2015.2.24
	49	OXYGEN SENSOR	M4-4080-01-02K	0	2015.2.24
	50	BC-6000	M3-4777-02-01K	1	2015.3.23
	51	SDM-6000	M3-4395-23-01K	1	2015.3.23
	52	BUL-6100	M3-4777-38-01K	0	2023.1.20

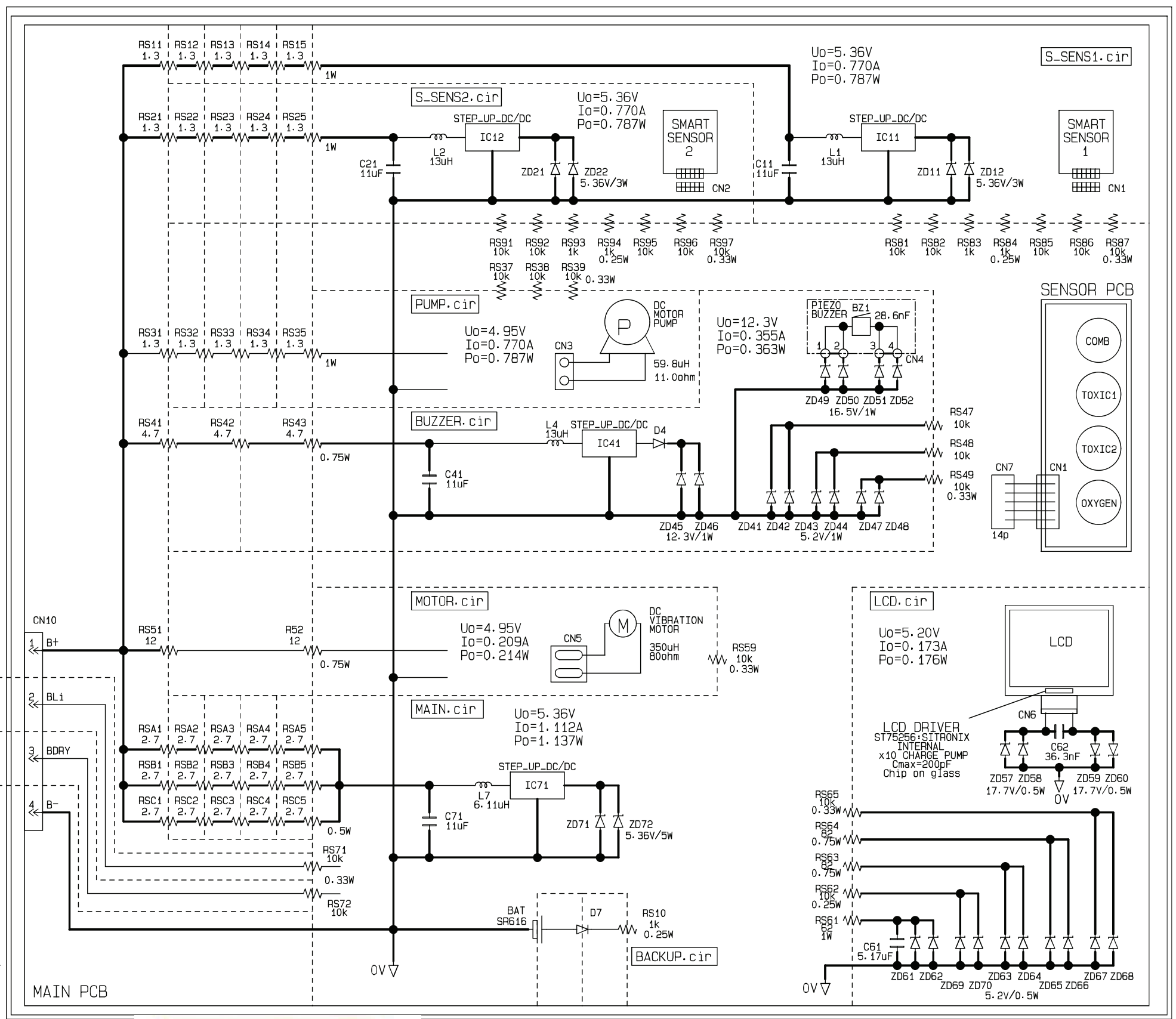
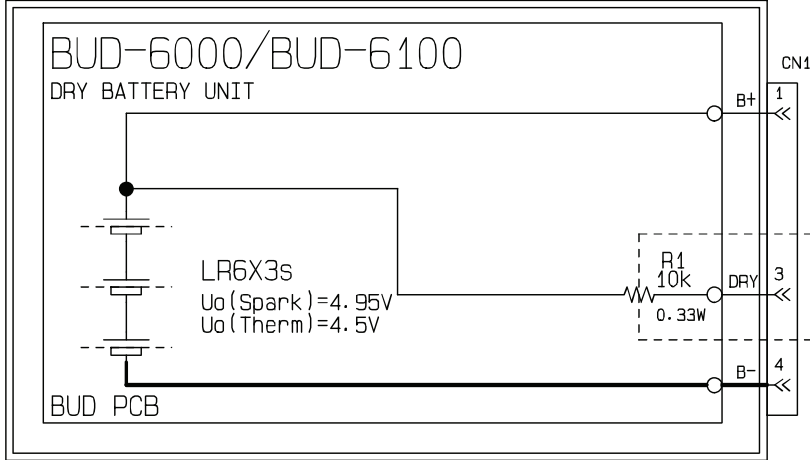


注 記 NOTES		改版担当者 REV. BY 小野圭	改版日 REVISED 2023.3.8	名 称 NAME INDEX GX-6000
改版回数 REV.	43 9 総頁数 PAGES 1			
承認 APPROVED 石橋勝	検 討 CHECKED 北村正英	製 図 DRAWN 小野圭	作成日 DATE 2015.3.6	図 番 DWG. NO. E 3 - 6 9 9 1 - 5 4 7 0 - 7 0 - 0 1 K
<div>RIKEN KEIKI</div> <div>理研計器株式会社</div> <div>機密情報 / CONFIDENTIAL</div>				

BATTERY CHARGER
BC-6000/SDM-6000
(Non hazardous area only)



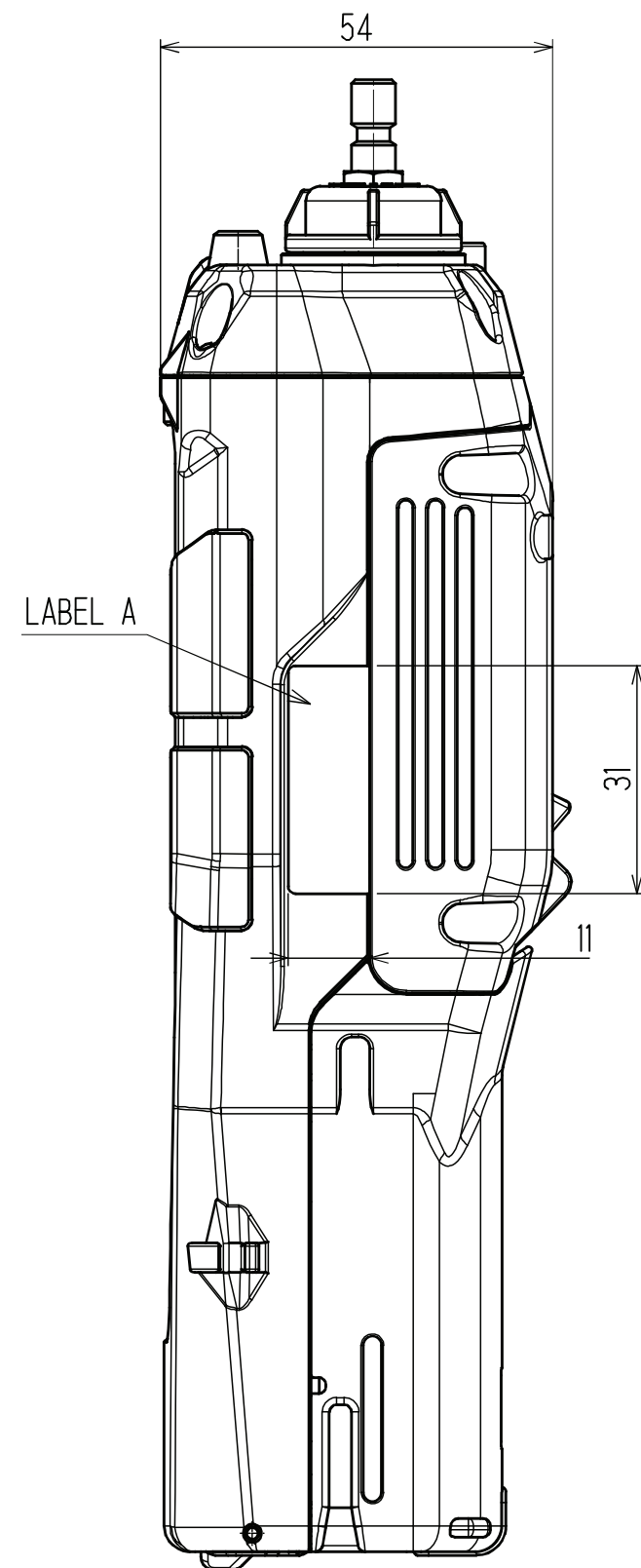
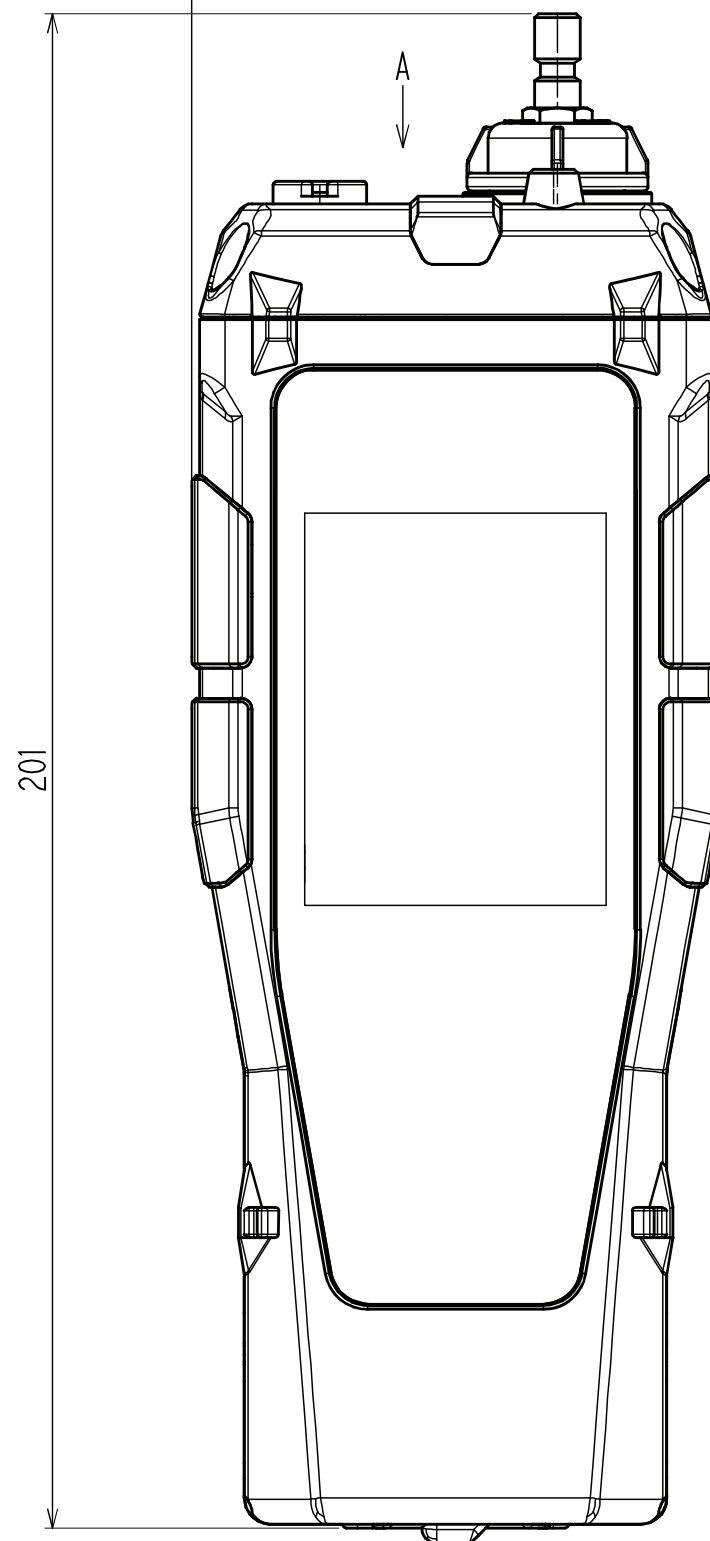
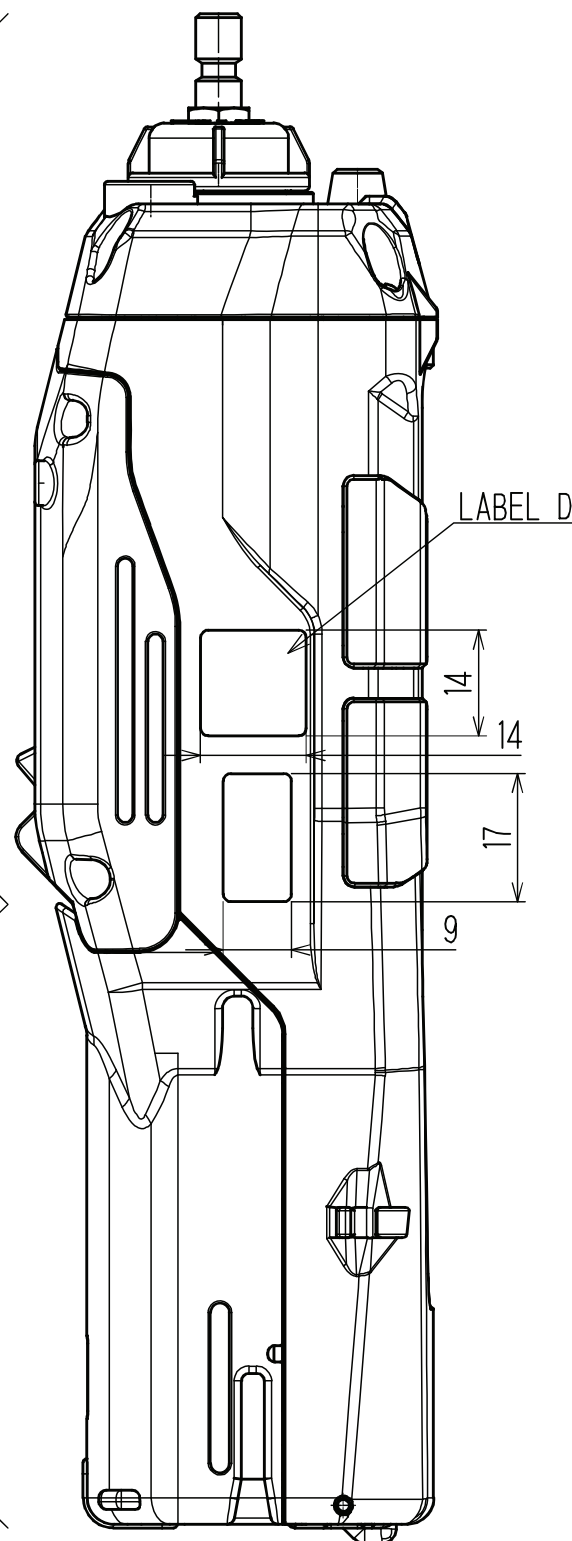
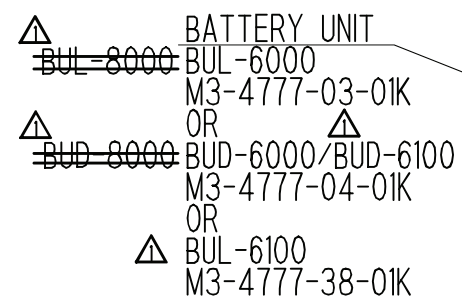
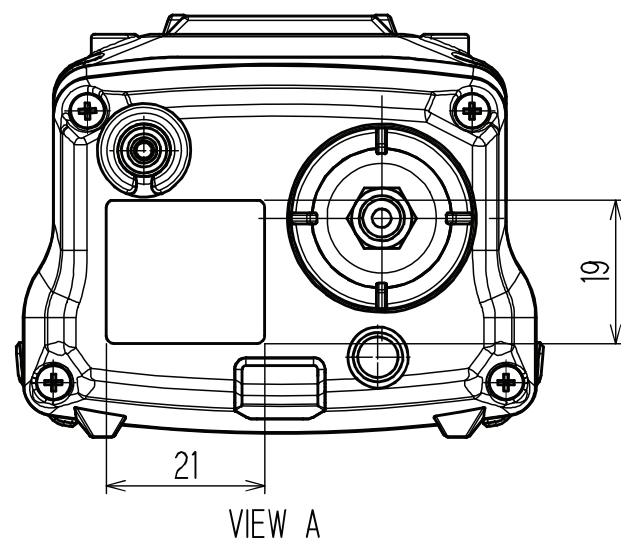
The battery unit
even the end user is
possible to replace.
(Non hazardous area only)

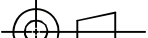


(MEMO)
1. --- marks means SEPARATE
2. --- marks means INFALLIBLE CONNECTION

E 記 NOTES BUL-6100/BUD-6100		改版担当者 REV. BY 木村司	改版日 REVISED 2023. 1. 20	名 称 NAME DIAGRAM FOR I. S. KEEP FOR MODEL GX-6000
改版回数 EV. 3	総頁数 PAGES 1			
承認 APPROVED 石橋勝	検 討 CHECKED 北村正英	製 図 DRAWN 小野圭	作成日 DATE 2014. 6. 23	図 番 DWG. NO. E3-6991-5361-10-01K
R RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL				

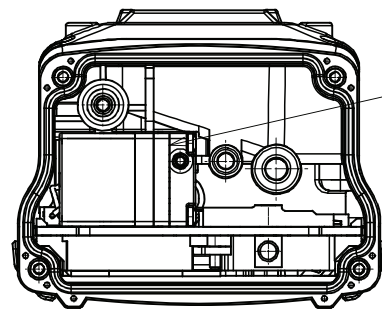
寸法	C	I	G	F	M	D	C	B
寸法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上	
精級	0.1	0.15	0.2	0.3	0.4	0.5	0.7	精級
粗級	0.2	0.3	0.4	0.5	0.8	1.0	1.2	粗級
粗級	0.4	0.6	0.8	1.2	1.6	2.0	2.5	粗級



表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME
材 質 MAT.					
			1 : 1		OUTER STRUCTURE GX-6000
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.	
青良治	近藤晴彦	海野裕作	2014. 7. 18	M3-4777-01-0.1K	
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL	

PROTECTION GRADE:MORE THAN IP 20

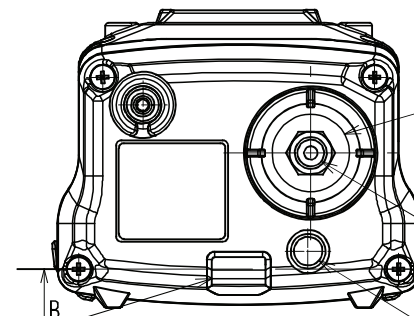
1 2 3 4 5 6 7 8 9 10 11



PUMP
M4-4181-61-01K

ALARM LAMP
MATERIAL:PC
SURFACE AREA:120mm²

FIGURE WITHOUT TOP COVER

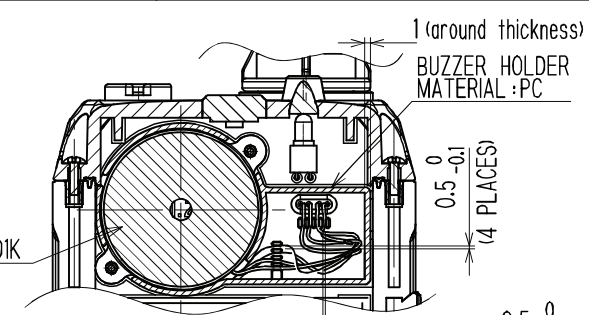


FILTER CASE
MATERIAL:PC
SURFACE AREA:397mm²

NIPPLE
MATERIAL:STAINLESS STEEL

BUZZER
E4-6991-5008-70-01K

ALARM LAMP
MATERIAL:PC
SURFACE AREA:60cm²



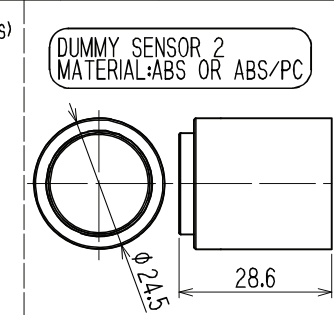
B-B SECTION

CABLE CLAMPING FOR BUZZER

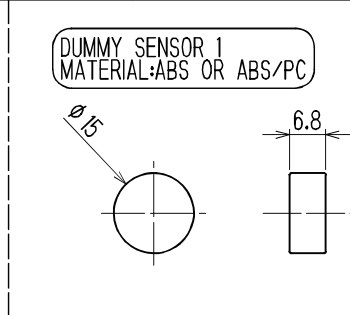
1 (around thickness)
BUZZER HOLDER
MATERIAL:PC

0.5 0
-0.1
(4 PLACES)

0.5 0
-0.1
(4 PLACES)

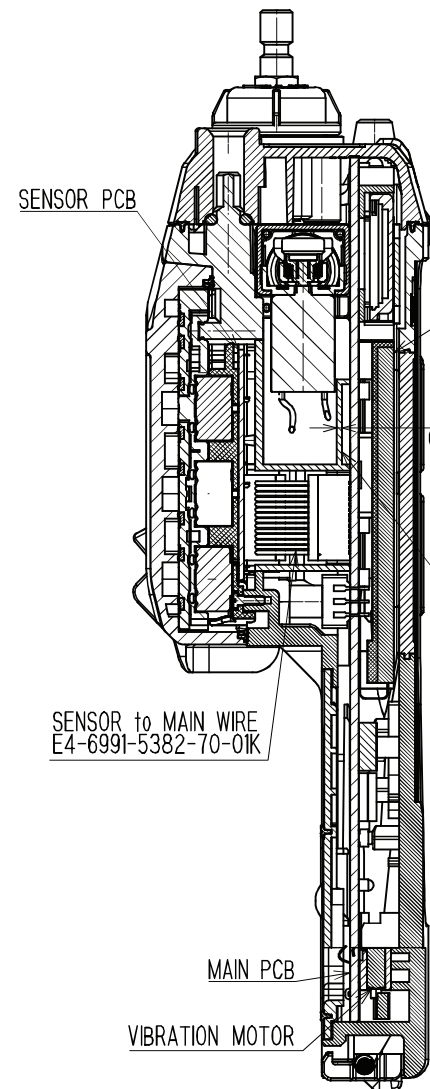


DUMMY SENSOR 2
MATERIAL:ABS OR ABS/PC



DUMMY SENSOR 1
MATERIAL:ABS OR ABS/PC

A-A SECTION



SENSOR PCB

LCD

1 (around thickness)

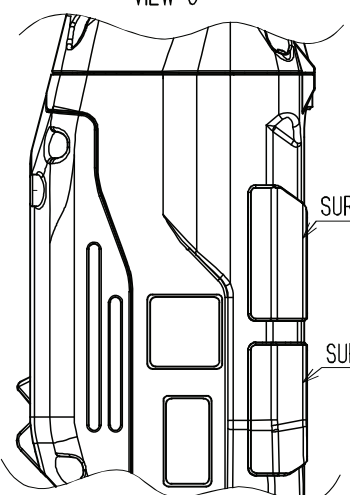
PUMP CASE
MATERIAL:PC

SENSOR to MAIN WIRE
E4-6991-5382-70-01K

MAIN PCB

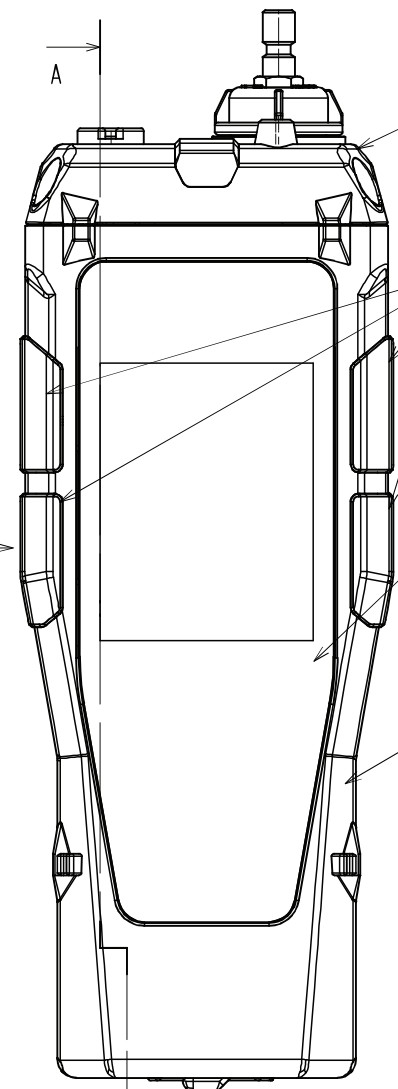
VIBRATION MOTOR

VIEW C



SURFACE AREA:290mm²

SURFACE AREA:290mm²

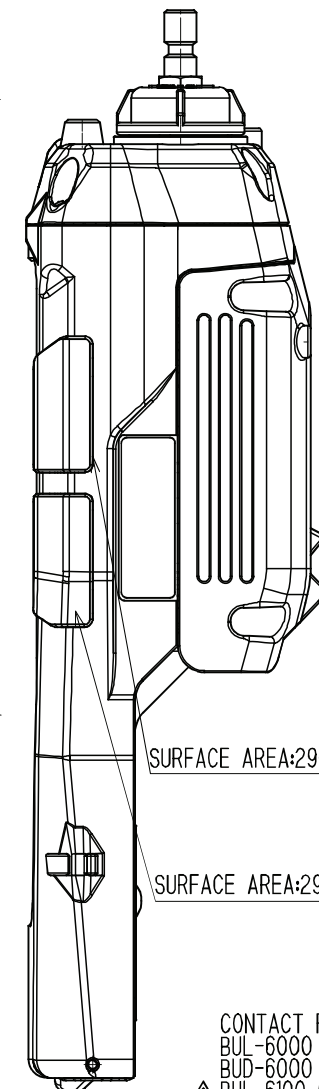


TOP COVER
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP

ALARM LAMP
MATERIAL:PC

PANEL SHEET
△ PET ST-PET
RESISTANCE LESS THAN 1[GΩ]
ACHILLES CORP
OR
PET 300R
RESISTANCE LESS THAN 1[GΩ]
TOYOBO CO LTD

HOUSING
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP



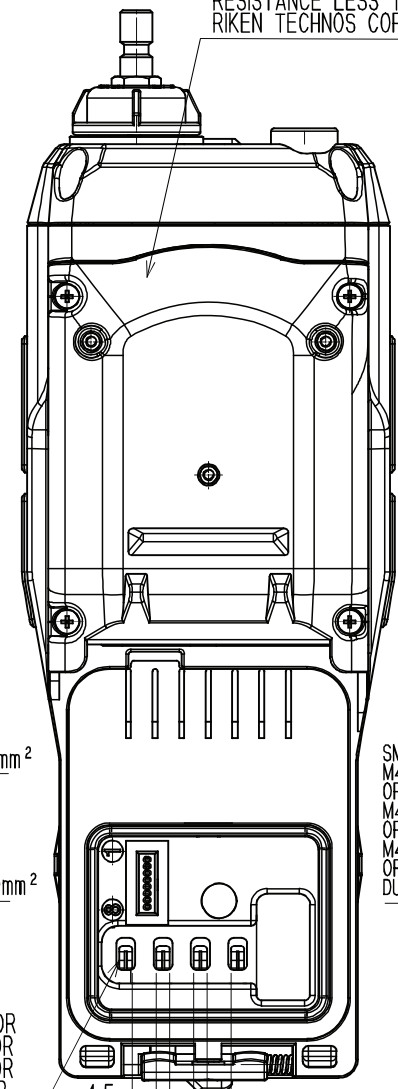
SURFACE AREA:290mm²

SURFACE AREA:290mm²

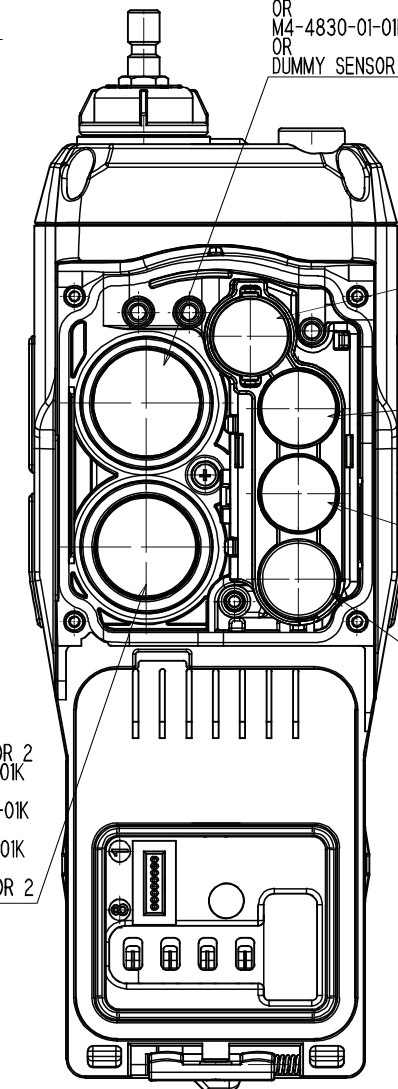
CONTACT FOR
BUL-6000 OR
BUD-6000 OR
△ BUL-6100 OR
BUD-6100

4.5
4.5
4.5

SENSOR COVER
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP



SMART SENSOR 2
M4-4486-01-01K
OR
M4-4630-20-01K
OR
M4-4830-01-01K
OR
DUMMY SENSOR 2



SMART SENSOR 1
M4-4486-01-01K
OR
M4-4630-20-01K
OR
M4-4830-01-01K
OR
DUMMY SENSOR 2

COMBUSTIBLE
GAS SENSOR
M3-4462-64-05K
OR
DUMMY SENSOR 1

TOXIC
GAS SENSOR 1
M4-4084-92-03K
OR
DUMMY SENSOR 1

TOXIC
GAS SENSOR 2
M4-4084-92-03K
OR
DUMMY SENSOR 1

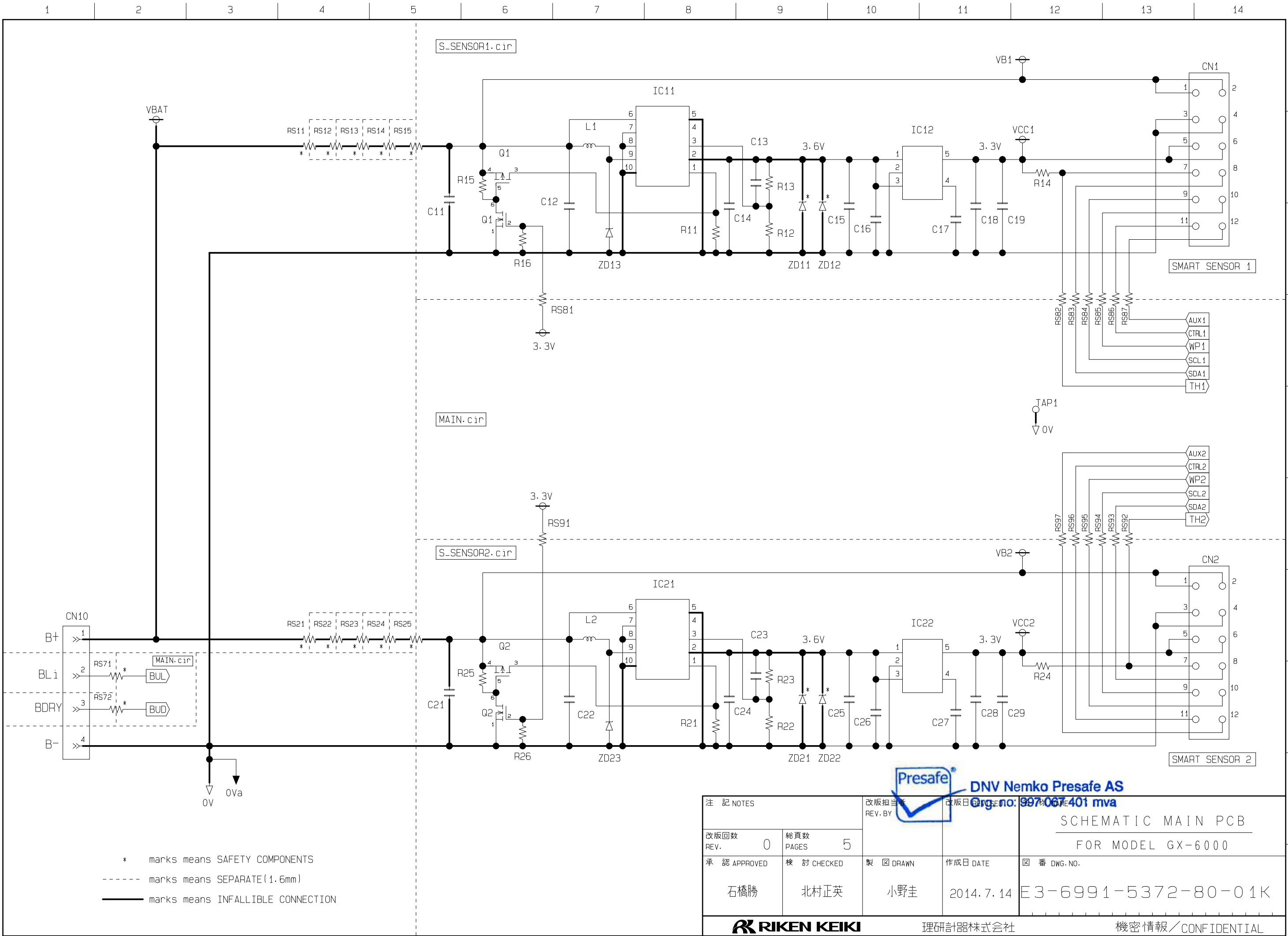
OXGEN SENSOR
M4-4080-82-07K
OR
DUMMY SENSOR 1

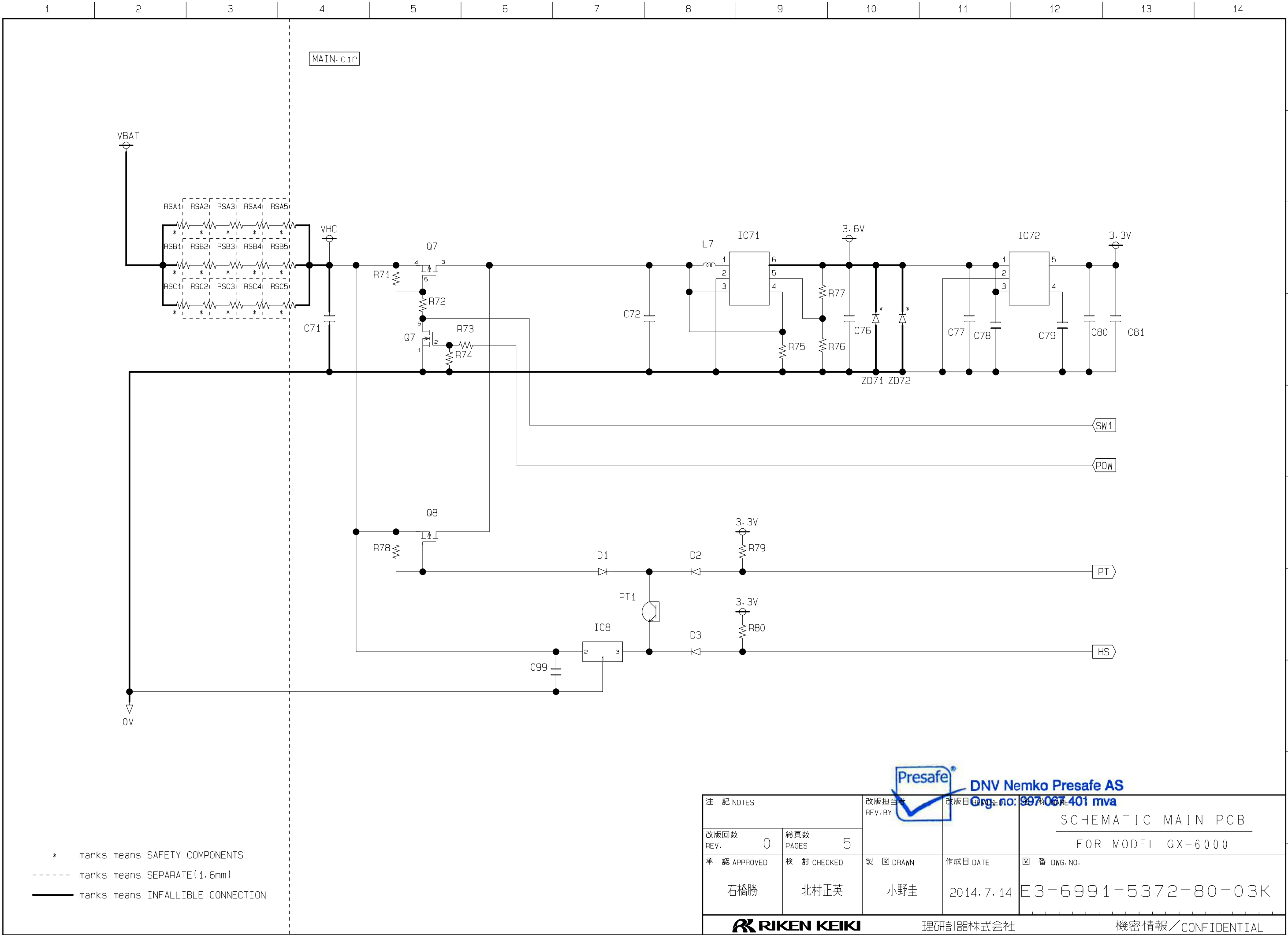
FIGURE WITHOUT SENSOR COVER,SENSOR PACKING

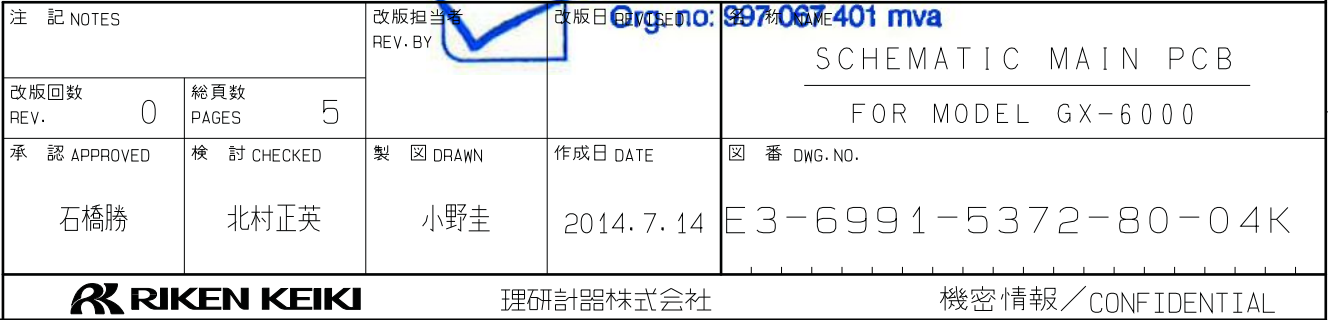


△	Correction	2023.120	伊藤周
△	ADD PANEL SHEET C5	2014.9.30	海野裕作
△	記 事	年 月 日	訂 正 者

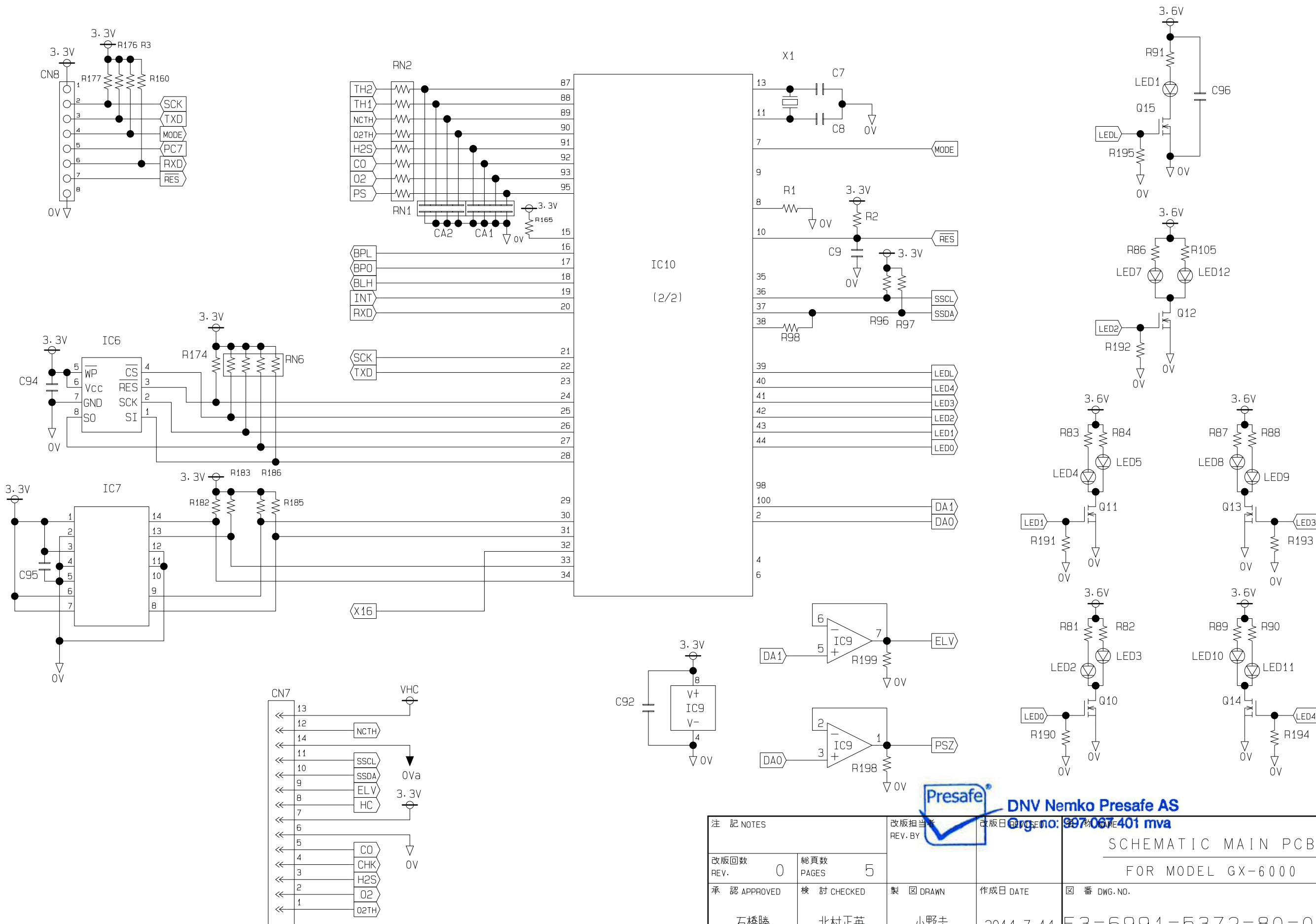
表面处理 TREAT. 材 質 MAT.	許容差 TOL.	尺 度 SCALE 1 : 1	投影法 PROJECTION 第一角法	名 称 NAME MAIN UNIT GX-6000
承認 APPROVED 青良治	檢 討 CHECKED 近藤晴彦	製 図 DRAWN 海野裕作	作成日 DATE 2014. 7. 22	図 番 DWG. NO. M2-4777-01-01K
RIKEN KEIKI 理研計測株式会社 機密情報/CONFIDENTIAL				







MAIN.cir



注 記 NOTES		改版担当者 REV. BY	改版日 REVISED DATE	図 番 DWG. NO.
改版回数 REV. 0	総頁数 PAGES 5			SCHEMATIC MAIN PCB FOR MODEL GX-6000
承認 APPROVED 石橋勝	検討 CHECKED 北村正英	製 図 DRAWN 小野圭	作成日 DATE 2014. 7. 14	図 番 DWG. NO. E3-6991-5372-80-05K

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
IC1	IC (IrDA module)	RPM841-H16	m
IC2	IC (IrDA encoder/decoder)	TIR1000IPW	m
IC3	IC (FRAM)	MB85RC256	m
IC4	IC (RTC)	RX-8564LC	m
IC5,9	IC (OPAMP)	S-89713B-K8T2	m
IC6	IC (Serial flash memory)	AT45DB081E-MHN	m
IC7	IC (Digital MEMS Accelerometer)	ADXL343	m
IC8	IC (Hole IC)	S-5716A -M3T1	m
IC10	IC (CPU)	R5F5210BBDFP	m
IC11,21	IC (DC/DC Converter)	TPS61020	m
IC71	IC (DC/DC Converter)	LTC3526	m
IC12,22,72	IC (Voltage regulator)	TPS73133	m
IC31	IC (Voltage regulator)	TPS79901	m
IC41	IC (DC/DC Converter)	TPS61041DRV	m
IC42	IC (Comparator)	TS3702IPT	m
IC51	IC (Voltage regulator)	S-1200B30-M5T1	m
Q1,2,4,7	N+Pch FET	NTLJD3119C	m
Q3	N-ch FET	SSM3K123TU	m
Q5,10-17	N-ch FET	SSM3K36TU or RUF025N02	m
Q8	P-ch FET	SSM3J130TU	m

NOTE	m marked parts are mounted or not. <div>  <div> DNV Nemko Presafe AS Org. no: 997 067 401 mva </div> </div>		
REV.	0	NAME	PARTS LIST OF MAIN PCB
DATE	2014.7.14	DWG.No.	PLT-6991-5372-80 (1/4)
RIKEN KEIKI CO., LTD.			

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
D1-3,10-16	Schottky barrier diode	RB160VA-40	m
D7	Schottky barrier diode	MMSD301, ON Semiconductor Vr = 30 V, If = 0.2 A	*
D4,8,9	Schottky barrier diode	MMSD301	m
ZD5	Zener diode	TFZ 5.1B	m
ZD61-70	Zener diode	TFZ 5.1B , ROHM Vz = 4.94 - 5.20V , 0.5W	*
ZD11,12,21,22	Zener diode	1SMB5918B, ON Semiconductor Vz = 4.84 - 5.36 V, 3W	*
ZD13,23	Zener diode	TFZ 6.8B	m
ZD41,42,43,44,47,48	Zener diode	KDZ4.7B , ROHM Vz = 4.70 – 5.20V , 1W	*
ZD45,46	Zener diode	KDZ11B , ROHM Vz = 11.0 – 12.3V , 1W	*
ZD49,50,51,52	Zener diode	KDZ15B , ROHM Vz = 14.7 – 16.5V , 1W	*
ZD57,58,59,60	Zener diode	TFZ 18B , ROHM Vz = 16.82 – 17.70V , 0.5W	*
ZD71,72	Zener diode	1N5338BG , ON Semiconductor Vz = 4.84 - 5.36 V, 5W	*
LED1	LED Lamp	HLMP-NW50 or NSPW300DS	m
LED2,3,4,5,7,8,9,10,11	LED Lamp	1105W	m
LED12	LED Lamp	HSMZ-C110	m
R1-3,5-9,11-16,21-26, R31-35,41-47,50,51, R61-63,71-84,86-90, R92-107,110-117,124, R130,131,140-142,160, R161,174,176,177, R182-186,189-199	Chip fixed resistor or Chip jumper	10 ohm-10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
R48,49,91,109	Chip fixed resistor	2.2 ohm-100k ohm / 1%, 0.25W (3216)	m
RN1,2,3,4,5,6	Chip fixed resistor array	100 ohm-1M ohm x4 / 5%, 0.1W (1608 x 4)	m

NOTE

* marked parts are for safety.
m marked parts are mounted or not.
() Parts size code



DNV Nemko Presafe AS
Org. no: 997 067 401 mva

REV.

3

NAME

PARTS LIST OF MAIN PCB

DATE

2014.12.16

DWG.No.

PLT-6991-5372-80 (2/4)

RIKEN KEIKI CO., LTD.

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
RS11-15,21-25,31-35	Chip fixed resistor	RK73HW3ATTE1R30F, KOA 1.3ohm / 1%, 1W	*
RS37-39,47-49,59,62, R65,71,72,81,82,85-87, R91,92,95-97	Chip fixed resistor	ESR18EZPD1002, ROHM 10k ohm / 0.5%, 0.33W	*
RS10,83,84,93,94	Chip fixed resistor	MCR18EZPF1001, ROHM 1k ohm / 1%, 0.25W	*
RS41,42,43	Chip fixed resistor	RK73HW2HTTE4R70F, KOA 4.7 ohm / 1%, 0.75W	*
RS51,52	Chip fixed resistor	RK73HW2HTTE12R0F, KOA 12 ohm / 1%, 0.75W	*
RS61	Chip fixed resistor	RK73HW3ATTE62R0F, KOA 62 ohm / 1%, 1W	*
RS63,64	Chip fixed resistor	RK73HW2HTTE82R0F, KOA 82 ohm / 1%, 0.75W	*
RSA1-5,RSB1-5, RSC1-5	Chip fixed resistor	RPL18T2R7F,TAIYOSHA 2.7 ohm / 1%, 0.5W	*
C1-6,12,16,18,22,26, C28,32,42,46,78,80, C82,84-89,92,94,95, C97-99	Chip multilayer capacitor	0.1uF / 10% , 50V	m
C7,8,13,23,34,43, C90,91	Chip multilayer capacitor	10pF-1000pF / 10% , 50V	m
C9,17,27,79	Chip multilayer capacitor	0.01uF / 10% , 50V	m
C11,21,41,71	Chip multilayer capacitor	10uF / 10% , 10V	m
C14,24,51,52,72,77, C83,93,96	Chip multilayer capacitor	1uF / 10% , 25V	m
C15,19,25,29,31,33	Chip multilayer capacitor	2.2uF / 10% , 16V	m
C44	Chip multilayer capacitor	0.47uF / 10% , 25V	m
C45	Chip multilayer capacitor	0.22uF / 10% , 25V	m
C61,76,81	Chip multilayer capacitor	4.7uF / 10% , 16V	m
C62	Chip multilayer capacitor	33000pF / 10% , 50V	m
CA1,2,3	Chip multilayer capacitor array	0.01uF x4 / 20%, 50V	m

NOTE

* marked parts are for safety.
m marked parts are mounted or not.



DNV Nemko Presafe AS
Org. no. 997 067 401 mva

REV.

1

NAME

PARTS LIST OF MAIN PCB

DATE

2014.11.5

DWG.No.

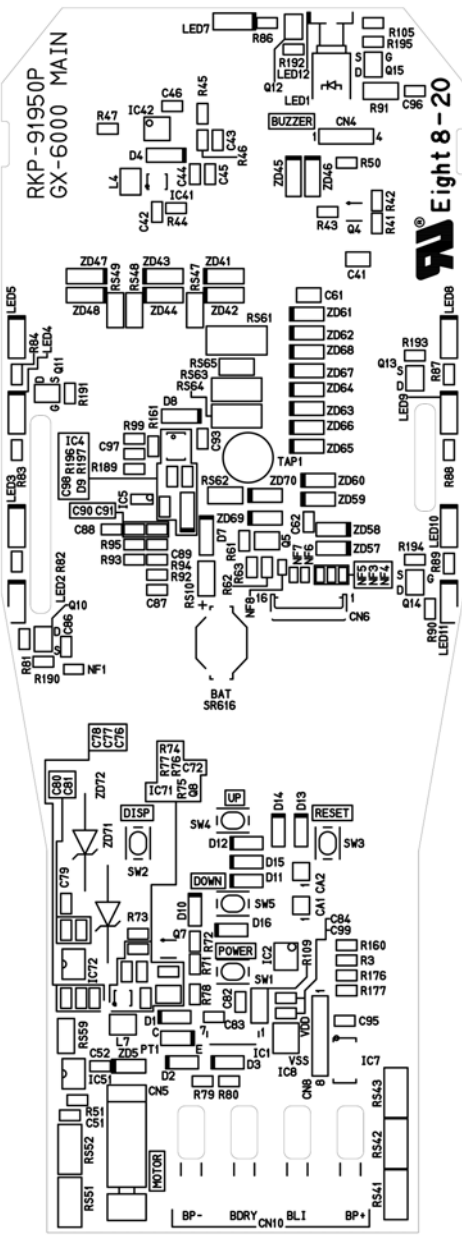
PLT-6991-5372-80 (3/4)

RIKEN KEIKI CO., LTD.

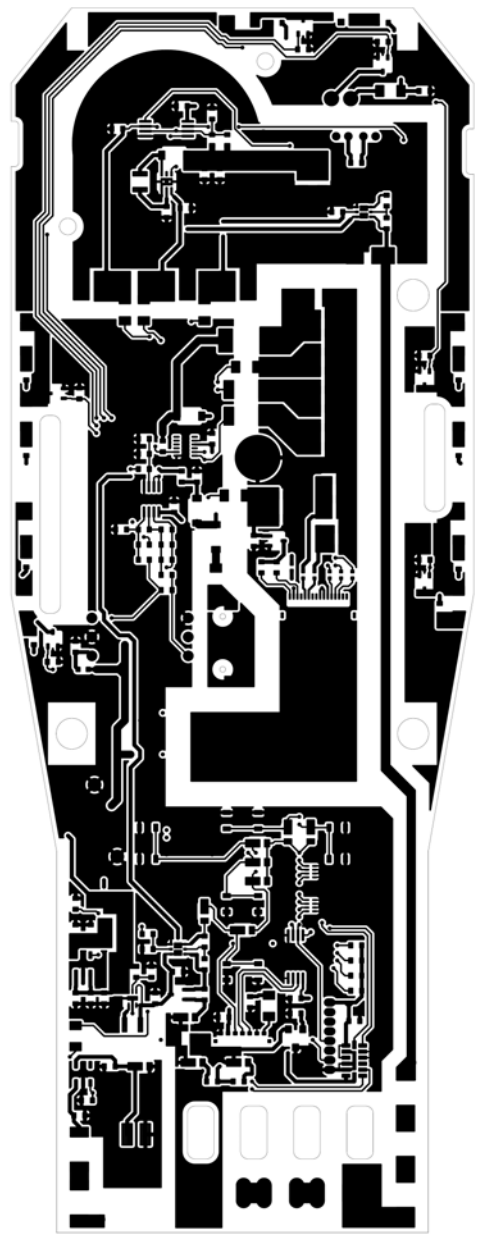
Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
L1,2,4	Chip multilayer inductor	10uH / 30% (2520)	m
L7	Chip multilayer inductor	4.7uH / 30% (2520)	m
PT1	Photo transistor	PS1192HB	m
PS1	Pressure sensor	P-2000-101G	m
X1	Crystal	DSX321, 14.7456MHz	m
NF1,2	Noise filter	BLM18AG151	m
NF3-8	Noise filter	BLM15HD182	m
BAT	Silver oxide battery	SR616SW / Sony Vmax = 1.65V , Vtyp = 1.55V	*
LCD	LCD Module	BTD-128160B-FBWB / YEEBO	D
MOT	Vibration motor	A3BE-MT4 / SICOH	D
NOTE	* marked parts are for safety. m marked parts are mounted or not. D marked parts, refer to datasheet () Parts size code		
REV.	0	NAME	PARTS LIST OF MAIN PCB
DATE	2014.7.14	DWG.No.	PLT-6991-5372-80 (4/4)
RIKEN KEIKI CO., LTD.			



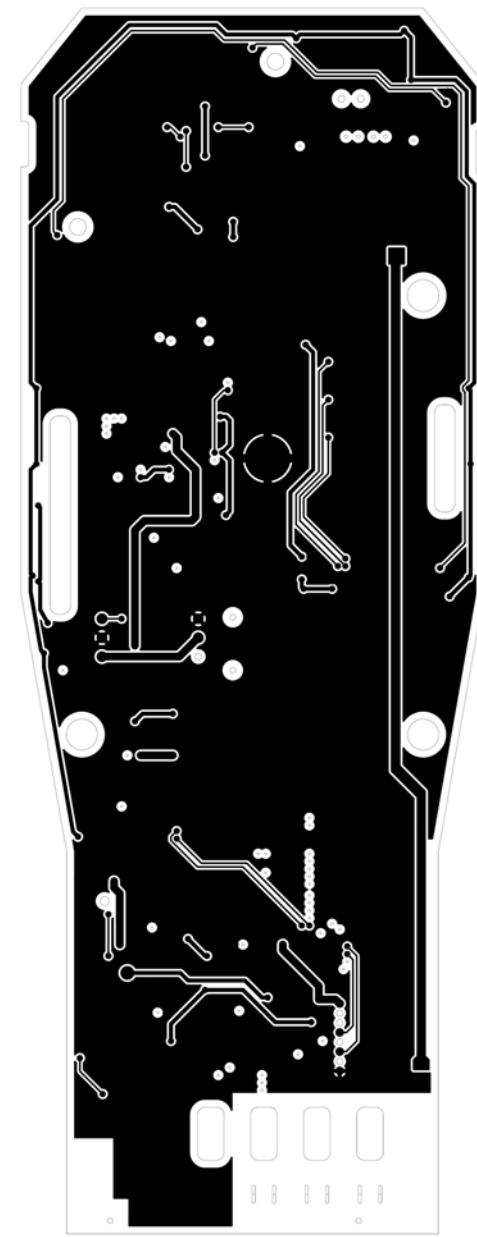
DNV Nemko Presafe AS
Org. no: 997 067 401 mva



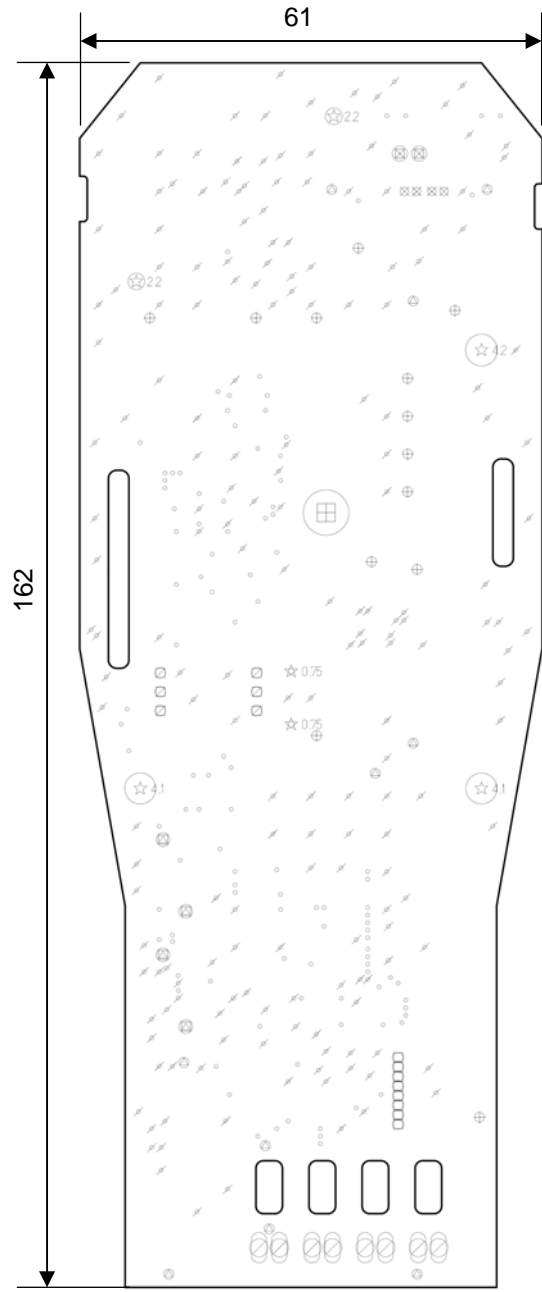
SILK PRINT FOR PARTS SIDE



PARTS SIDE



INNER LAYER(2 LAYER)



VIA HOLES FOR PARTS SIDE

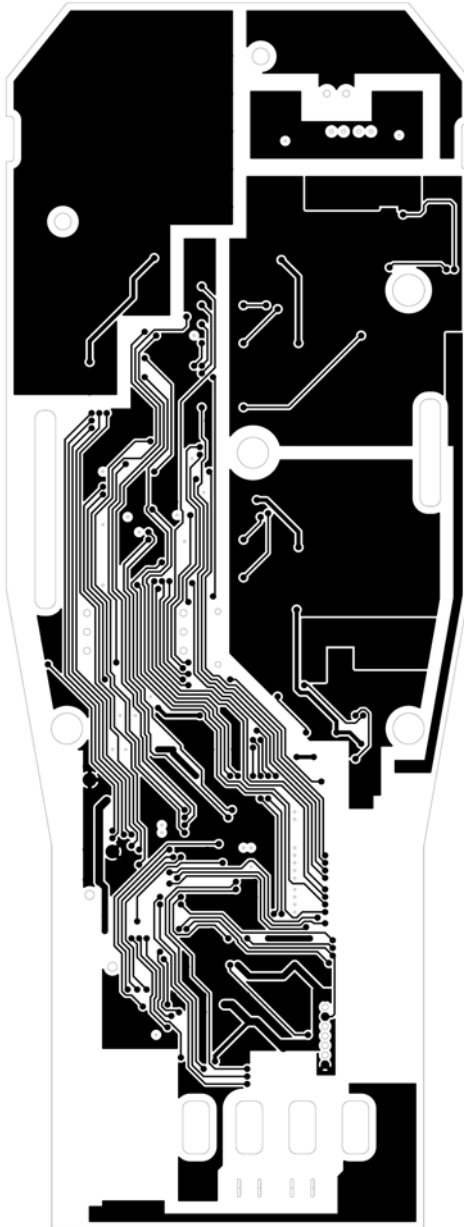
SPECIFICATION FOR PCB

- PCB No. : RKP-91950P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 4
(2+2 BVH , Between layer#2 and #3 is 0.6mm.)
- Thickness copper film
Surface : 35um , Inner : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.2mm
- CTI : 100 above

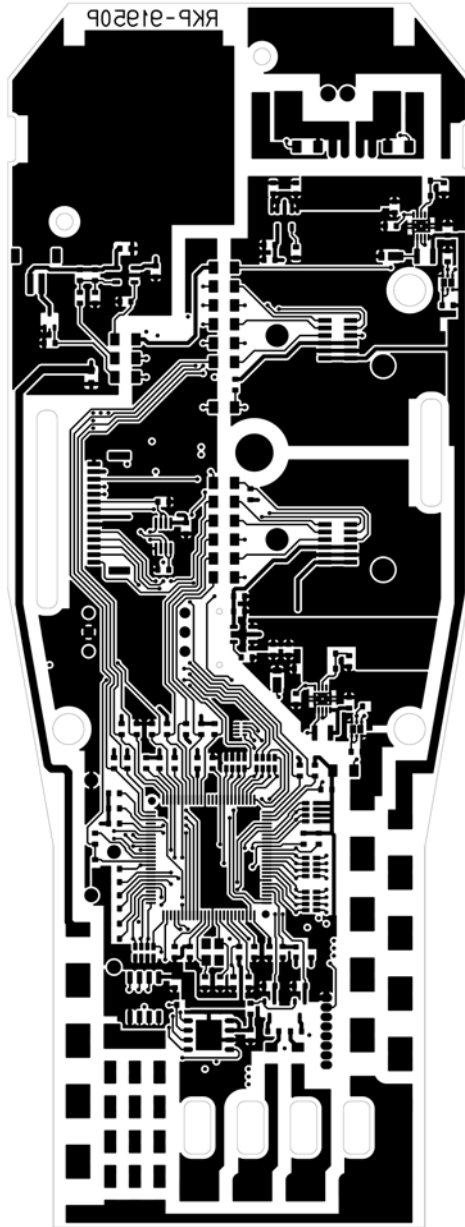
All drawings are view of parts side
SCALE 1:1

MARK	DIAGRAM	HOLE
○	φ 0.3	1-4VIA
／	φ 0.3	1-2VIA
×	φ 0.5	1-4VIA
△	φ 0.7	1-4VIA
+	φ 0.7	1-2VIA
□	φ 0.85	1-4VIA
▣	φ 0.9	1-4VIA
▤	φ 0.9	1-4VIA
▥	φ 1.2	1-4VIA
▧	φ 4.1	1-4VIA
⊙	φ 0.4×2.4	1-4VIA
☆0.75	φ 0.75	NTH
☆2.2	φ 2.2	NTH
☆4.1	φ 4.1	NTH
☆4.2	φ 4.2	NTH

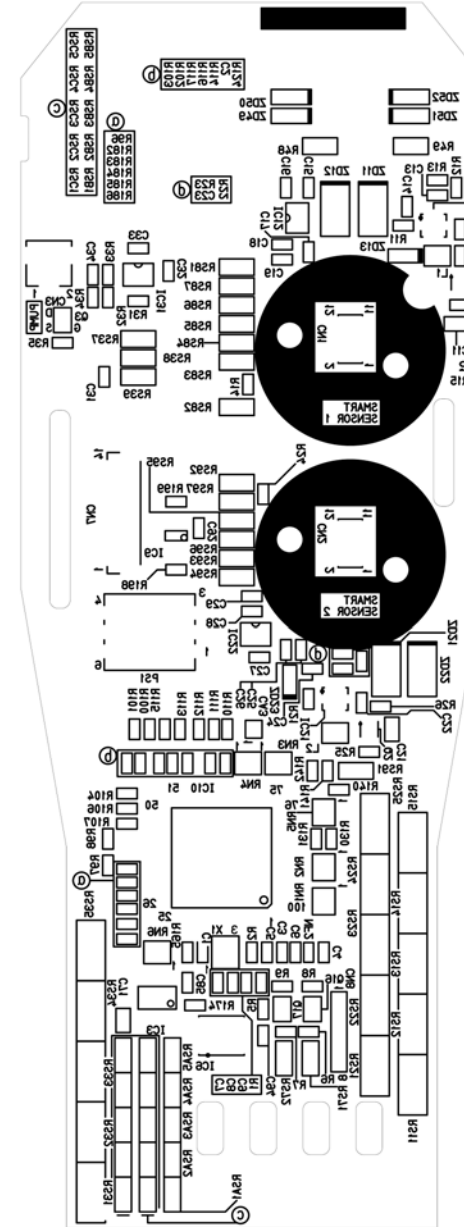
注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	改版理由 REASON
改版回数 REV.	0	総頁数 PAGES	2	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小野圭	2014.7.14	E 3 - 6 9 9 1 - 5 3 7 2 - 8 0 - 0 1 A
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL				



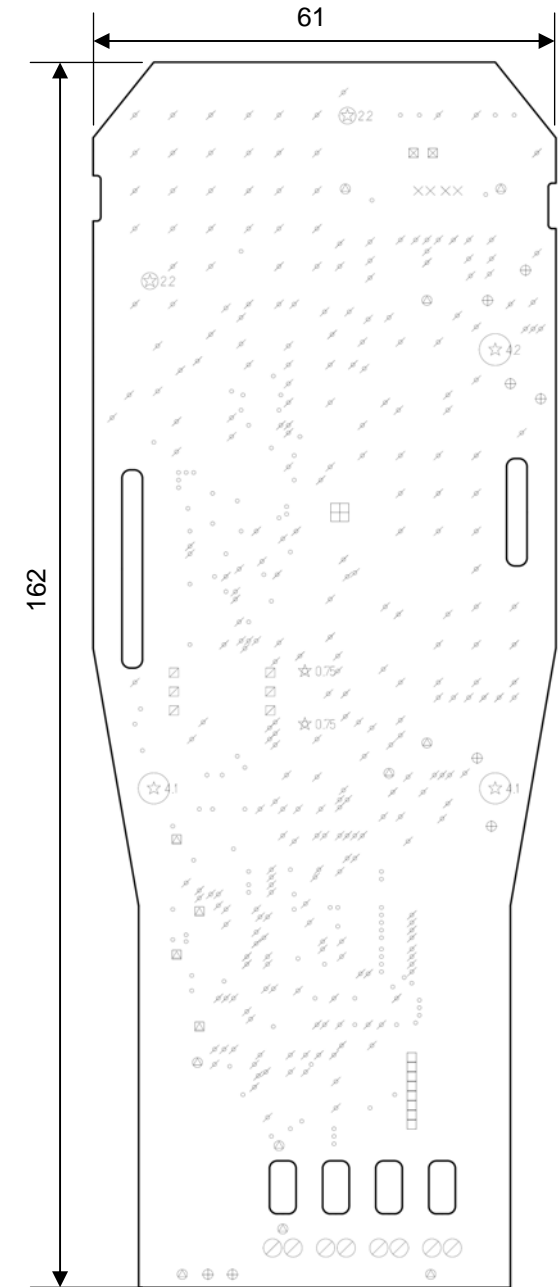
INNER LAYER(3 LAYER)



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



VIA HOLES FOR SOLDERING SIDE

SPECIFICATION FOR PCB

- PCB No. : RKP-91950P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 4
(2+2 BVH , Between layer#2 and #3 is 0.6mm.)
- Thickness copper film
Surface : 35um , Inner : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.2mm
- CTI : 100 above

All drawings are view of parts side

SCALE 1:1

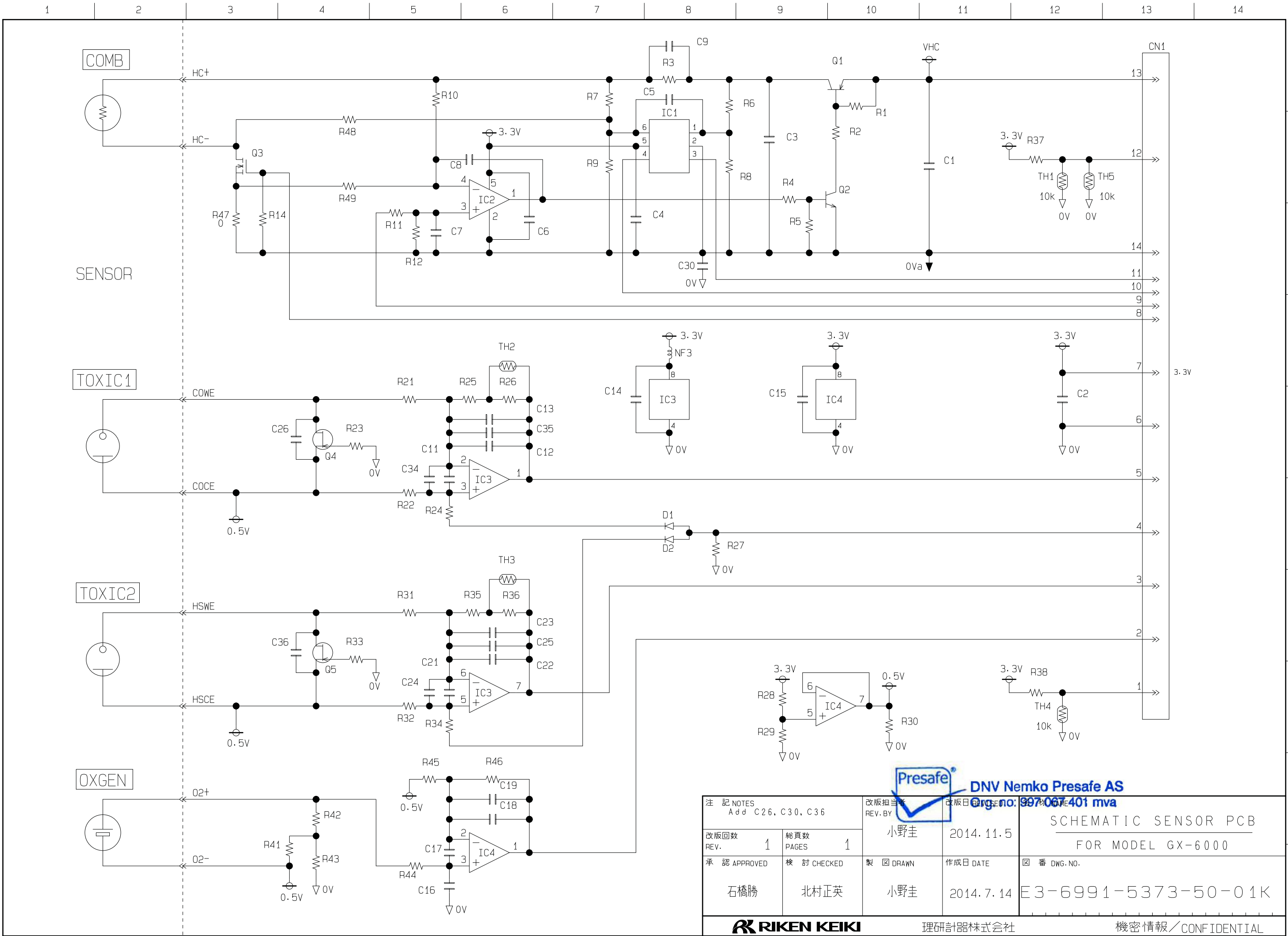
MARK	DIAGRAM	HOLE
○	φ 0.3	1-4VIA
／	φ 0.3	3-4VIA
×	φ 0.5	1-4VIA
△	φ 0.7	1-4VIA
+	φ 0.7	3-4VIA
□	φ 0.85	1-4VIA
▣	φ 0.9	1-4VIA
⊠	φ 0.9	1-4VIA
⊞	φ 1.2	1-4VIA
⊠	φ 4.1	1-4VIA
⊞	φ 0.4×2.4	1-4VIA
☆0.75	φ 0.75	NTH
☆2.2	φ 2.2	NTH
☆4.1	φ 4.1	NTH
☆4.2	φ 4.2	NTH

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED DATE	改版理由 REVISED REASON
改版回数 REV.	0	総頁数 PAGES	1	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小野圭	2014.7.14	E 3 - 6 9 9 1 - 5 3 7 2 - 8 0 - 0 2 A

RIKEN KEIKI

理研計器株式会社

機密情報/CONFIDENTIAL



注 記 NOTES Add C26, C30, C36		改版担当者 REV. BY 小野圭	改版日 REVISION DATE 2014. 11. 5	SCHEMATIC SENSOR PCB FOR MODEL GX-6000
改版回数 REV. 1	総頁数 PAGES 1	製 図 DRAWN 小野圭	作成日 DATE 2014. 7. 14	
承 認 APPROVED 石橋勝	検 討 CHECKED 北村正英	製 図 DRAWN 小野圭	作成日 DATE 2014. 7. 14	図 番 DWG. NO. E3-6991-5373-50-01K

RIKEN KEIKI

理研計器株式会社

機密情報 / CONFIDENTIAL

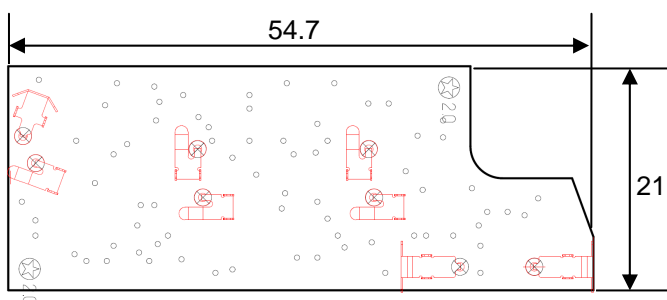
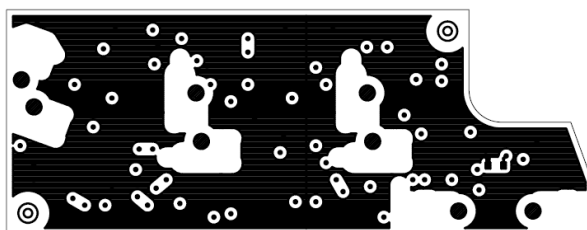
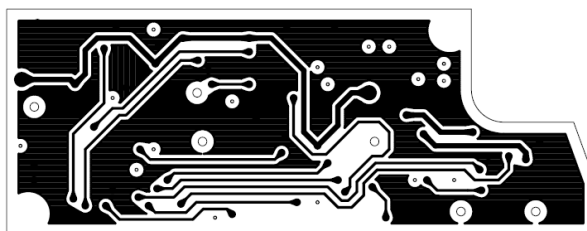
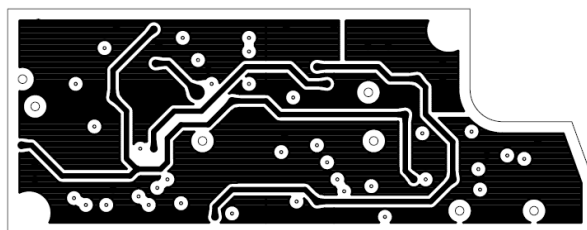
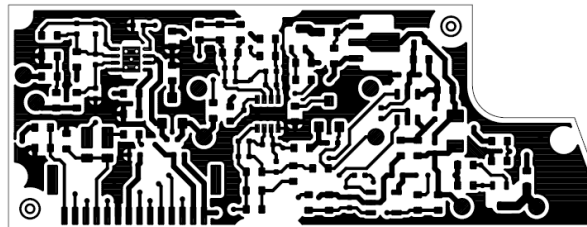
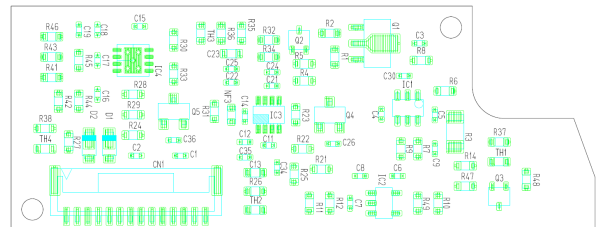
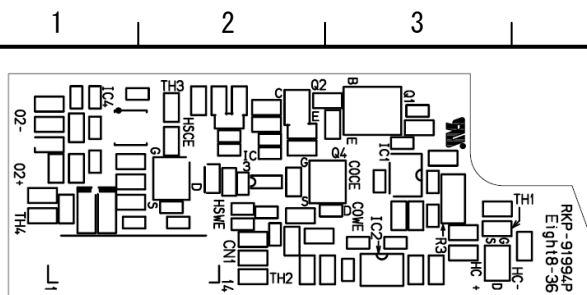
Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
IC1	IC (A/D Converter)	ADS1110A0IDBV	m
IC2	IC (OPAMP)	OPA333AIDBV	m
IC3	IC (OPAMP)	OPA2379AIDCN	m
IC4	IC (OPAMP)	OPA2333AIDR	m
Q1	PNP Transistor	2SB1115	m
Q2	NPN Transistor	2SD2700	m
Q3	N-ch FET	SSM3K123TU	m
Q4,5	N-ch J-FET	2SK209	m
D1,2	Schottky barrier diode	RB160VA-40	m
R1,2,4-12,14,22-30, R32-38,41-47, TH1,2,3,4	Chip fixed resistor or Chip jumper or Chip thermistor	3.3 ohm-10M ohm / 1%, 0.1W or 50m ohm max, 1A or (1608) Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1608)	m
R3	Chip fixed resistor	1 ohm - 100 ohm / 1%, 0.25W (3216)	m
NF3,R21,R31	Noise filter	BLM18AG151	m
C1,2,3	Chip multilayer capacitor	1uF / 10%, 10V	m
C4-8,14-16,19	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C9,11,12,17,18,21,22 C24,25,26,34,35,36	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C13,23	Chip multilayer capacitor	4.7uF / 10%, 10V	m
C30	Chip multilayer capacitor	0.01uF / 10%, 25V	m

NOTE

* marked parts are for safety.
m marked parts are mounted or not.
() Parts size code

REV.	2	NAME	PARTS LIST OF SENSOR PCB
DATE	2014.12.16	DWG.No.	PLT-6991-5373-50 (1/1)
RIKEN KEIKI CO., LTD.			

Presafe®
DNV Nemko Presafe AS
Org. no: 997 067 401 mva




SPECIFICATION FOR PCB

- PCB No. : RKP-91994P
- Material : Glass epoxy
- Thickness : 1.0mm
- Layer number : 4
- Thickness copper film
 Surface : 35um , Inner : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.2mm
- CTI : 100 above

MARK	DIAGRAM	HOLE
○	φ 0.3	1-4VIA
×	φ 0.8	1-4VIA
☆2.0	φ 2.0	NTH

All drawings are view of parts side

$$\text{SCALE} = \sqrt{2} : 1$$


 All drawings are view of parts side
 SCALE = $\sqrt{2} : 1$
 NAME _____
 DNV Nemko Presafe AS
 Org. no: 997 067 401 mva
 SENSOR PCB

Org. no: 997 067 401 mva

SENSOR PCB

FOR MODEL GX-6000

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
Add C26,C30,C36		小野圭	2014.11.5	 Org. no: 997 067 401 mva SENSOR PCB <hr/> FOR MODEL GX-6000
改版回数 REV.	総頁数 PAGES			
1	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED	検 討 CHECKED	小野圭	2014.7.14	E 4 - 6 9 9 1 - 5 3 7 3 - 5 0 - 0 1 A
石橋勝		北村正英		

1 2 3 4 5 6 7

A

B

C

D

E

F

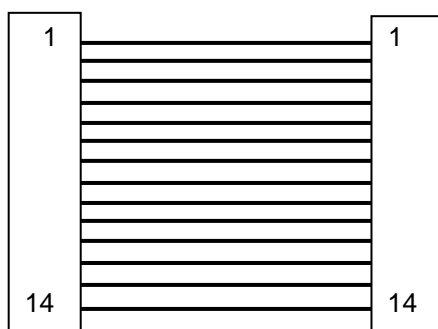
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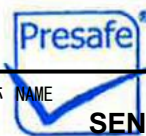
I

CN1
CONNECTOR
Model : NSHR-14V-S
Manufacturer : JST

CN2
CONNECTOR
Model : NSHR-14V-S
Manufacturer : JST



Wire : UL1571 AWG30
Maximum wire length : 40mm



DNV Nemko Presafe AS
Org. no: 997 067 401 mva

SENSOR to MAIN WIRE

FOR MODEL GX-6000

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME	図 番 DWG. NO.
改版回数 REV.	0				
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	E 4 - 6 9 9 1 - 5 3 8 2 - 7 0 - 0 1 K	
承認 APPROVED	石橋勝				
検 討 CHECKED	北村正英	小野圭	2014.7.14		

1 2 3 4 5 6 7

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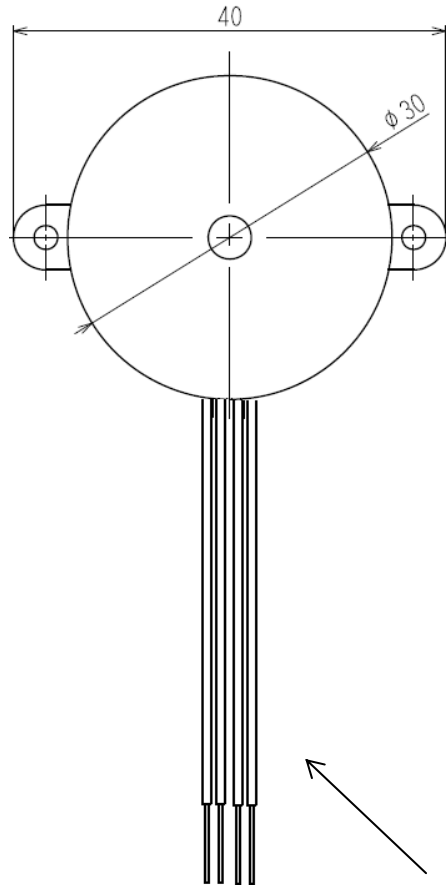
E

F

G

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I



Cable: UL1571, AWG32
Maximum length: 45mm

Piezo elements : M274C4
Manufacturer : NIHON CERATEC
Capacitance : 22 nF / 30%

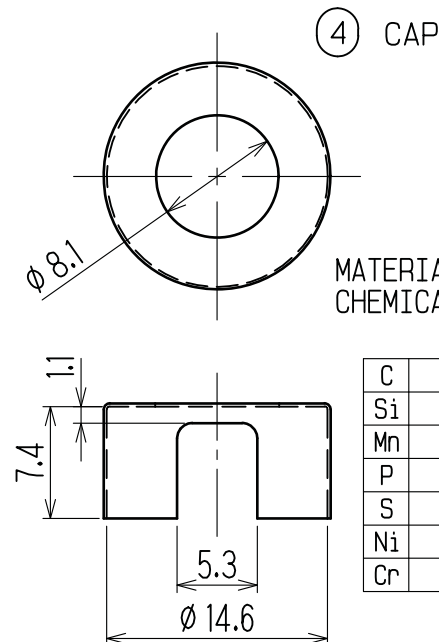
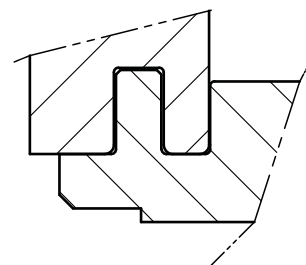
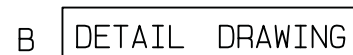
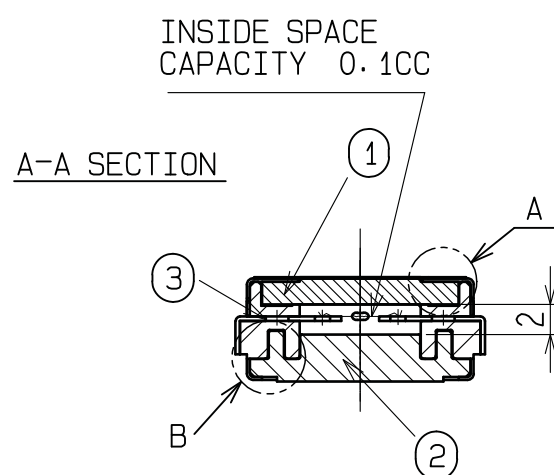
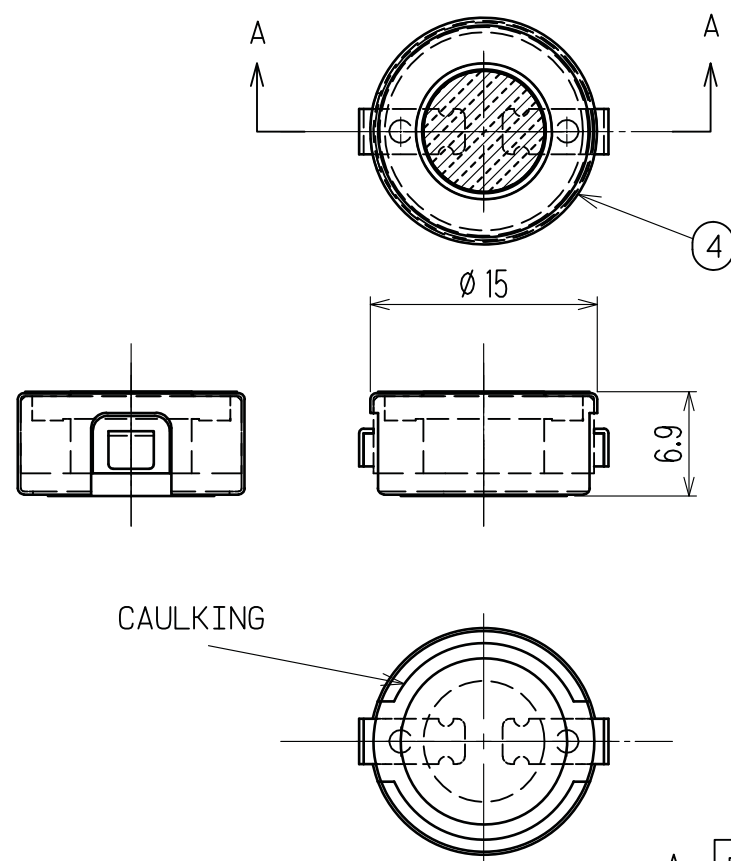



SCALE $\sqrt{2}:1$
DNV Nemko Presafe AS
Org. no: 997 067 401 mva
Buzzer

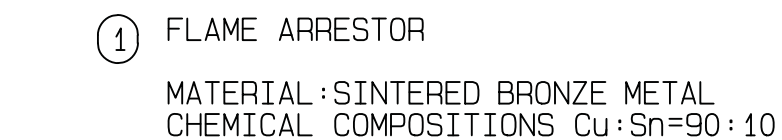
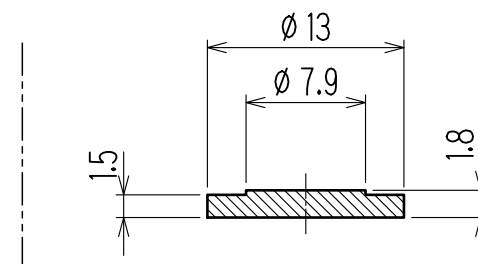
BZ-9K


注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	1	
承認 APPROVED	検討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小暮晋祐	2011.02.28	E 4 - 6 9 9 1 - 5 0 0 8 - 7 0 - 0 1 K

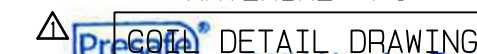
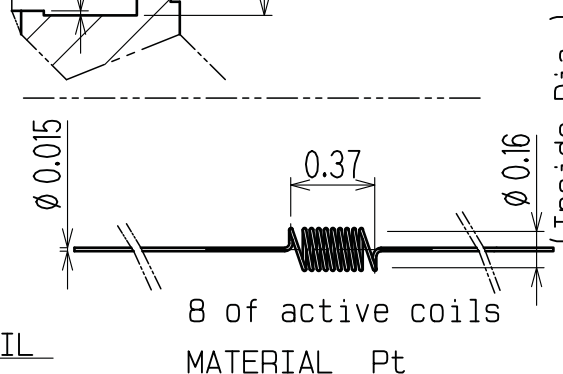
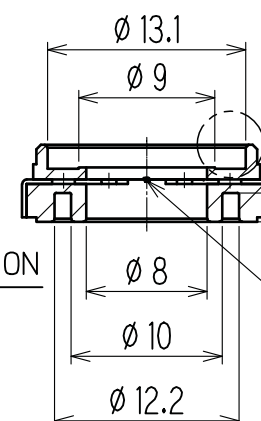
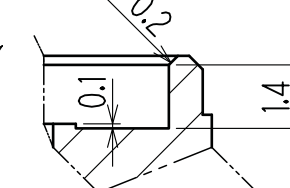
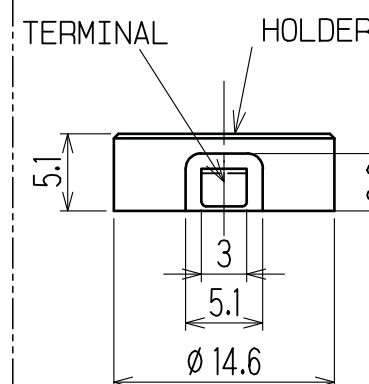
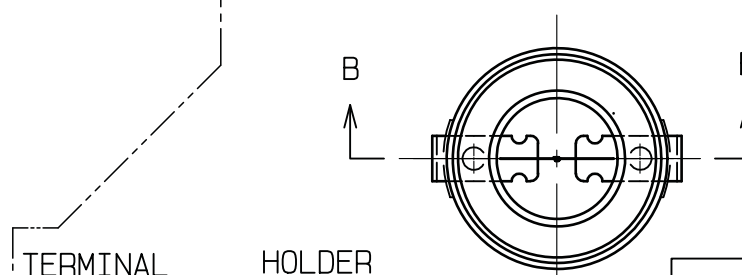
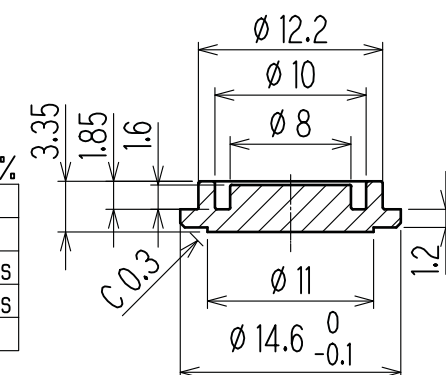
κ	λ	ι	γ	π	ε	δ	ζ	β
寸 法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上	寸 法
精 級	0.1	0.15	0.2	0.3	0.4	0.5	0.7	精 級
中 級	0.2	0.3	0.4	0.6	0.8	1.0	1.2	中 級
粗 級	0.4	0.6	0.8	1.2	1.6	2.0	2.5	粗 級



	UNIT % 
C	0.08 or less
Si	1.00 or less
Mn	2.00 or less
P	0.045 or less
S	0.030 or less
Ni	8.00~10.50
Cr	18.00~20.00



MATERIAL : ALUMINIUM ALLOY (A5056)			
CHEMICAL COMPOSITIONS:			
UNIT : 			
Si	0.30 or less	Cr	0.05~0.20
Fe	0.40 or less	Zn	0.10 or less
Cu	0.10 or less	OTHER COMPONENTS	INDIVIDUAL 0.05 or less
Mn	0.05~0.20		TOTAL 0.15 or less
Mg	4.5~5.6		rem



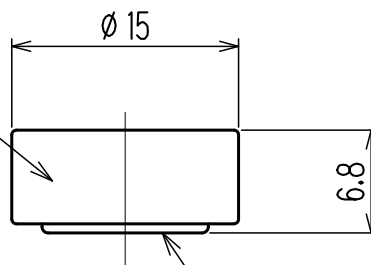
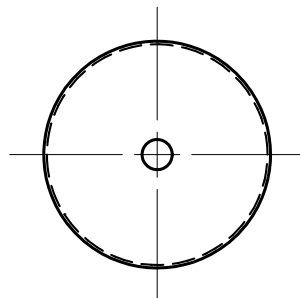
(Remarks)
Binder in section 1.2.6 of
the type approval
guide: Uses epoxy resin
which has enough thermal
stability at min. 120°C

△	Correction	2012.4.17	島田聡
△	UP DATE	2007.8.30	武井康典
△	UP DATE	2007.5.21	中村幸男
△	記 事	年 月 日	訂 正 者

表面处理 TREAT.	許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME
材 質 MAT.		2 : 1		COMBUSTIBLE GAS SENSOR △ NC SENSOR
承 認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
田島秀二	青良治	中村幸男	2007. 3. 16	M3-4462-64-05K
 理研計器株式会社 RIKEN KEIKI CO., LTD.				

寸法	精細	0.1	中級	0.2	粗級	0.4	18以上未滿	18以上50未滿	50以上120未滿	120以上260未滿	260以上500未滿	500以上1000未滿	1000以上
許容差	精細	0.1	中級	0.2	粗級	0.4	0.15	0.3	0.6	0.8	1.2	1.6	2.0
	精細	0.1	中級	0.2	粗級	0.4	0.15	0.3	0.6	0.8	1.2	1.6	2.0
	精細	0.1	中級	0.2	粗級	0.4	0.15	0.3	0.6	0.8	1.2	1.6	2.0

CAP(-)
MATERIAL:STAINLESS STEEL



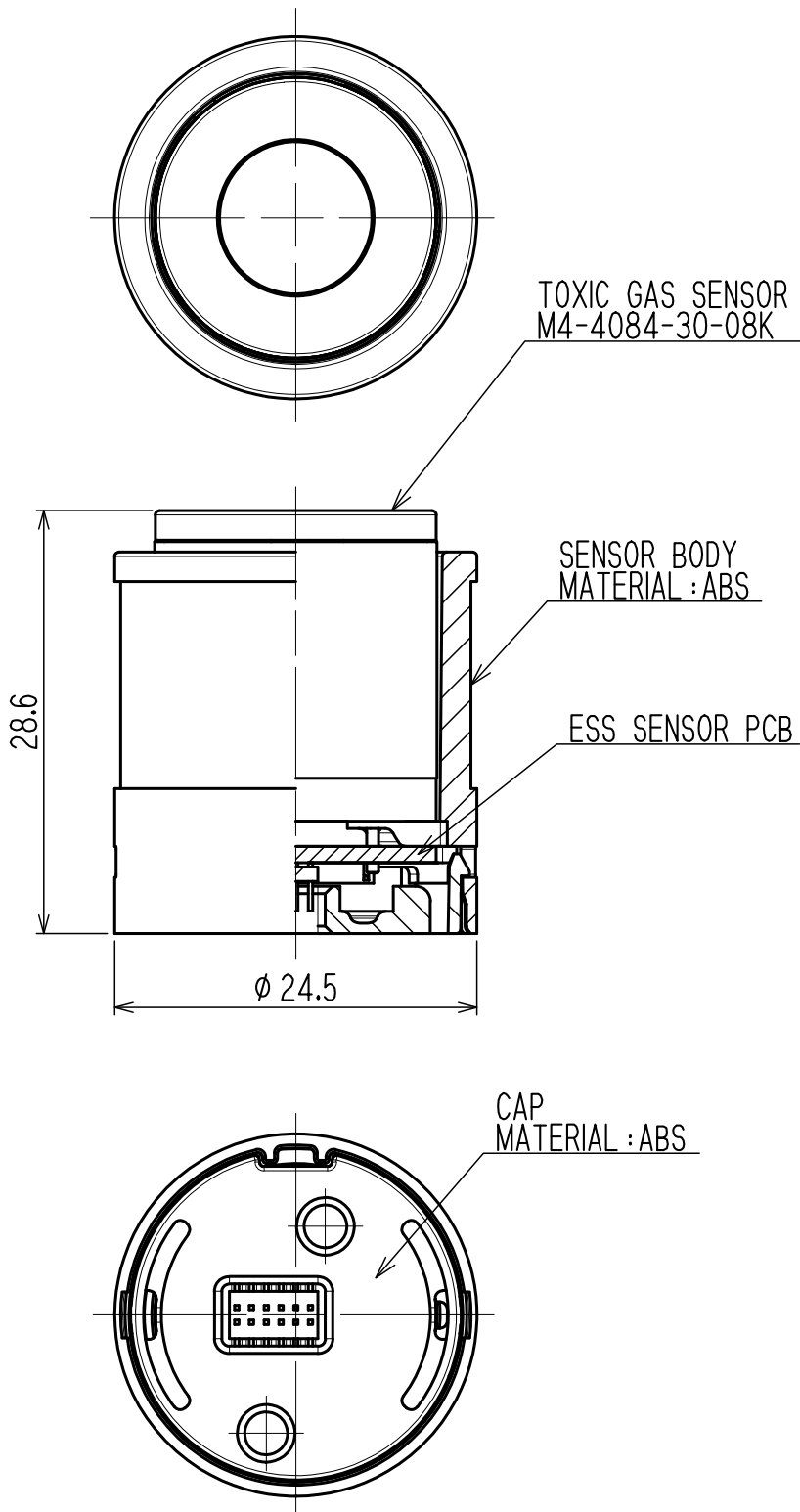
BOTTOM CAP(+)
MATERIAL:COPPER ALLOY

Output specification
・Open circuit voltage : 0.5V(max)
・Short circuit current : 0.1mA(max)

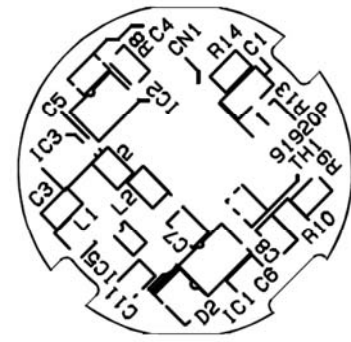
CAPACITANCE ≒ 0

表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	△ Presafe 記 事 年 月 日 訂 正 者	
材 質 MAT.					名 称 NAME	
承認 APPROVED		検 討 CHECKED	製 図 DRAWN	作成日 DATE	Org. no: 997 067 401 mva	
青良治					近藤晴彦	
2014. 7. 30		海野裕作		図 番 DWG. NO.		
M4-4080-82-07K						
RIKEN KEIKI			理研計測株式会社		機密情報/CONFIDENTIAL	

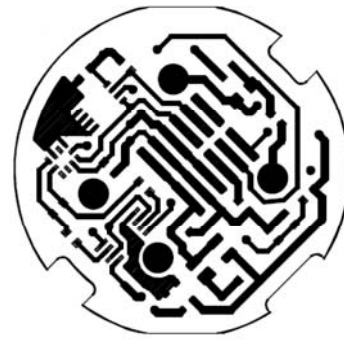
寸法	18 未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
許容差	精 0.1 中 0.2 粗 0.4	0.15 0.3 0.6	0.2 0.4 0.8	0.3 0.6 1.2	0.4 0.8 1.6	0.5 1.0 2.0	0.7 1.2 2.5



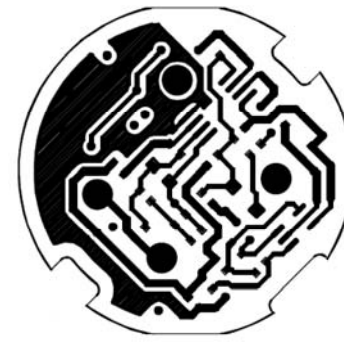
表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME Org. no: 997 067 401 mva SMART SENSOR Type-ESS
材 質 MAT.					
承 認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.	
青良治	近藤晴彦	武井康典	2014. 7. 30	M4-4486-01-01K	
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL	



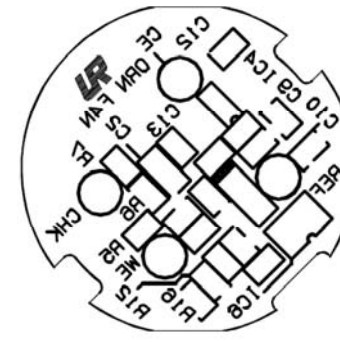
SILK PRINT FOR PARTS SIDE



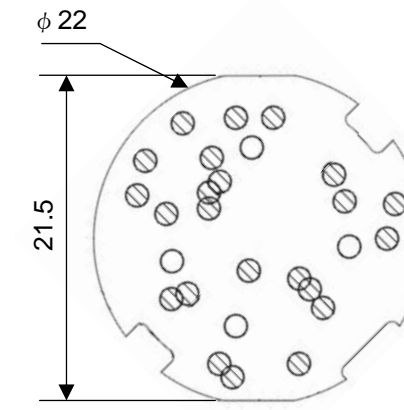
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

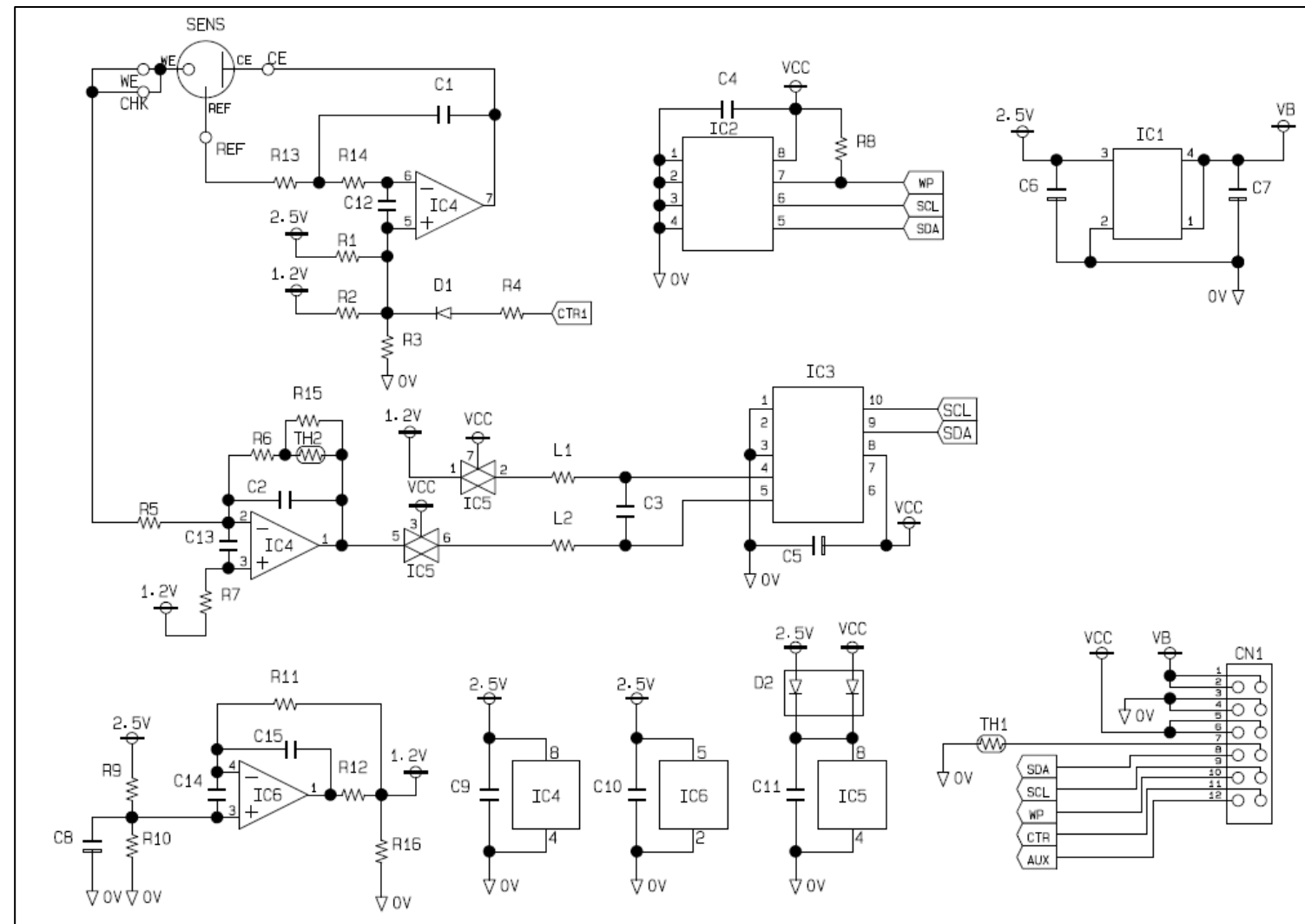
MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 1.0	TH

SPECIFICATION FOR PCB

- PCB No. : RKP-91920P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.2mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	S-1313D25-N4T1	m
IC2	IC (EEPROM)	S-24C16CI-I8T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
IC4	IC (OPAMP)	LT6004CMS8	m
IC5	IC (Logic)	HD74ALVC2G66	m
IC6	IC (OPAMP)	AD8500AKS	m
D1	Diode	1SS355	m
D2	Diode array	RB480Y (2elements)	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-16	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max,1A (1005)	m
C1,2	Chip multilayer capacitor	10uF / 10%, 6.3V	m
C4,5,6,7,9,10,11	Chip multilayer capacitor	0.1uF / 10%, 16V	m
C3,8,12,13,14	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C15	Chip multilayer capacitor	1uF / 10%, 10V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max,1A (1005) or BLM15HD182	m

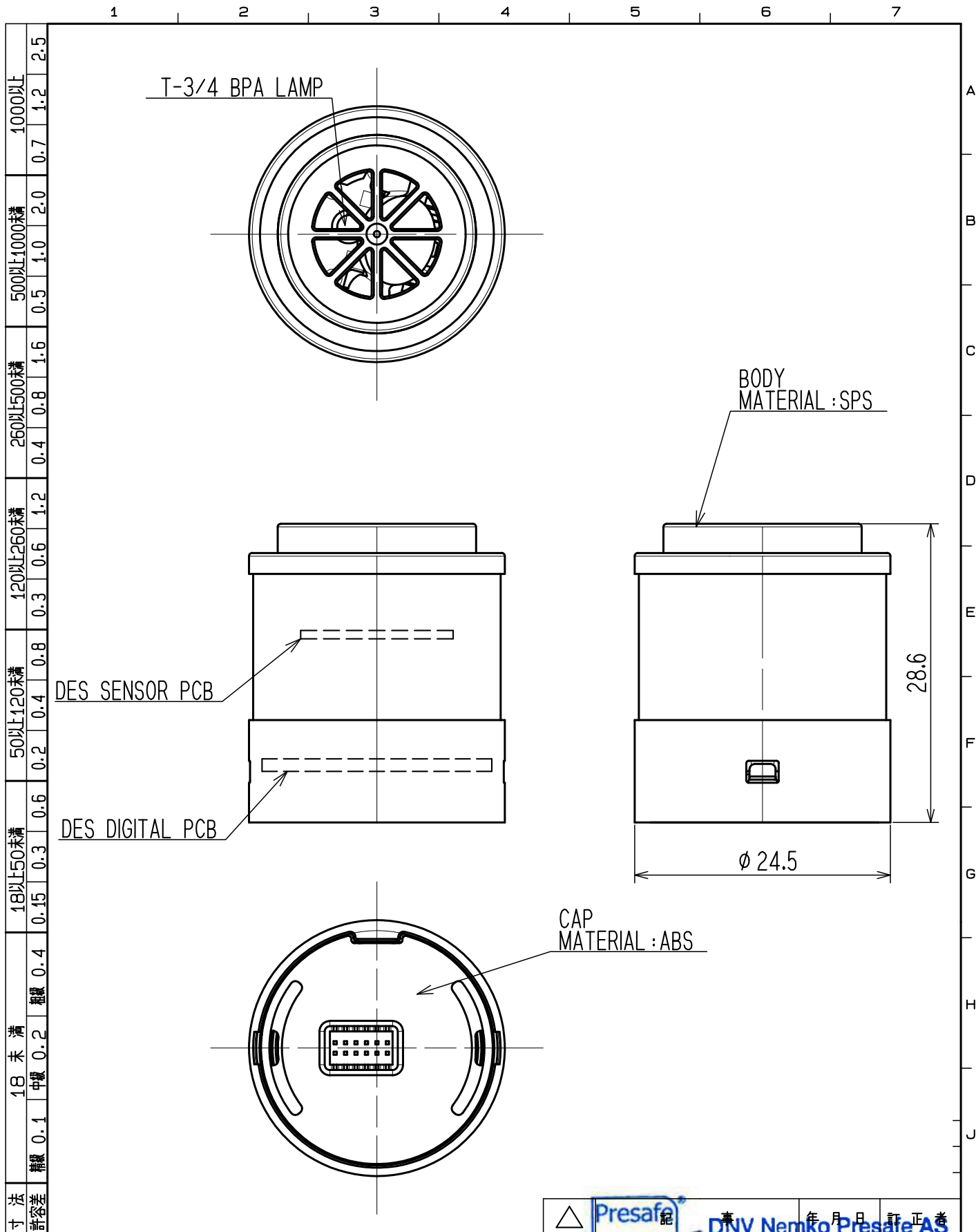
m marked parts are mounted or not

注 記 NOTES		改版担当 改版日 REV. 改版者		Presafe DNV Nemko Presafe AS 097 067 401 mva	
改版回数 REV.	0	総頁数 PAGES	1	ESS SENSOR PCB	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.	
石橋勝	北村正英	小野圭	2014.7.14	E 3 - 6 9 9 1 - 5 3 8 4 - 1 0 - 0 1 K	

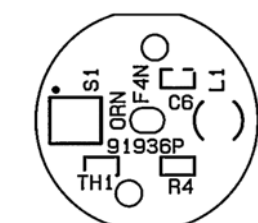
RIKEN KEIKI

理研計器株式会社

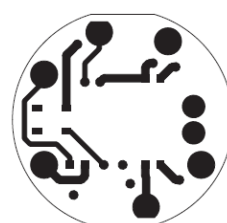
機密情報/CONFIDENTIAL



寸法 許容差 18 未満 0.1 0.2 0.4 0.15 0.3 0.6 0.2 0.4 0.8 0.3 0.6 1.2 0.4 0.8 1.6 0.5 1.0 2.0 0.7 1.2 1000以上		表面処理 TREAT. 材質 MAT.		許容差 TOL. 	尺度 SCALE 2 : 1	投影法 PROJECTION 	名称 NAME SMART SENSOR Type-DES	図番 DWG. NO. M4-4630-20-01K
承認 APPROVED 青良治		検討 CHECKED 武井康典		製図 DRAWN 近藤晴彦	作成日 DATE 2014. 7. 24	Presafe 記 DNV Nemko Presafe AS Org. no: 997 067 401 mva 年 月 日 訂正者		



SILK PRINT
FOR PARTS SIDE



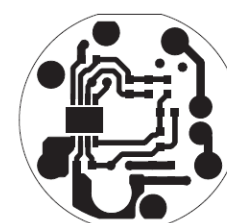
PARTS SIDE



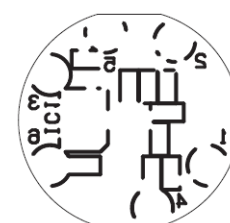
Lay.2



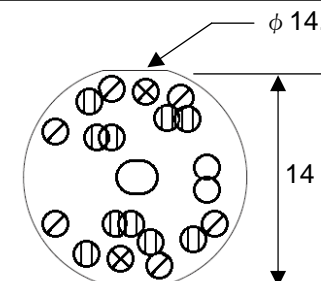
Lay.3



SOLDERING SIDE



SILK PRINT FOR
SOLDERING SIDE

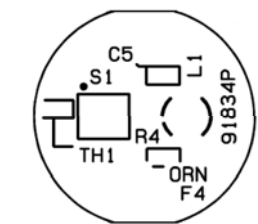


THROUGH HOLE
DATA

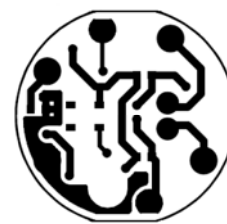
MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 0.5	TH
⊗	φ 0.8	TH
⊗	φ 1.7	NTH

SPECIFICATION FOR PCB

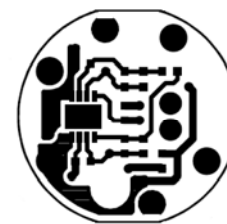
- PCB No. : RKP-91936P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 4
- Thickness copper film : 18um
- Minimum conductor width : 0.2mm
- CTI : 100 above



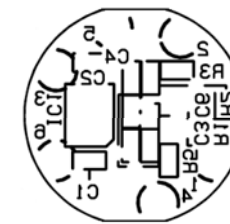
SILK PRINT
FOR PARTS SIDE



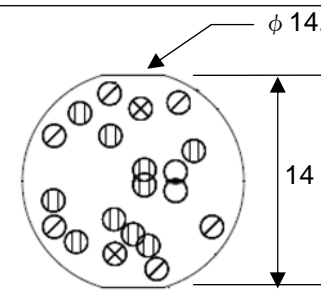
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR
SOLDERING SIDE



THROUGH HOLE
DATA

MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 0.5	TH
⊗	φ 0.8	TH
⊗	φ 1.7	NTH

SPECIFICATION FOR PCB

- PCB No. : RKP-91834P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.2mm
- CTI : 100 above

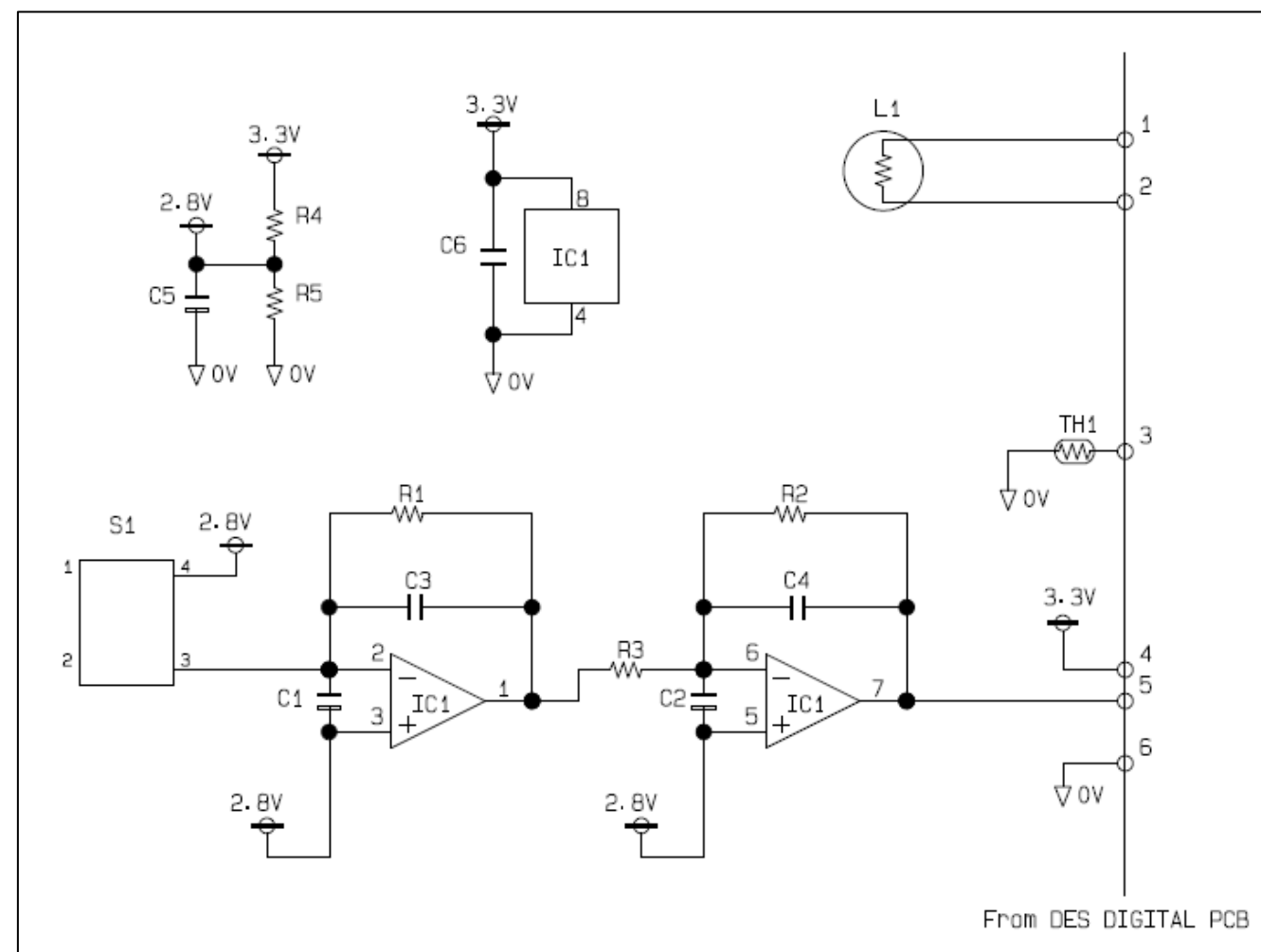
All drawings are view of parts side

SCALE 2:1

PARTS LIST

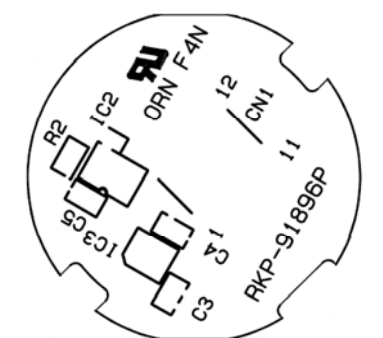
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
S1	IR Sensor	IR1011	
IC1	IC (OPAMP)	LTC2055HDD	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1,2,3,4,5	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max,1A (1005)	m
C1,2	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C3	Chip multilayer capacitor	0.01uF / 10%, 25V	m
C4,5,6	Chip multilayer capacitor	0.1uF / 10%, 25V	m
L1	T-3/4 BPA LAMP	OL-8270BPA refer to E4-6991-5129-60-01K	

m marked parts are mounted or not



SCHEMATIC

注記 NOTES		改版担当者 REV. BY		改版日 REVISED DATE	
Add RKP-91936P		小野圭		2015.5.25	
改版回数 REV.	1	総頁数 PAGES	1	DES SENSOR PCB	
承認 APPROVED	石橋勝	検討 CHECKED	北村正英	製図 DRAWN	小野圭
		作成日 DATE		図番 DWG. NO.	
		2014.7.14		E3-6991-5385-90-01K	



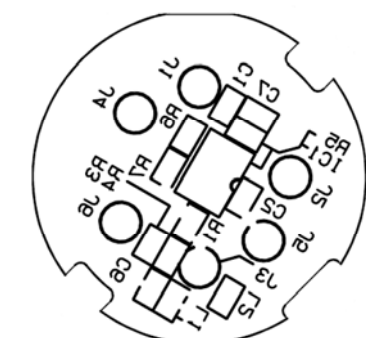
SILK PRINT FOR PARTS SIDE



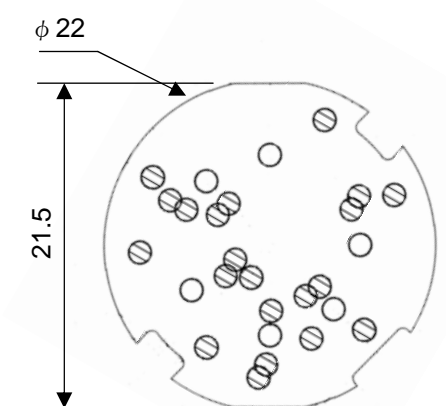
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

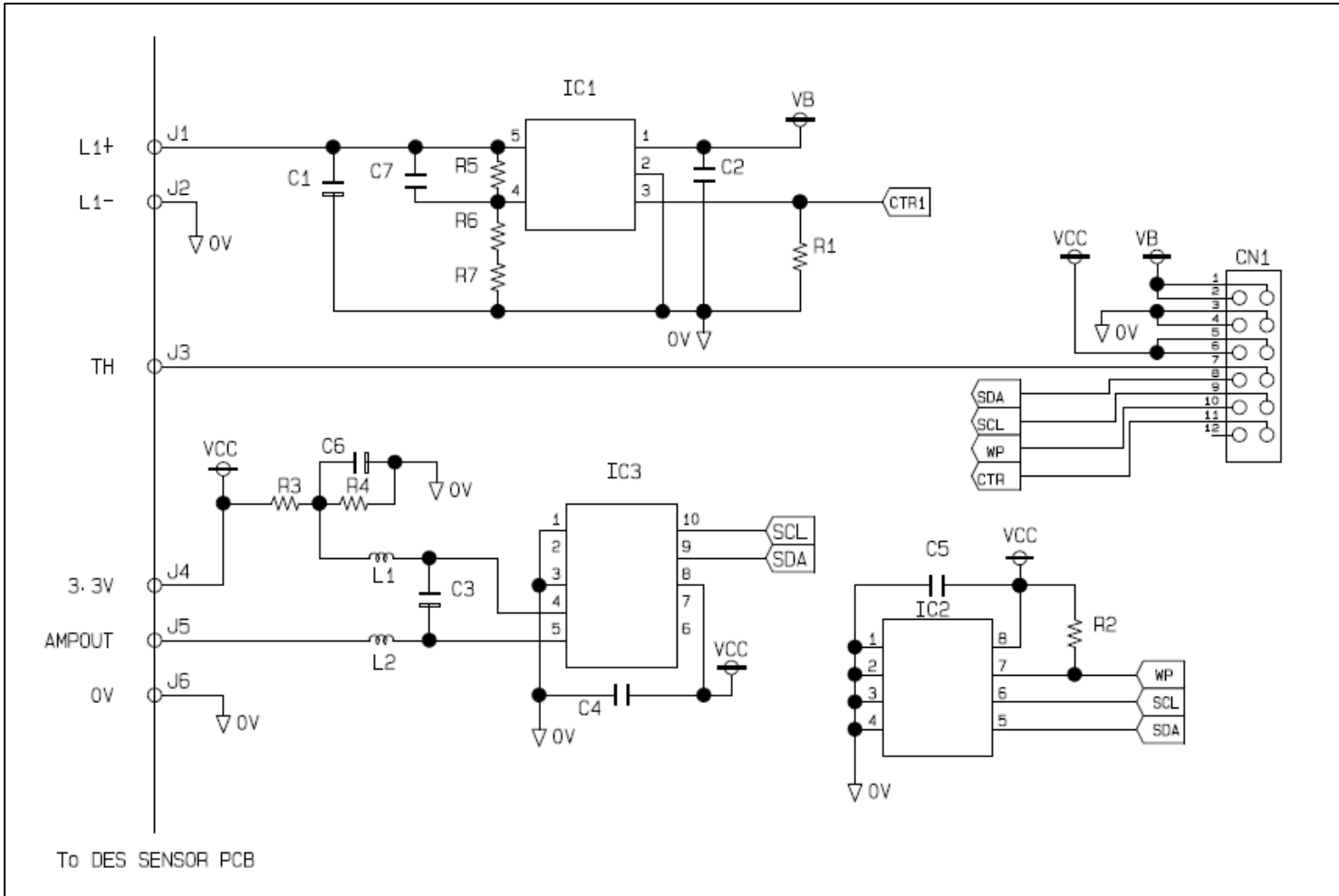
MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 0.9	TH

SPECIFICATION FOR PCB

- ・PCB No. : RKP-91896P
- ・Material : Glass epoxy
- ・Thickness : 1.2mm
- ・Layer number : 2
- ・Thickness copper film : 35um
- ・Minimum conductor width : 0.3mm
- ・CTI : 100 above

All drawings are view of parts side

SCALE 2:1



SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	TPS73201DBV	m
IC2	IC (EEPROM)	S-24C16CI-I8T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
R1,2,3,4,5,6,7	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005)	m
C1,2	Chip multilayer capacitor	4.7uF / 20%, 6.3V	m
C3,4,5,6	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C7	Chip multilayer capacitor	1uF / 10%, 10V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005) or BLM15HD182	m

m marked parts are mounted or not

注 記 NOTES

C1、C2 change

改版担当者

REV. BY

小野圭

改版日

REVISED DATE

2015.2.24

承認 APPROVED

検 討 CHECKED

製 図 DRAWN

作成日 DATE

図 番 DWG. NO.

石橋勝

北村正英

小野圭

2014.7.14

E 3 - 6 9 9 1 - 5 3 8 6 - 6 0 - 0 1 K

Presafe

DNV Nemko Presafe AS

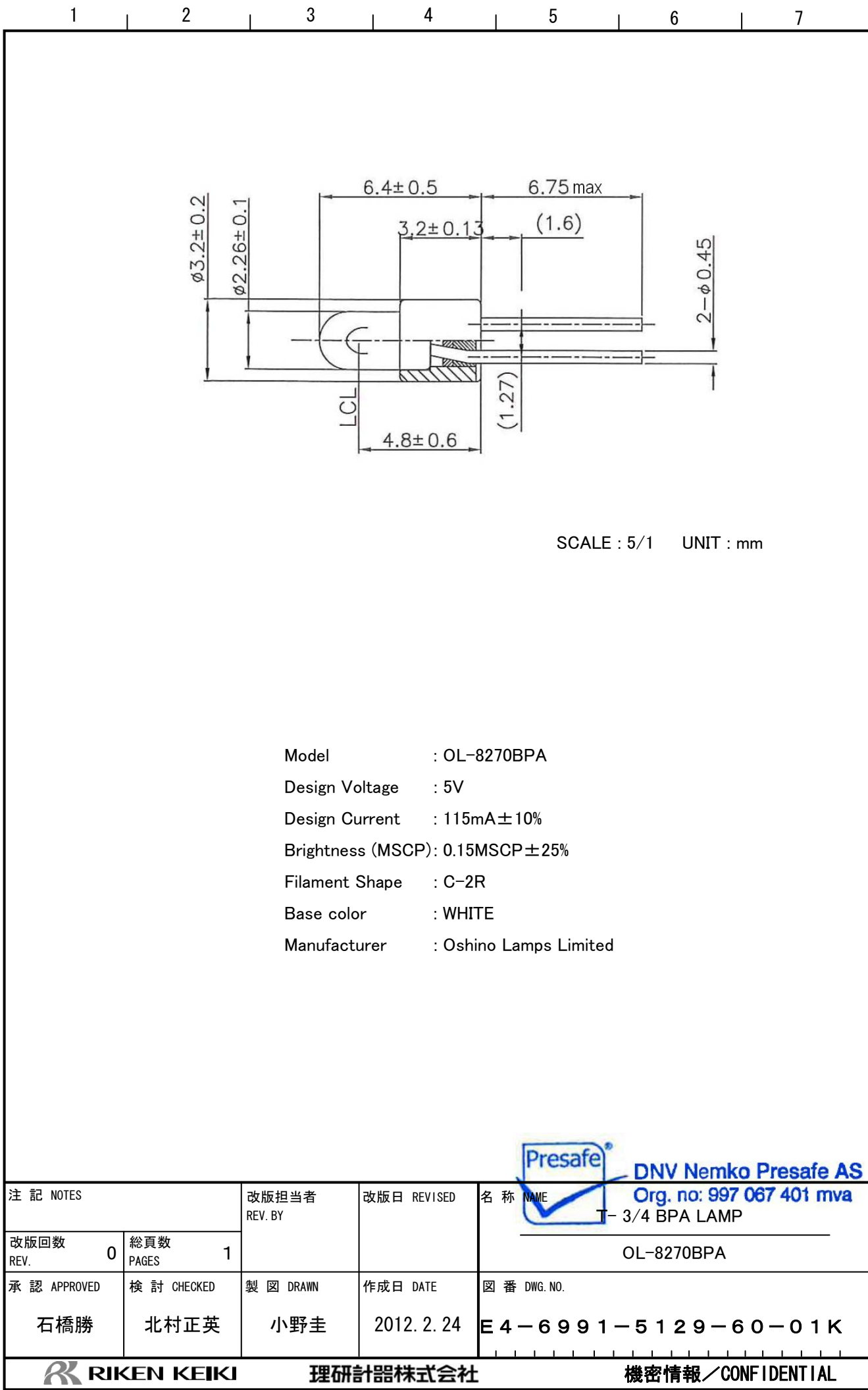
Org. nr. 997 067 401 mva

DES DIGITAL PCB

RIKEN KEIKI

理研計器株式会社


機密情報 / CONFIDENTIAL

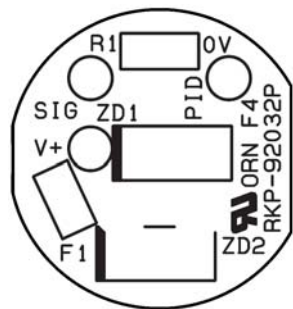


Model : OL-8270BPA
Design Voltage : 5V
Design Current : 115mA±10%
Brightness (MSCP): 0.15MSCP±25%
Filament Shape : C-2R
Base color : WHITE
Manufacturer : Oshino Lamps Limited

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME <div>Presafe® DNV Nemko Presafe AS Org. no: 997 067 401 mva T- 3/4 BPA LAMP</div>
改版回数 REV.	0			
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED	検 討 CHECKED			
石橋勝	北村正英	小野圭	2012. 2. 24	E 4 - 6 9 9 1 - 5 1 2 9 - 6 0 - 0 1 K

		寸 法																					
		18 未 満		18以上50未満		50以上120未満		120以上260未満		260以上500未満		500以上1000未満		1000以上									
精 度	0.1	中 級	0.2	粗 級	0.4	0.15	0.3	0.6	0.2	0.4	0.8	0.3	0.5	1.2	0.4	0.8	1.6	0.5	1.0	2.0	0.7	1.2	2.5

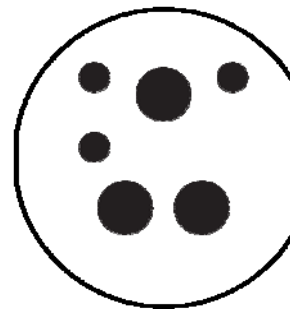
表面处理 TREAT.	許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME Org. no: 997 067 401 mva SMART SENSOR Type-PIS
材 質 MAT.				
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
青良治	近藤晴彦	武井康典	2014. 7. 30	M4-4830-01-01K
 RIKEN KEIKI			理研計測株式会社	
機密情報 / CONFIDENTIAL				



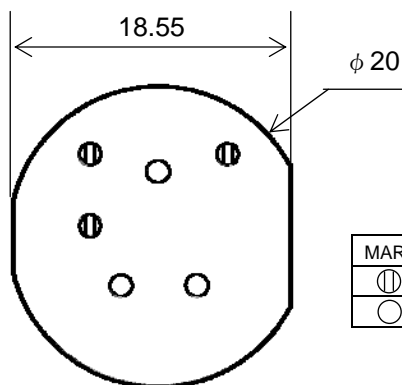
SILK PRINT FOR PARTS SIDE





PARTS SIDE



SOLDERING SIDE



THROUGH HOLE DATA

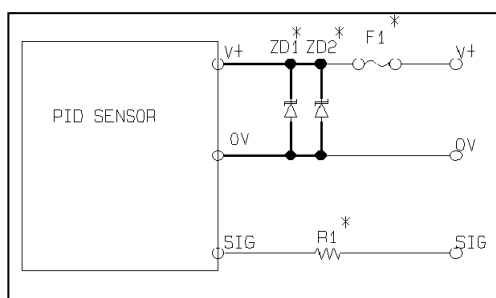
MARK	DIAGRAM	HOLE
	ϕ 0.6	TH
	ϕ 1.8	TH

All drawings are view of parts side

SCALE 2:1

SPECIFICATION FOR PCB

- PCB No. : RKP-92032P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 2
- Thickness copper film : 35um
- Minimum conductor width : 1.0mm
- CTI : 100 above



SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
PID SENSOR	VOC GAS SENSOR	MINI PID 3PIN, Ion Science Ltd. IECEx BAS 07.0030U	Ex comp.
F1	Fuse	MCF2 125mAR08B4, SOC In=250mA, DC72V	Safety comp.
ZD1,ZD2	Zener diode	1SMB5917B,ON Semiconductor Vz = 4.46 – 4.94 V, 3W	Safety comp.
R1	Chip fixed resistor	1k ohm / 1%, 0.25W (3216)	Safety comp.

注記 NOTES

PID=>PIS

改版回数
REV.

2

総頁数
PAGES

改版担当者	
REV BY	

小野圭

承認 APPROVED

検討 CHECKED

石橋勝

北村正英

製 図 DRAWN

小野圭

改 版 日	REVISED
-------	---------

2015.3.25

作成日 DATE

2014.7.14

名称	NAME
1. 姓名	NAME
2. 性别	SEX
3. 年龄	AGE
4. 职业	CAREER
5. 教育程度	EDUCATION
6. 婚姻状况	MARRIAGE
7. 收入	INCOME
8. 消费支出	EXPENDITURE
9. 储蓄	SAVING
10. 投资	INVESTMENT
11. 负债	DEBT
12. 资产	ASSET
13. 净财富	NET WEALTH
14. 生活质量	QUALITY OF LIFE
15. 社会地位	SOCIAL STATUS
16. 健康状况	HEALTH STATUS
17. 心理状态	PSYCHOLOGICAL STATE
18. 行为习惯	HABIT
19. 兴趣爱好	INTEREST
20. 社交网络	SOCIAL NETWORK
21. 消费偏好	CONSUMPTION PREFERENCE
22. 品牌忠诚度	BRAND LOYALTY
23. 环保意识	ENVIRONMENTAL AWARENESS
24. 社会责任	SOCIAL RESPONSIBILITY
25. 文化素养	CULTURAL LITERACY
26. 科技接受度	TECHNOLOGY ACCEPTANCE
27. 风险承受能力	RISK TOLERANCE
28. 时间观念	TIME CONCEPT
29. 沟通能力	COMMUNICATION SKILL
30. 团队合作	TEAMWORK
31. 领导力	LEADERSHIP
32. 决策能力	DECISION MAKING
33. 问题解决能力	PROBLEM SOLVING
34. 创新能力	INNOVATION
35. 学习能力	LEARNING ABILITY
36. 适应能力	ADAPTABILITY
37. 抗压能力	STRESS RESISTANCE
38. 情绪管理能力	EMOTION MANAGEMENT
39. 自我激励	SELF-MOTIVATION
40. 目标设定	GOAL SETTING
41. 计划执行	PLAN EXECUTION
42. 时间管理	TIME MANAGEMENT
43. 资源管理	RESOURCE MANAGEMENT
44. 风险管理	RISK MANAGEMENT
45. 危机处理	CRISIS MANAGEMENT
46. 冲突解决	CONFLICT RESOLUTION
47. 谈判技巧	NEGOTIATION SKILL
48. 团队合作	TEAMWORK
49. 领导力	LEADERSHIP
50. 决策能力	DECISION MAKING
51. 问题解决能力	PROBLEM SOLVING
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61. 资源管理	RESOURCE MANAGEMENT
62. 风险管理	RISK MANAGEMENT
63. 危机处理	CRISIS MANAGEMENT
64. 冲突解决	CONFLICT RESOLUTION
65. 谈判技巧	NEGOTIATION SKILL
66. 团队合作	TEAMWORK
67. 领导力	LEADERSHIP
68. 决策能力	DECISION MAKING
69. 问题解决能力	PROBLEM SOLVING
70. 创新能力	INNOVATION
71. 学习能力	LEARNING ABILITY
72. 适应能力	ADAPTABILITY
73. 抗压能力	STRESS RESISTANCE
74. 情绪管理能力	EMOTION MANAGEMENT
75. 自我激励	SELF-MOTIVATION
76. 目标设定	GOAL SETTING
77. 计划执行	PLAN EXECUTION
78. 时间管理	TIME MANAGEMENT
79. 资源管理	RESOURCE MANAGEMENT
80. 风险管理	RISK MANAGEMENT
81. 危机处理	CRISIS MANAGEMENT
82. 冲突解决	CONFLICT RESOLUTION
83. 谈判技巧	NEGOTIATION SKILL
84. 团队合作	TEAMWORK
85. 领导力	LEADERSHIP
86. 决策能力	DECISION MAKING
87. 问题解决能力	PROBLEM SOLVING
88. 创新能力	INNOVATION
89. 学习能力	LEARNING ABILITY
90. 适应能力	ADAPTABILITY
91. 抗压能力	STRESS RESISTANCE
92. 情绪管理能力	EMOTION MANAGEMENT
93. 自我激励	SELF-MOTIVATION
94. 目标设定	GOAL SETTING
95. 计划执行	PLAN EXECUTION
96. 时间管理	TIME MANAGEMENT
97. 资源管理	RESOURCE MANAGEMENT
98. 风险管理	RISK MANAGEMENT
99. 危机处理	CRISIS MANAGEMENT
100. 冲突解决	CONFLICT RESOLUTION
101. 谈判技巧	NEGOTIATION SKILL
102. 团队合作	TEAMWORK
103. 领导力	LEADERSHIP
104. 决策能力	DECISION MAKING
105. 问题解决能力	PROBLEM SOLVING
106. 创新能力	INNOVATION
107. 学习能力	LEARNING ABILITY
108. 适应能力	ADAPTABILITY
109. 抗压能力	STRESS RESISTANCE
110. 情绪管理能力	EMOTION MANAGEMENT
111. 自我激励	SELF-MOTIVATION
112. 目标设定	GOAL SETTING
113. 计划执行	PLAN EXECUTION
114. 时间管理	TIME MANAGEMENT
115. 资源管理	RESOURCE MANAGEMENT
116. 风险管理	RISK MANAGEMENT
117. 危机处理	CRISIS MANAGEMENT
118. 冲突解决	CONFLICT RESOLUTION
119. 谈判技巧	NEGOTIATION SKILL
120. 团队合作	TEAMWORK
121. 领导力	LEADERSHIP
122. 决策能力	DECISION MAKING
123. 问题解决能力	PROBLEM SOLVING
124. 创新能力	INNOVATION
125. 学习能力	LEARNING ABILITY
126. 适应能力	ADAPTABILITY
127. 抗压能力	STRESS RESISTANCE
128. 情绪管理能力	EMOTION MANAGEMENT
129. 自我激励	SELF-MOTIVATION
130. 目标设定	GOAL SETTING
131. 计划执行	PLAN EXECUTION
132. 时间管理	TIME MANAGEMENT
133. 资源管理	RESOURCE MANAGEMENT
134. 风险管理	RISK MANAGEMENT
135. 危机处理	CRISIS MANAGEMENT
136. 冲突解决	CONFLICT RESOLUTION
137. 谈判技巧	NEGOTIATION SKILL
138. 团队合作	TEAMWORK
139. 领导力	LEADERSHIP
140. 决策能力	DECISION MAKING
141. 问题解决能力	PROBLEM SOLVING
142. 创新能力	INNOVATION
143. 学习能力	LEARNING ABILITY

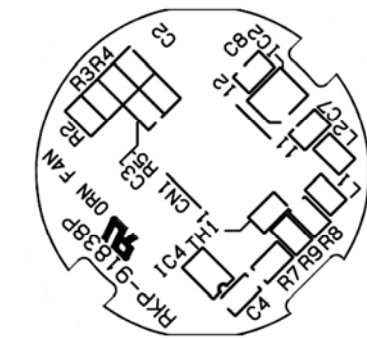


DNV Nemko Presafe AS
Org. no: 997 067 401 mva
SENSOR PCB

PIS SENSOR PCB

图 番 DWG. NO.

E 4-6991-5387-30-01 K



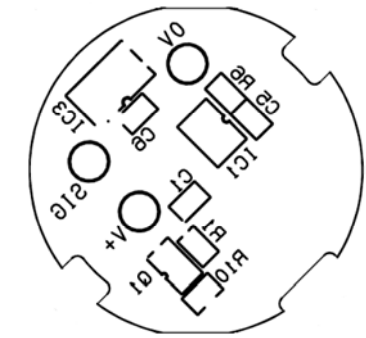
SILK PRINT FOR PARTS SIDE



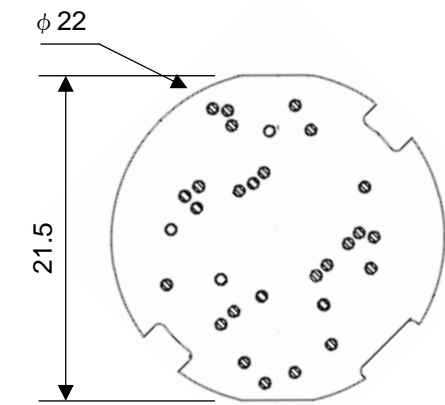
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

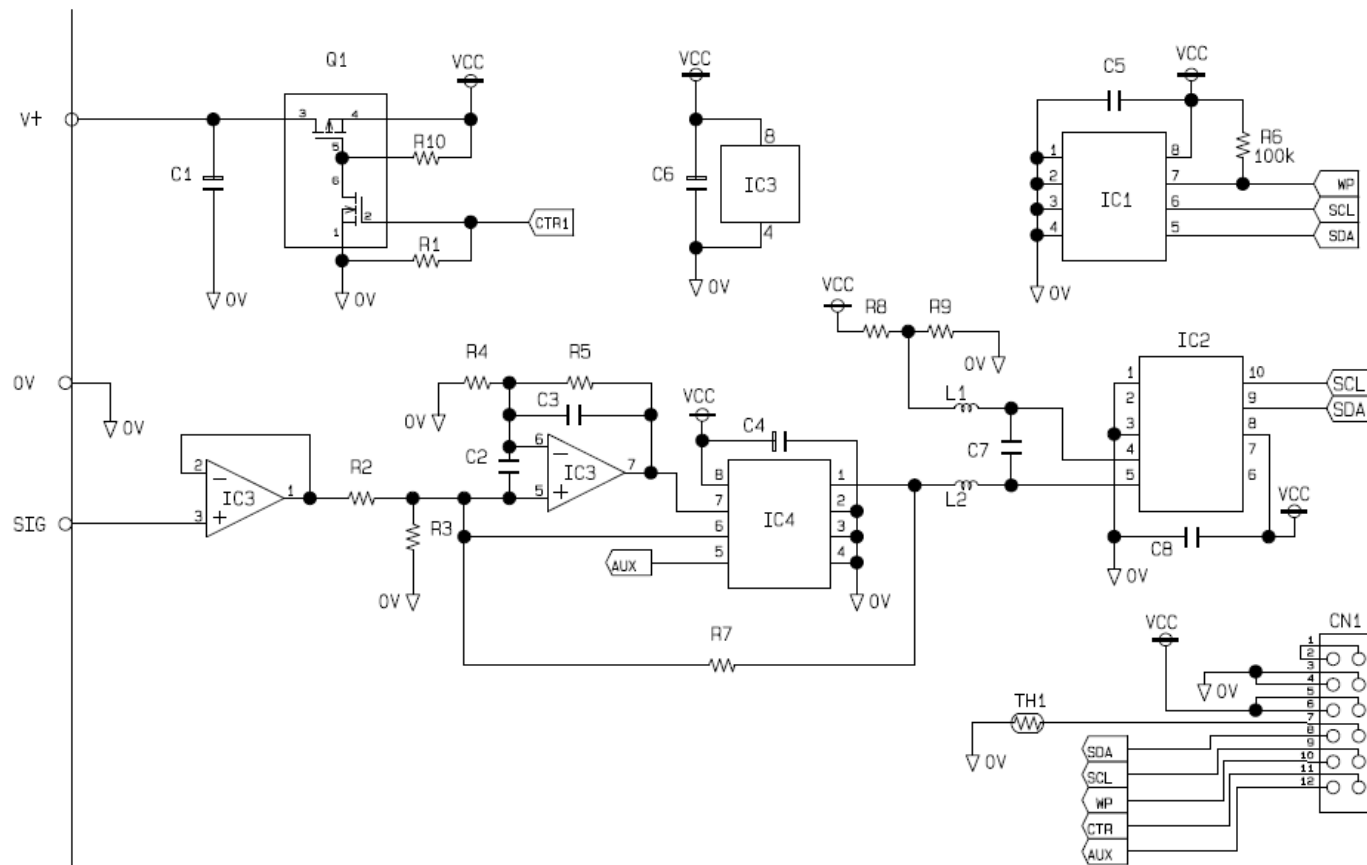
MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 1.0	TH

SPECIFICATION FOR PCB

- PCB No. : RKP-91838P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.3mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



To PID SENSOR PCB

SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (EEPROM)	S-24C16CI-I8T1	m
IC2	IC (A/D Converter)	ADS1114IRU	m
IC3	IC(OPAMP)	OPA2378AIDCN	m
Q1	N+P-ch FET	EM6M2	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-10	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005)	m
C1,2,4,5,6,7,8	Chip multilayer capacitor	0.1uF / 10%, 16V	m
C3	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005) or BLM15HD182	m

m marked parts are mounted or not

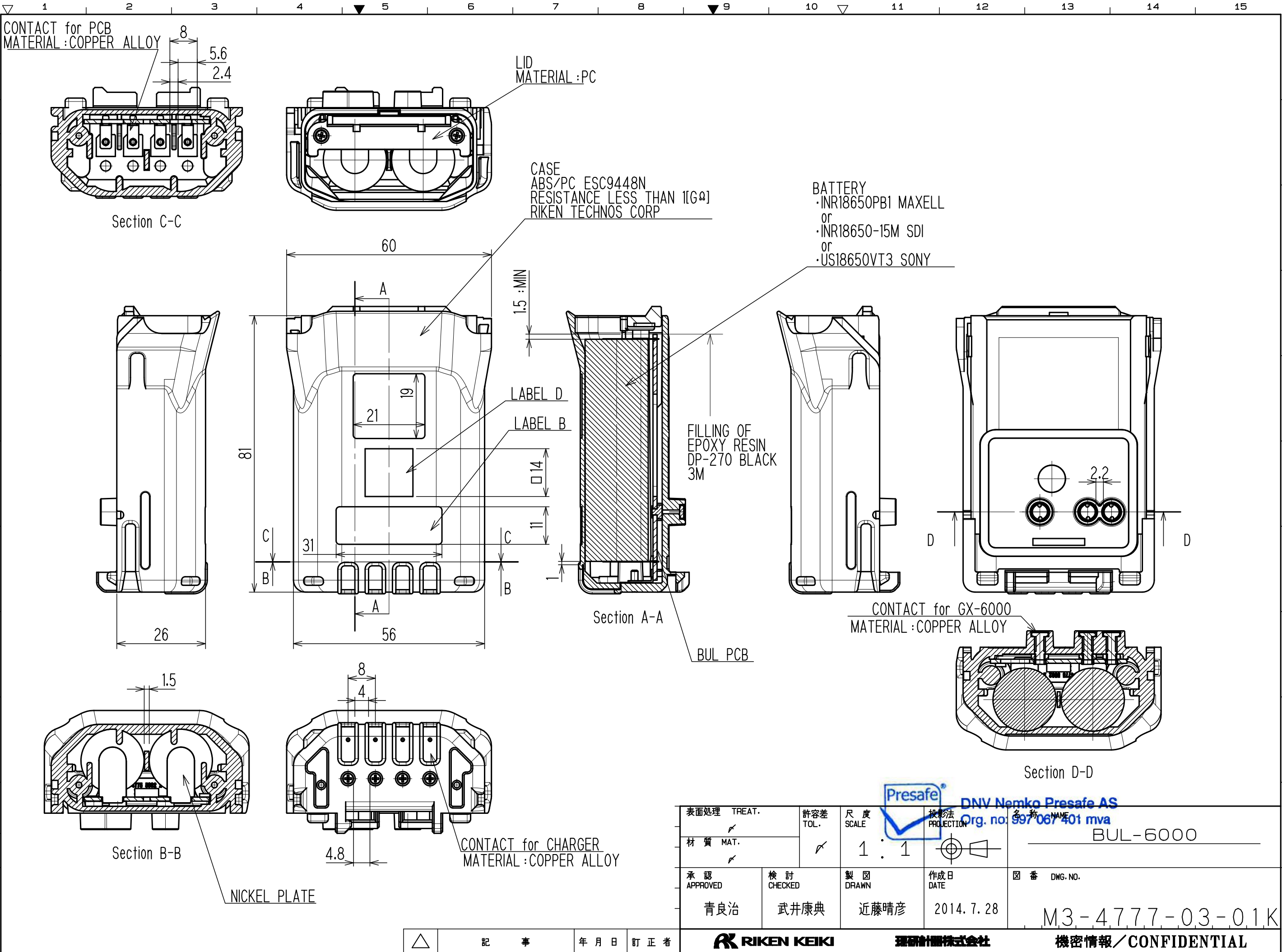
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改版回数 REV.		総頁数 PAGES		小野圭	
承認 APPROVED		検討 CHECKED		2015.3.25	
石橋勝		北村正英		作成日 DATE	
		小野圭		2014.7.14	
				図 番 DWG. NO.	
				E 3 - 6 9 9 1 - 5 3 8 8 - 1 0 - 0 1 K	

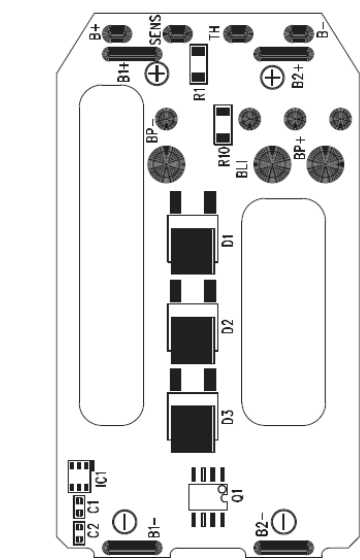
RIKEN KEIKI

理研計器株式会社

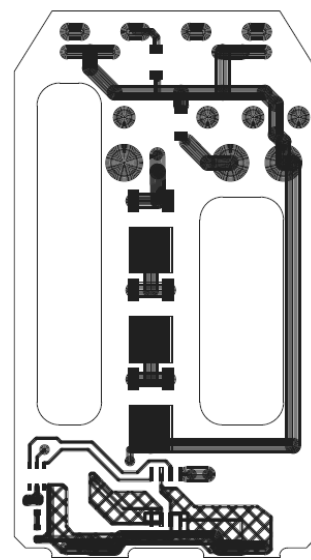
機密情報/CONFIDENTIAL

寸法	精度	中級	粗級
1000以上	0.7	1.2	2.5
500以上1000未満	0.5	1.0	2.0
260以上500未満	0.4	0.8	1.6
120以上260未満	0.3	0.6	1.2
50以上120未満	0.2	0.4	0.8
18以上50未満	0.15	0.3	0.6
1日未満	0.1	0.2	0.4
寸法	精度	中級	粗級

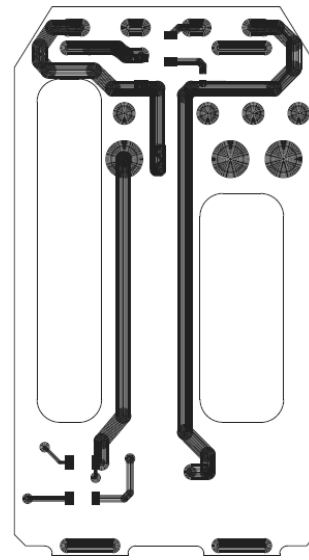




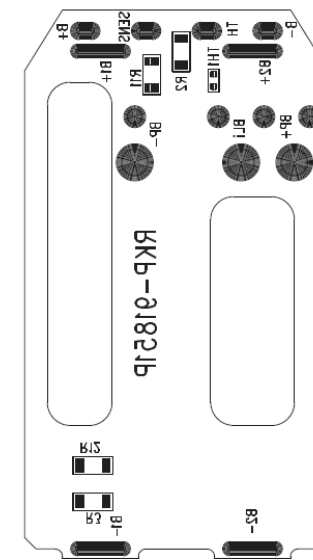
SILK PRINT FOR PARTS SIDE



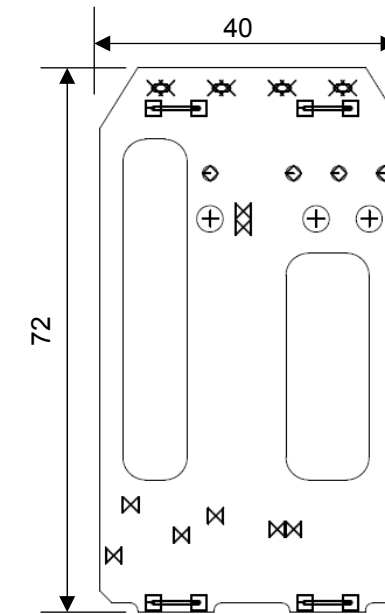
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

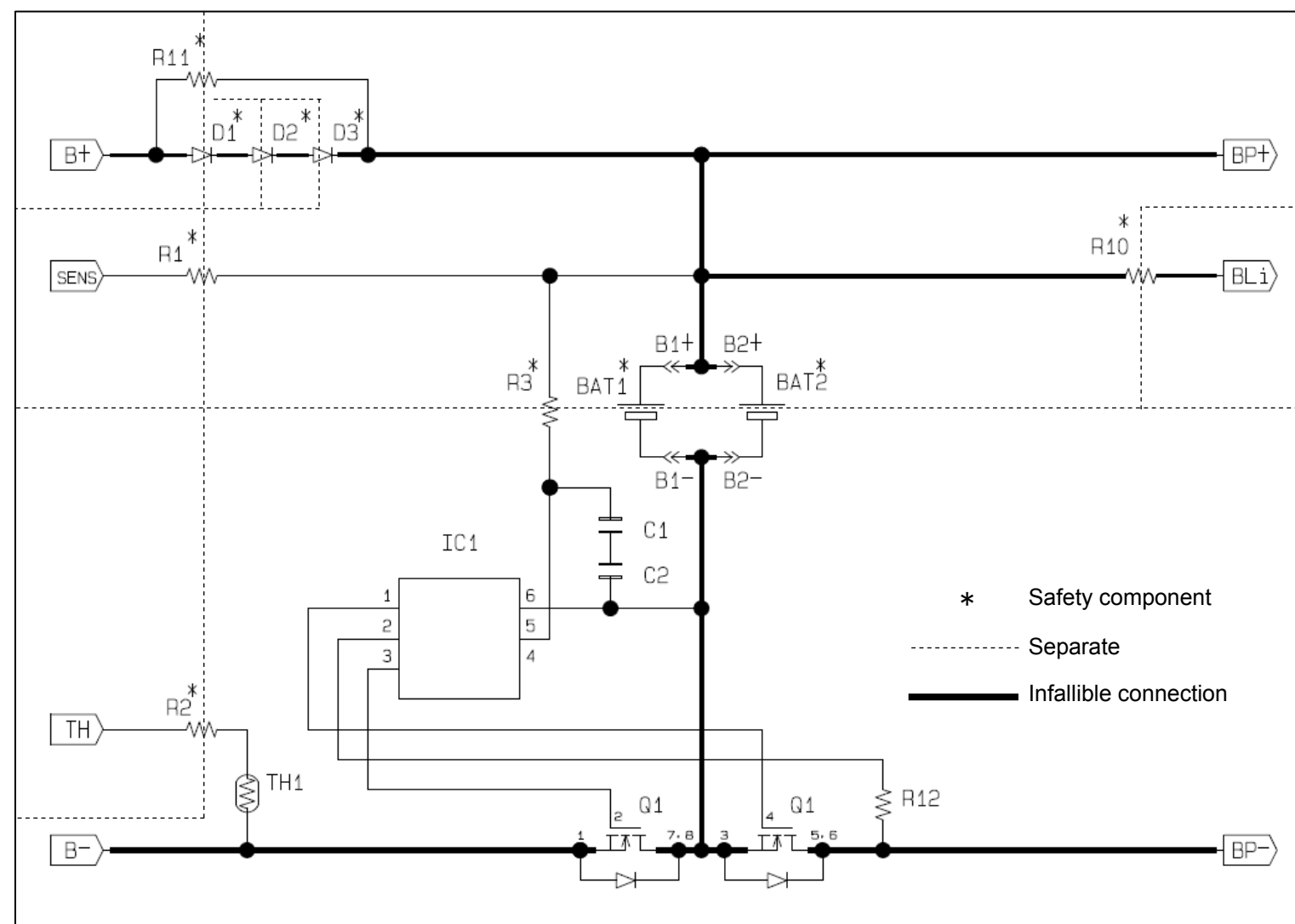
SPECIFICATION FOR PCB

- PCB No. : RKP-91851P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 2
- Thickness copper film : 35um
- Minimum conductor width : 0.3mm
- CTI : 100 above

MARK	DIAGRAM	HOLE
+	3.5	TH
×	0.8×6.5	TH
□	0.5×6.5	TH
◇	2	TH
⊗	0.8	TH

All drawings are view of parts side

SCALE 1:1



SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Protection IC)	S-8261	
Q1	FET	FDS6961A	
D1,2,3	Schottky barrier diode	MBRD1045, On semiconductor Vr = 45V, If = 10A	*
R1,2	Chip fixed resistor	MCR18EZP_2000, ROHM or RK73H2BT_2000, KOA 200ohm / 1% , 0.25W	*
R3	Chip fixed resistor	MCR18EZP_4700, ROHM or RK73H2BT_4700, KOA 470ohm / 1% , 0.25W	*
R10	Chip fixed resistor	MCR18EZP_1002, ROHM or RK73H2BT_1002, KOA 10k ohm / 1% , 0.25W	*
R11	Chip fixed resistor	MCR18EZP_1002, ROHM or RK73H2BT_1002, KOA 2.2k ohm / 1% , 0.25W	*
R12	Chip fixed resistor	200Ω-10kΩ / 1% , 0.25W (3216)	
C1,2	Chip multilayer capacitor	0.1uF / 10%, 50V	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	

m marked parts are mounted or not

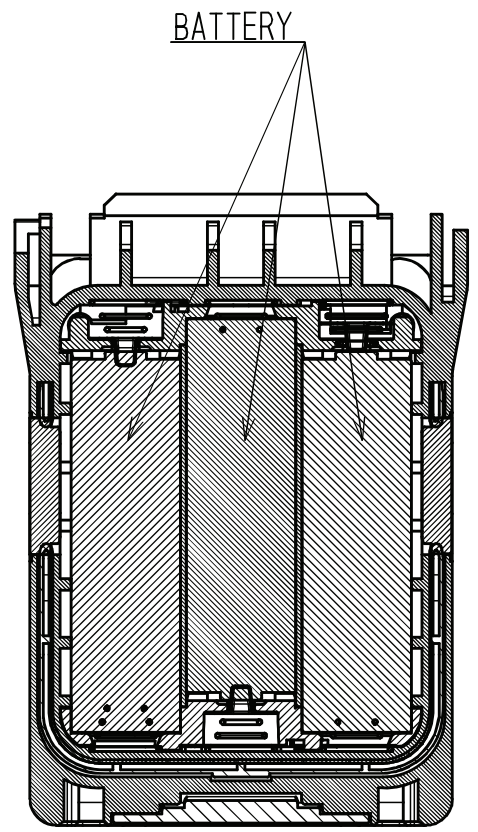
担当者 改版

DNV Nemko Presafe AS
REVISED 名称 NAME
0397 067 401 mva

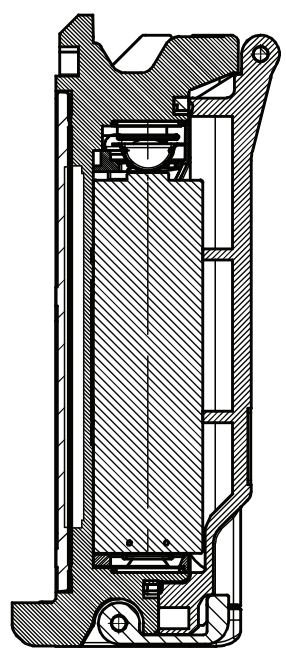
BUL PCB

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED 2014.9.5	図番 DWG. NO. E3-6991-5389-80-01K
改版回数 REV.	1	小野圭	2014.9.5	
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	
石橋勝	北村正英	小野圭	2014.7.14	

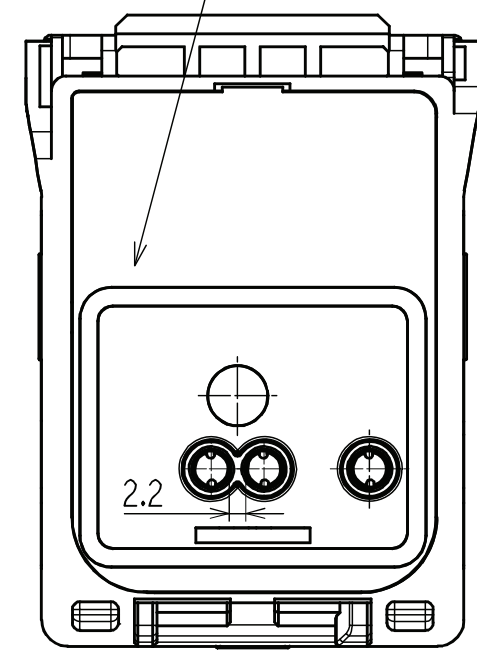
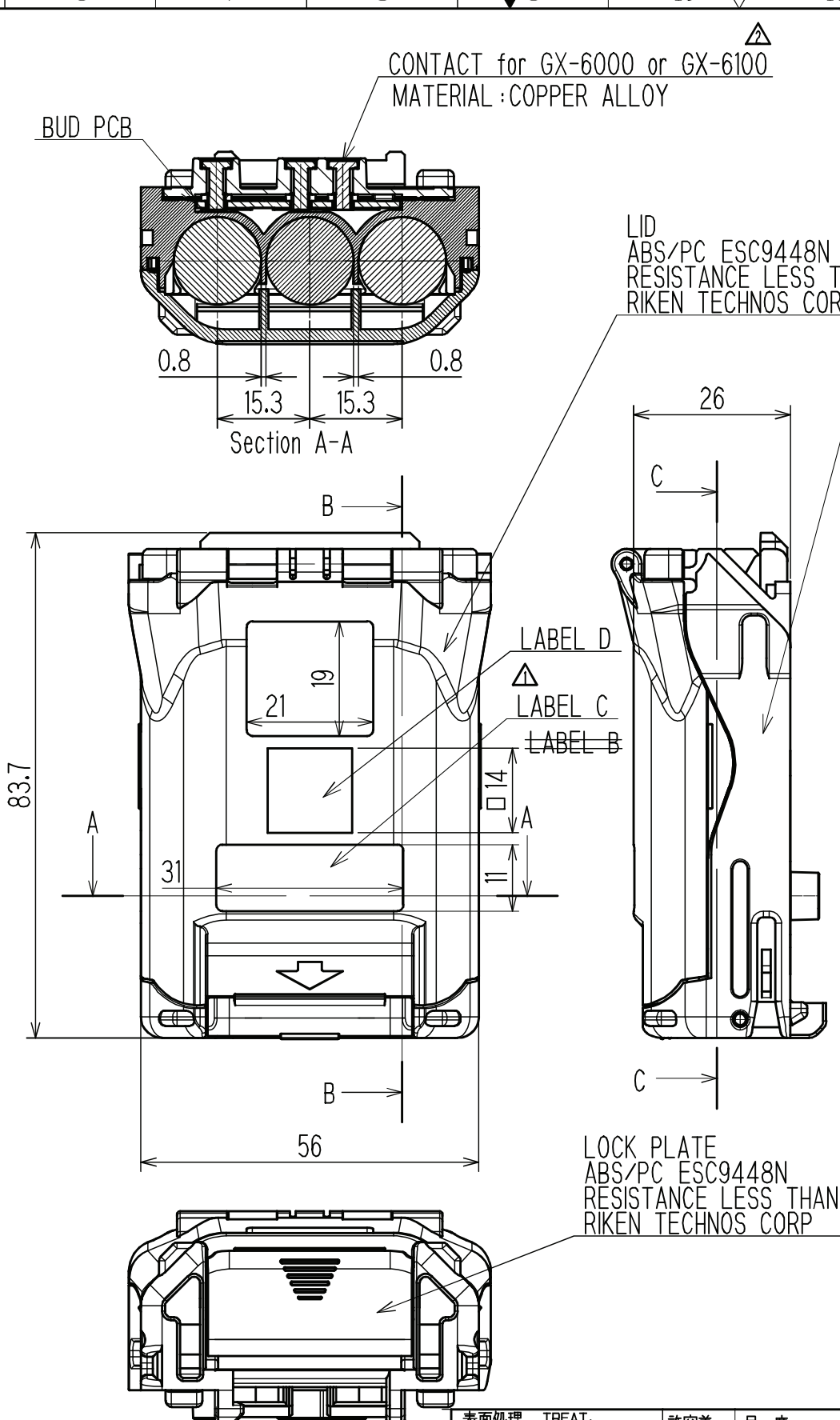
寸 法	公差																												
	公差																												
	公差																												
	公差																												
1000以上	0.7	1.2	2.5	500以上1000未満	0.5	1.0	2.0	260以上500未満	0.4	0.8	1.6	120以上260未満	0.3	0.6	1.2	50以上120未満	0.2	0.4	0.8	18以上50未満	0.15	0.3	0.6	18未満	0.1	0.2	0.4		
精 級	中 級	粗 級		精 級	中 級	粗 級		精 級	中 級	粗 級		精 級	中 級	粗 級		精 級	中 級	粗 級	精 級	中 級	粗 級		精 級	中 級	粗 級		精 級	中 級	粗 級


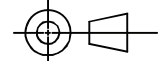







Section C-C

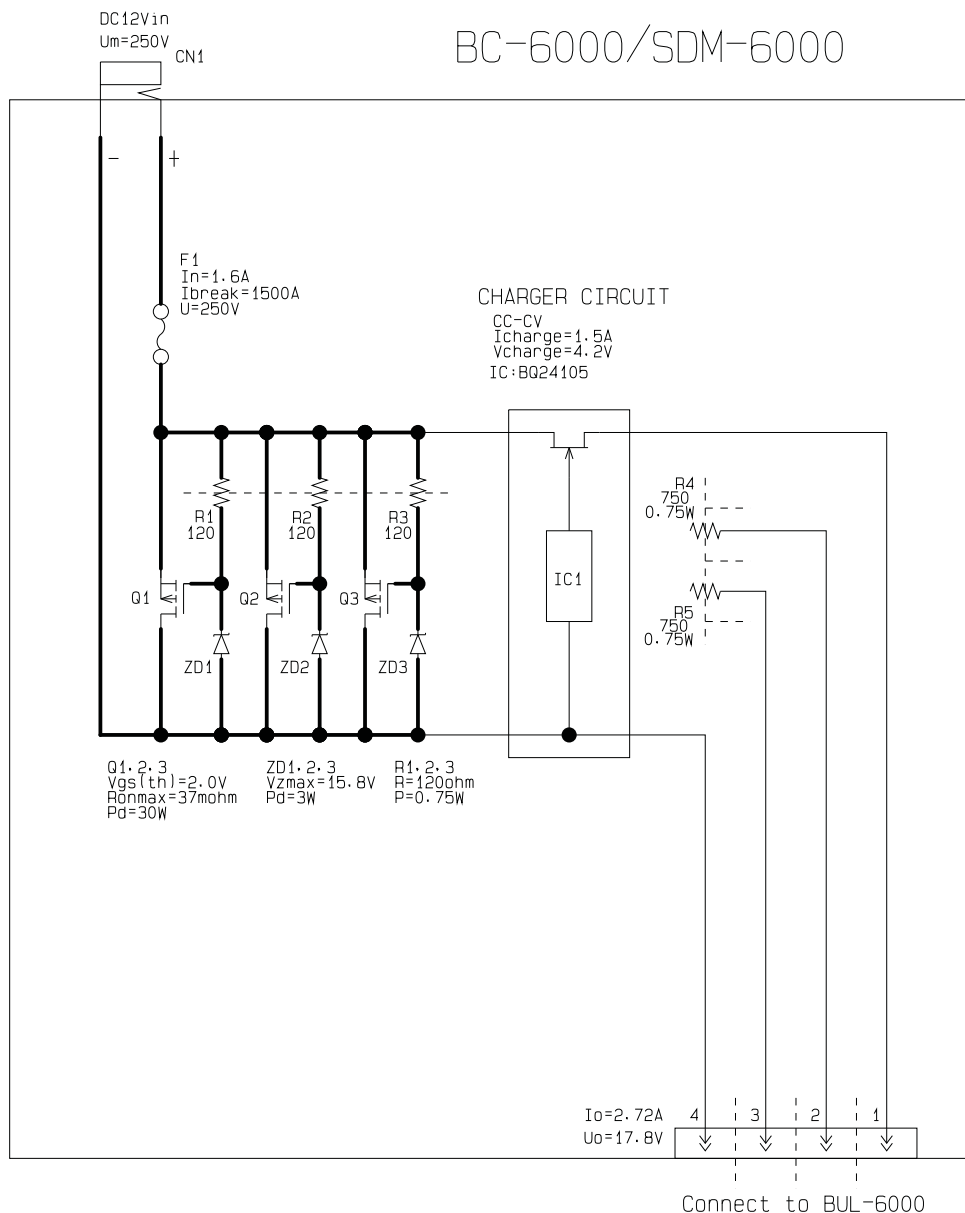


Section B-B



				表面処理 TREAT. 材 質 MAT.		許公差 TOL. 尺 度 SCALE 1 : 1	投影法 PROJECTION 	名 称 NAME BUD-6000/BUD-6100 			
				承認 APPROVED 青良治		検 討 CHECKED 武井康典		製 図 DRAWN 近藤晴彦		作成日 DATE 2014. 7. 30	
	REVISION A10	2023.1.20	伊藤周	 理研計機株式会社 機密情報 / CONFIDENTIAL							
	REVISION E9	2015.3.6	海野裕作								
	記 事	年 月 日	訂 正 者								

1	2	3	4	5	6	7												
SILK PRINT FOR PARTS SIDE		PARTS SIDE		SOLDERING SIDE		THROUGH HOLE DATA												
<p> All drawings are view of parts side SCALE 1:1 </p>						<table border="1"> <tr> <th>MARK</th> <th>DIAGRAM</th> <th>HOLE</th> </tr> <tr> <td>/</td> <td>$\phi 0.8$</td> <td>TH</td> </tr> <tr> <td>X</td> <td>$\phi 3.7$</td> <td>TH</td> </tr> <tr> <td>☆22</td> <td>$\phi 2.2$</td> <td>NTH</td> </tr> </table>	MARK	DIAGRAM	HOLE	/	$\phi 0.8$	TH	X	$\phi 3.7$	TH	☆22	$\phi 2.2$	NTH
MARK	DIAGRAM	HOLE																
/	$\phi 0.8$	TH																
X	$\phi 3.7$	TH																
☆22	$\phi 2.2$	NTH																
<p>SPECIFICATION FOR PCB</p> <ul style="list-style-type: none"> PCB No. : RKP-91954P Material : Glass epoxy Thickness : 1.2mm Layer number : 2 Thickness copper film : 35um Minimum conductor width : 1.6mm CTI : 100 above 																		
SCHEMATIC																		
PARTS LIST																		
Mark of drawing		Kind of parts		Rating / Model of parts		Remarks												
R1		Chip fixed resistor		MCR18EZP_1002, ROHM or RK73H2BT_1002, KOA 10k ohm / 1% , 0.25W		Safety comp.												
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p>注 記 NOTES</p> <table border="1"> <tr> <td>改版回数 REV.</td> <td>1</td> <td>総頁数 PAGES</td> <td>1</td> </tr> </table> <p>承認 APPROVED</p> <p>石橋勝</p> </div> <div> <p>改版担当者 REV. BY</p> <p>小野圭</p> <p>製 図 DRAWN</p> <p>小野圭</p> </div> <div> <p>改版日 REVISED</p> <p>2014.9.5</p> <p>作成日 DATE</p> <p>2014.7.14</p> </div> <div> <p>名 称 NAME</p> <p>BUD PCB</p> <p>図 番 DWG. NO.</p> <p>E 4 - 6 9 9 1 - 5 3 9 0 - 5 0 - 0 1 K</p> </div> </div>							改版回数 REV.	1	総頁数 PAGES	1								
改版回数 REV.	1	総頁数 PAGES	1															
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p>Presafe</p> <p>DNV Nemko Presafe AS</p> <p>Org. no: 997 067 401 mva</p> </div> </div>																		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p>RIKEN KEIKI</p> </div> <div> <p>理研計器株式会社</p> </div> <div> <p>機密情報 / CONFIDENTIAL</p> </div> </div>																		

BATTERY CHARGER
BC-6000/SDM-6000

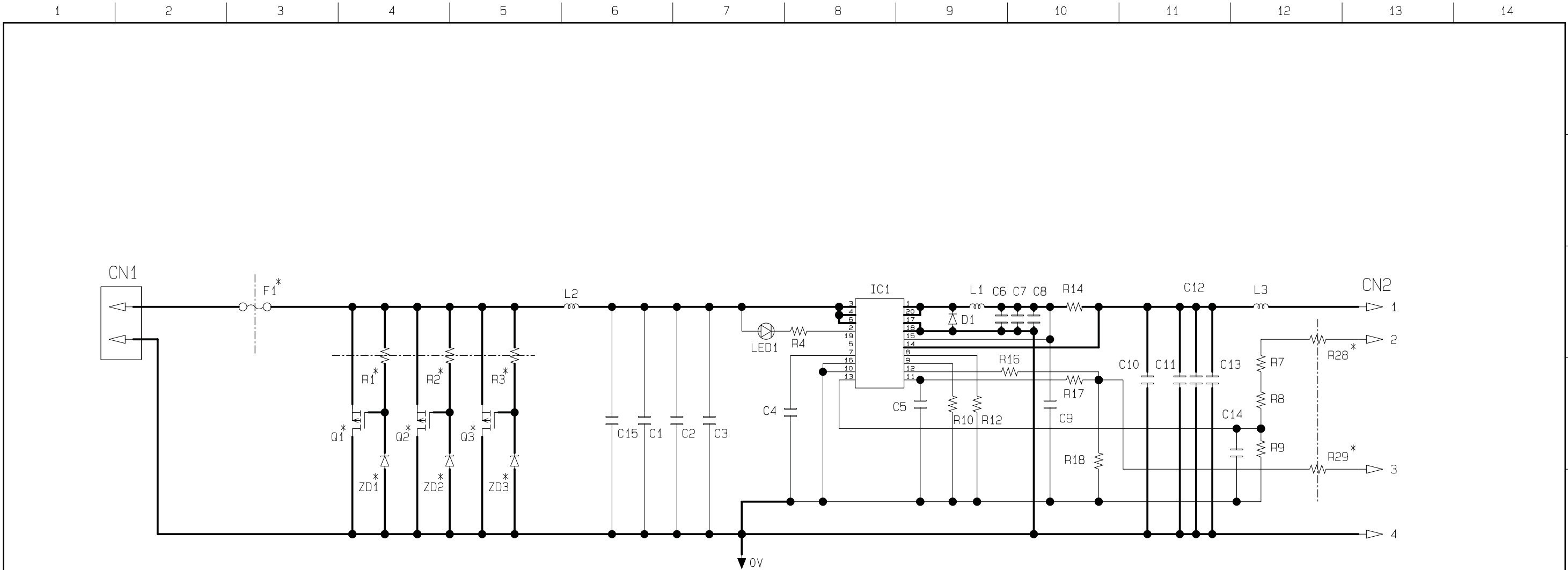
(MEMO)

1. - - - - marks means SEPARATE

2. ——— marks means INFALLIBLE CONNECTION

DNV Nemko Presafe AS
Org. no: 997 067 401 mva

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV. 1		小野圭	2014. 9. 5	DIAGRAM FOR I. S. KEEP FOR MODEL BC-6000/SDM-6000
総頁数 PAGES 1		製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED		検 討 CHECKED		
石橋勝		北村正英	小野圭	2014. 7. 30
				E 4-6991-5395-80-01K

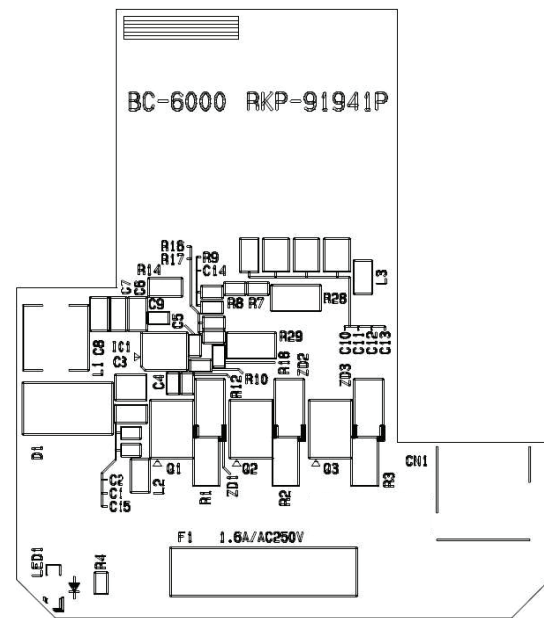


* marks means safety components

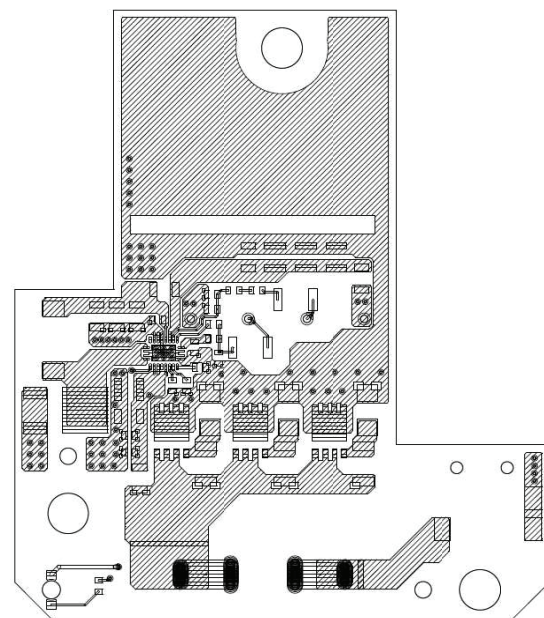
----- marks means separate

———— marks means infallible connection

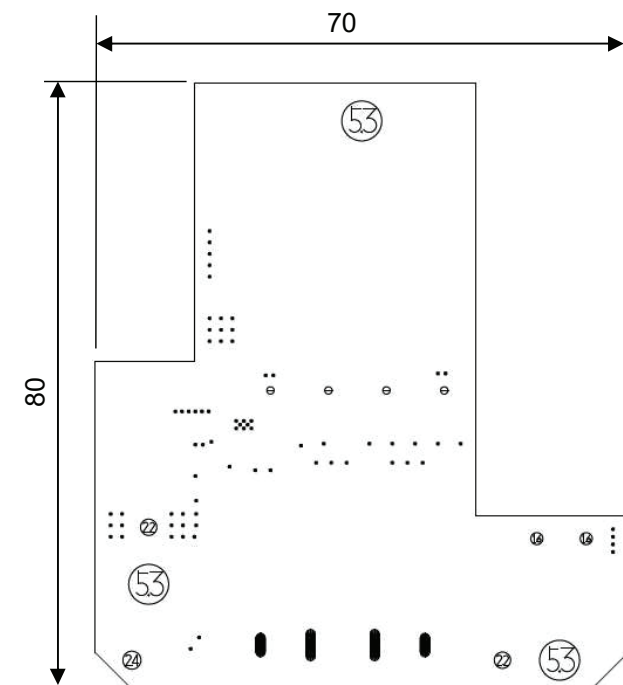
注 記 NOTES		改版担当者 REV. BY	改版日 REV. DATE	Presafe® DNV Nemko Presafe AS Obj no: 997-067-401 mva	
改版回数 REV.	0	総頁数 PAGES	1	SCHEMATIC CHARGER PCB FOR MODEL BC-6000	
承認 APPROVED	検討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.	
石橋勝	北村正英	小野圭	2014. 12. 16	E3-6991-5255-80-01K	
R RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL					



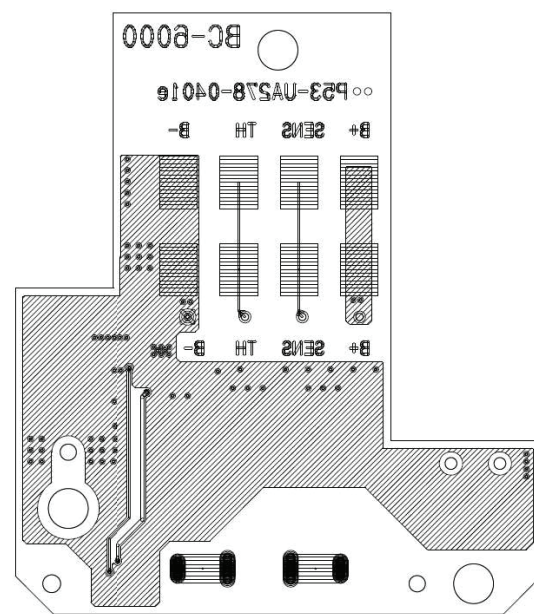
SILK PRINT FOR PARTS SIDE



PARTS SIDE



VIA HOLES



SOLDERING SIDE

All drawings are view of parts side
SCALE 1:1

MARK	DIAGRAM	HOLE
⊗	Φ0.3	TH
⊖	Φ1.0	TH
⊕	Φ1.2	TH
⑬	Φ1.6	NTH
②	Φ2.2	NTH
④	Φ2.4	NTH
⑤	Φ5.3	NTH

SPECIFICATION FOR PCB

- PCB No. : RKP-91941P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 2
- Thickness copper film : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.3mm
- CTI : 175 above

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Battery charger)	BQ24105RHLR	
D1	Schottky barrier diode	MBRD1045	
F1	Fuse	021601.6P Littelfuse In=1.6A, Ibreak=1500A@250Vac	*
Q1,Q2,Q3	P-ch MOSFET	TPCA8507-H TOSHIBA Ron_max=37mΩ , Pd=30W	*
ZD1,ZD2,ZD3	1SMB5929B	1SMB5929B ON Semiconductor Vz= 14.25V -15.75V ,Pd=3W	*
R1,R2,R3	Chip fixed resistor	RK73HW2H_1200F KOA 120Ω/1% ,0.75W	*
R4,R7,R8,R9,R10, R12,R16,R17,R18	Chip fixed resistor or Chip jumper	100Ω - 1MΩ/1% , 0.1W (1608) or 50mΩ max ,1A	m
R14	Chip fixed resistor	0.068Ω - 0.2Ω/1% , 0.25W (3216)	
R28,R29	Chip fixed resistor	RK73HW2H_7500F KOA 750Ω/1% ,0.75W	*
C1	Chip multilayer capacitor	1uF / 10% , 50V	m
C2,C6,C7,C8,C10	Chip multilayer capacitor	10uF / 10% , 25V	m
C3	Chip multilayer capacitor	22uF / 10% , 25V	m
C4	Chip multilayer capacitor	0.068uF / 10% , 50V or 0.22uF / 10% , 25V	m
C5,C9,C15	Chip multilayer capacitor	0.1uF / 10% , 50V	m
C1,C12,C13	Chip multilayer capacitor	47uF / 10% , 16V	m
C14	OPEN	OPEN	
L1	Inductor	10uH / 20%	
L2,L3	Chip ferrite beads	BLM31PG391	m
LED1	LED Lamp	SML-811U	m

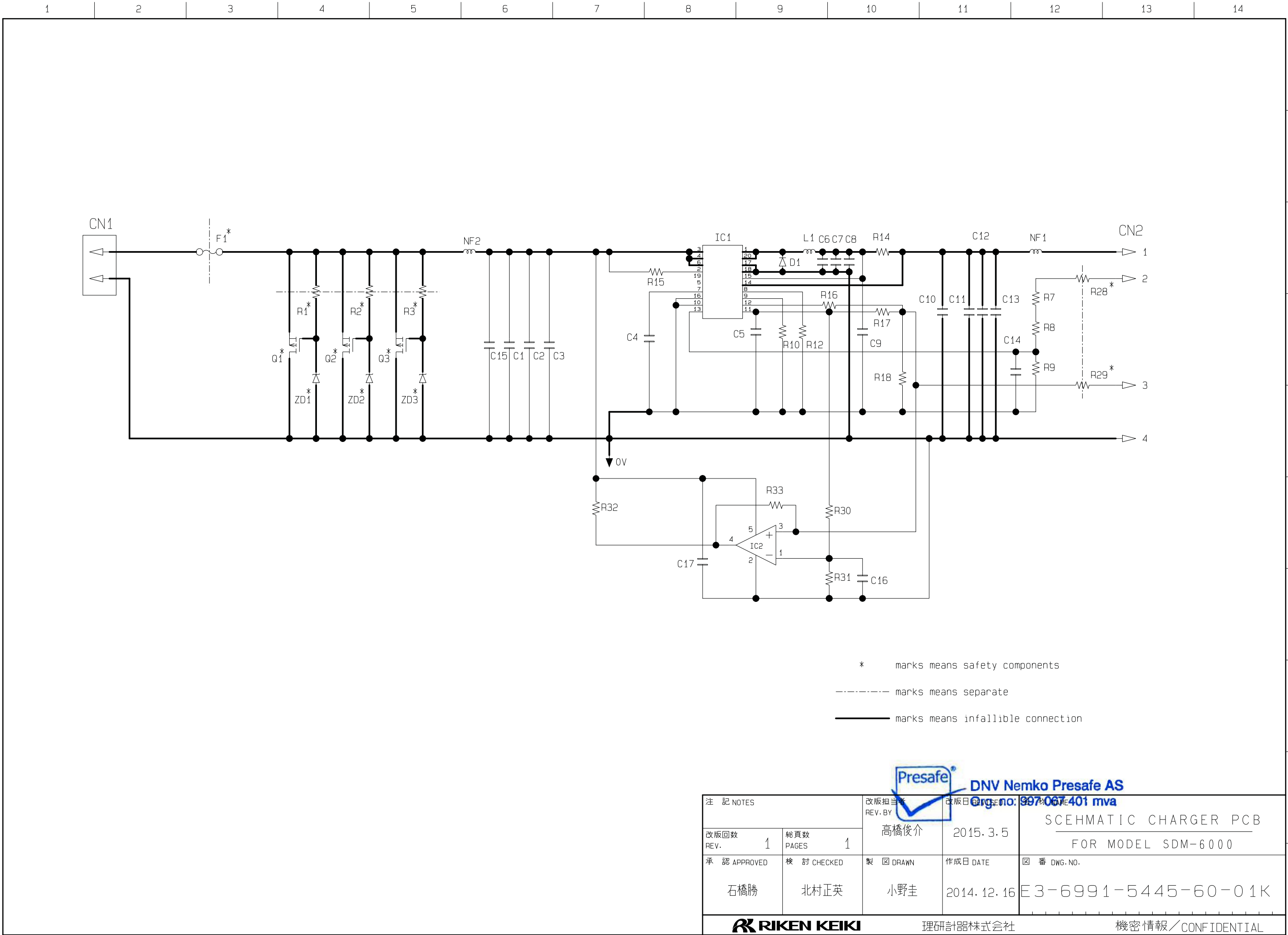
* marked parts are for safety

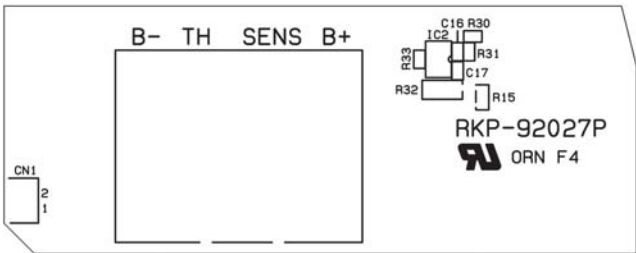
m marked parts are mounted or not

Non-Safety Components may be replaced with equivalent components.

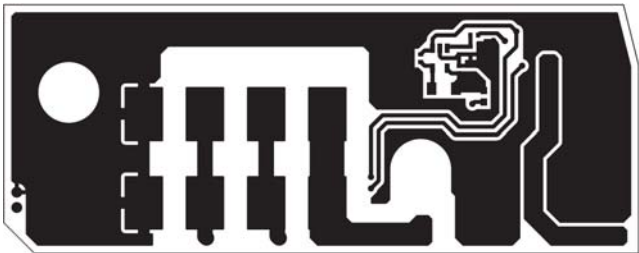


注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
Add.C4 value Add.second source		小野圭	2023.3.8	CHARGER PCB FOR MODEL BC-6000
改版回数 REV.	総頁数 PAGES			
1	1			
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小野圭	2014.12.16	E 3 - 6 9 9 1 - 5 2 5 5 - 8 0 - 0 1 A
RIKEN KEIKI		理研計器株式会社		機密情報 / CONFIDENTIAL

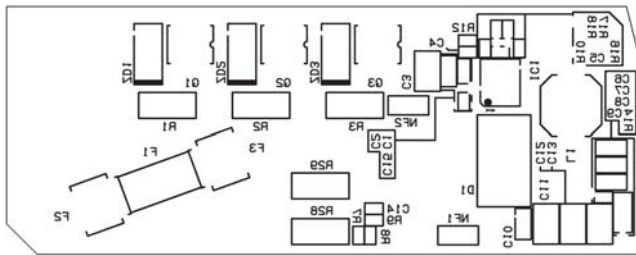




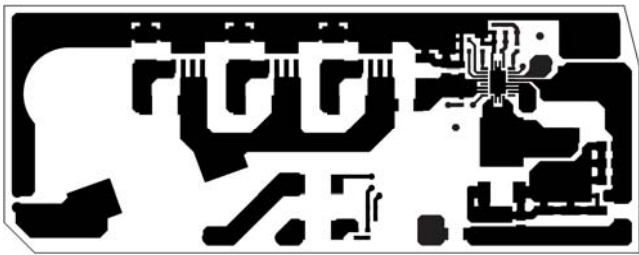
SILK PRINT FOR SOLDERING SIDE



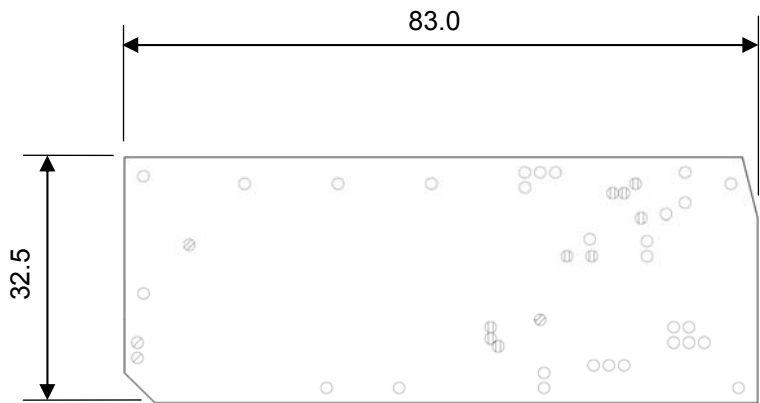
SOLDERING SIDE



SILK PRINT FOR PARTS SIDE



PARTS SIDE



All drawings are view of soldering side

SCALE 1:1

VIA HOLES

MARK	DIAGRAM	HOLE
⊙	Φ0.4	TH
○	Φ0.7	TH
⊗	Φ0.8	TH
⊘	Φ5.6	NTH

SPECIFICATION FOR PCB

- PCB No. :RKP-92027P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 2
- Thickness copper film : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.3mm
- CTI : 175 above

PARTS LIST

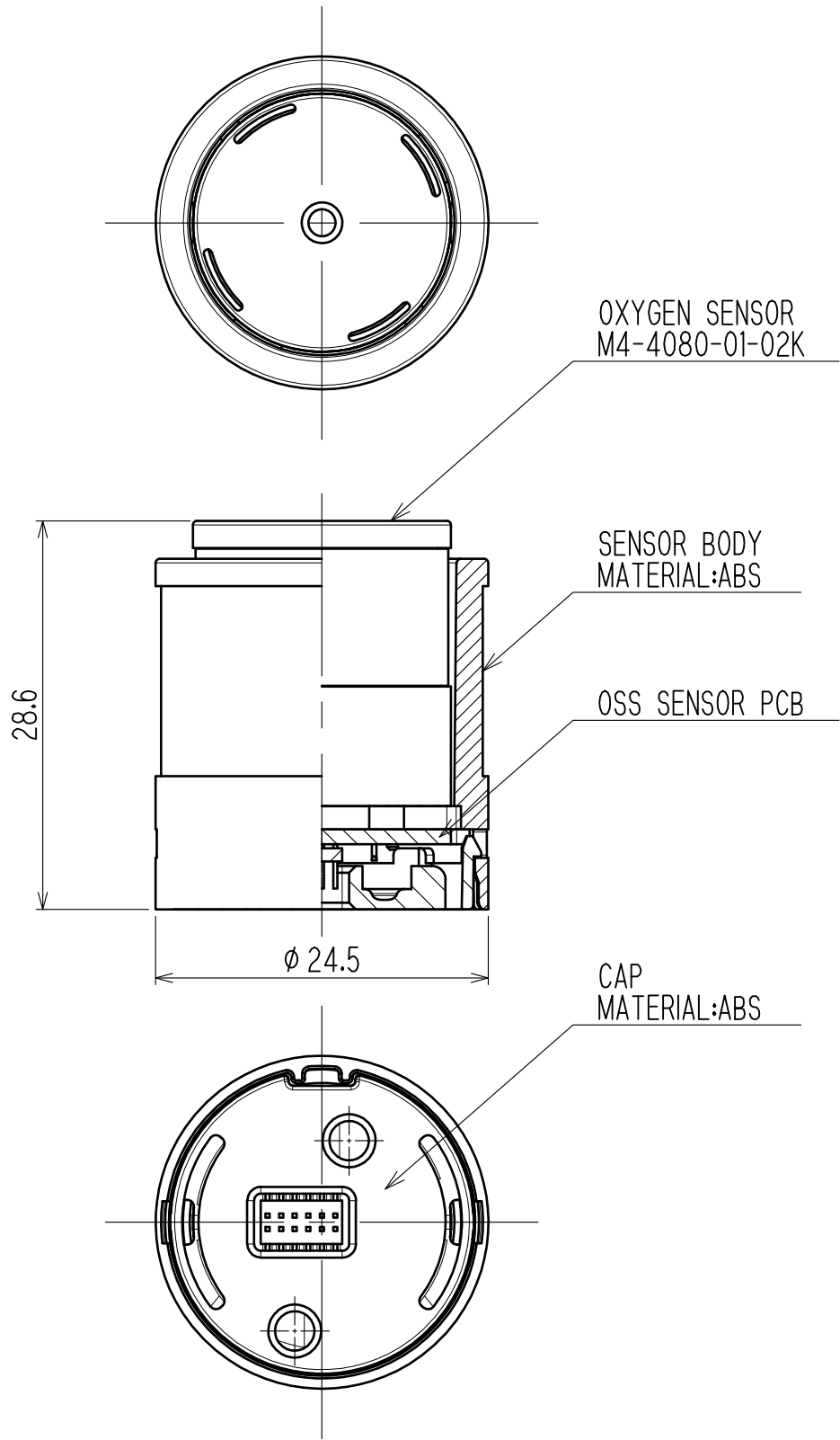
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Battery charger)	BQ24105RHLR	
IC2	IC(Comparator)	TL331	
D1	Schottky barrier diode	MBRD1045	
F1	Fuse	021601.6P Littelfuse In=1.6A, Ibreak=1500A@250Vac	*
Q1,Q2,Q3	P-ch MOSFET	TPCA8507-H TOSHIBA Ron_max=37mΩ , Pd=30W	*
ZD1,ZD2,ZD3	1SMB5929B	1SMB5929B ON Semiconductor Vz= 14.25V -15.75V ,Pd=3W	*
R1,R2,R3	Chip fixed resistor	RK73HW2H_1200F KOA 120Ω /1% ,0.75W	*
R7,R8,R9,R10,R12, R16,R17,R18,R30, R31,R33	Chip fixed resistor or Chip jumper	100Ω - 4.7MΩ /1% , 0.063W (1005) or 50mΩ max ,1A	m
R14	Chip fixed resistor	0.068Ω - 0.2Ω /1% , 0.25W (3216)	
R15	Chip fixed resistor or Chip jumper	100Ω - 1MΩ /1% , 0.1W (1608) or 50mΩ max ,1A	m
R28,R29	Chip fixed resistor	RK73HW2H_7500F KOA 750Ω /1% ,0.75W	*
R32,	Chip fixed resistor or Chip jumper	100Ω - 1MΩ /1% , 0.125W (3216) or 50mΩ max ,1A	m
C1,	Chip multilayer capacitor	1uF / 10%,25V	m
C3,	Chip multilayer capacitor	22uF / 10% 25V	m
C11,C12,C13	Chip multilayer capacitor	47uF / 10%,16V	m
C5,C9, C14,C15, C16,C17	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C2,C6,C7,C8,C10	Chip multilayer capacitor	10uF / 10%, 16V	m
C4,	Chip multilayer capacitor	0.22uF / 10%, 10V	m
L1	Inductor	10uH / 20%	
NF1,NF2	Chip ferrite beads	BLM31PG391	m


* marked parts are for safety

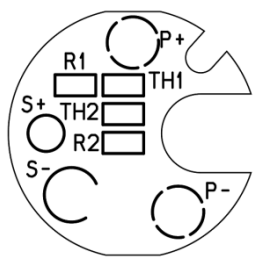
m marked parts are mounted or not

注 記 NOTES		改版担当者 REV. BY		改版日 REVISION DATE	改版者 REVISION BY
C4,C14		小野圭		2015.6.12	小野圭
改版回数 REV.	2	総頁数 PAGES	1		
承認 APPROVED	石橋勝	検討 CHECKED	北村正英	製図 DRAWN	小野圭
		作成日 DATE		2014.12.15	図番 DWG. NO.
				E 3 - 6 9 9 1 - 5 4 4 5 - 6 0 - 0 1 A	

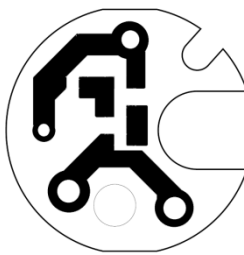
寸 法	18 未 満		18以上50未満		50以上120未満		120以上260未満		260以上500未満		500以上1000未満		1000以上						
許容差	精 0.1	中 0.2	粗 0.4	0.15	0.3	0.6	0.2	0.4	0.8	1.2	0.4	0.8	1.6	0.5	1.0	2.0	0.7	1.2	2.5



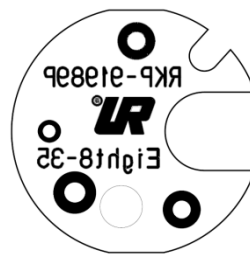
表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	 年 月 日 訂正者 DNV Nemko Presafe AS Org. no: 997 067 401 mva	
材 質 MAT.					名 称 NAME SMART SENSOR Type-OSS	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
青良治	武井康典	武田直樹	2015. 2. 24	M4-4080-01-01K		
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL		



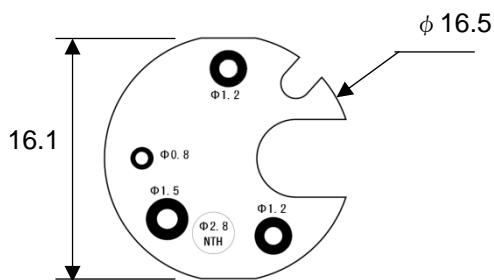
SILK PRINT FOR PARTS SIDE



PARTS SIDE



SOLDERING SIDE



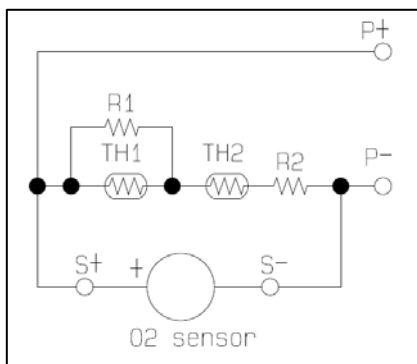
THROUGH HOLE DATA

SPECIFICATION FOR PCB

- PCB No. : RKP-91989P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 2
- Thickness copper film : 35um
- Minimum conductor width : 0.5mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



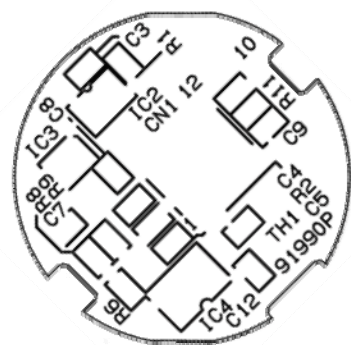
SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
O2 SENSOR	OXYGEN SENSOR	Refer to M4-4080-01-01K	
R1,2	Chip fixed resistor or Chip jumper	10 ohm – 1M ohm / 1%, 0.1W or 50m ohm max,1A (1608)	m
TH1,2	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1608)	m

m marked parts are mounted or not

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名称 NAME  DNV Nemko Presafe AS Org. no: 997 067 401 mva OSS SENSOR PCB
改版回数 REV.	0			
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED	検 討 CHECKED			
石橋勝	北村正英	小野圭	2015.2.24	E 4 - 6 9 9 1 - 5 4 5 7 - 0 0 - 0 1 K



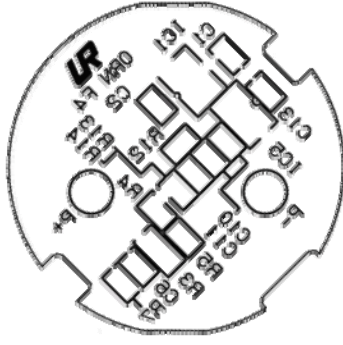
SILK PRINT FOR PARTS SIDE



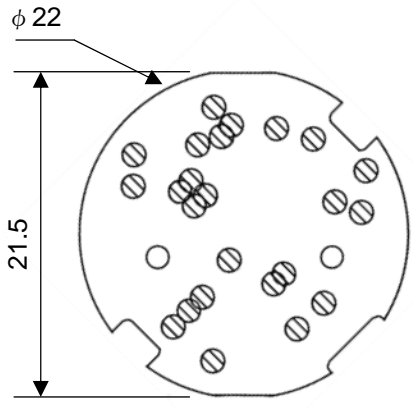
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

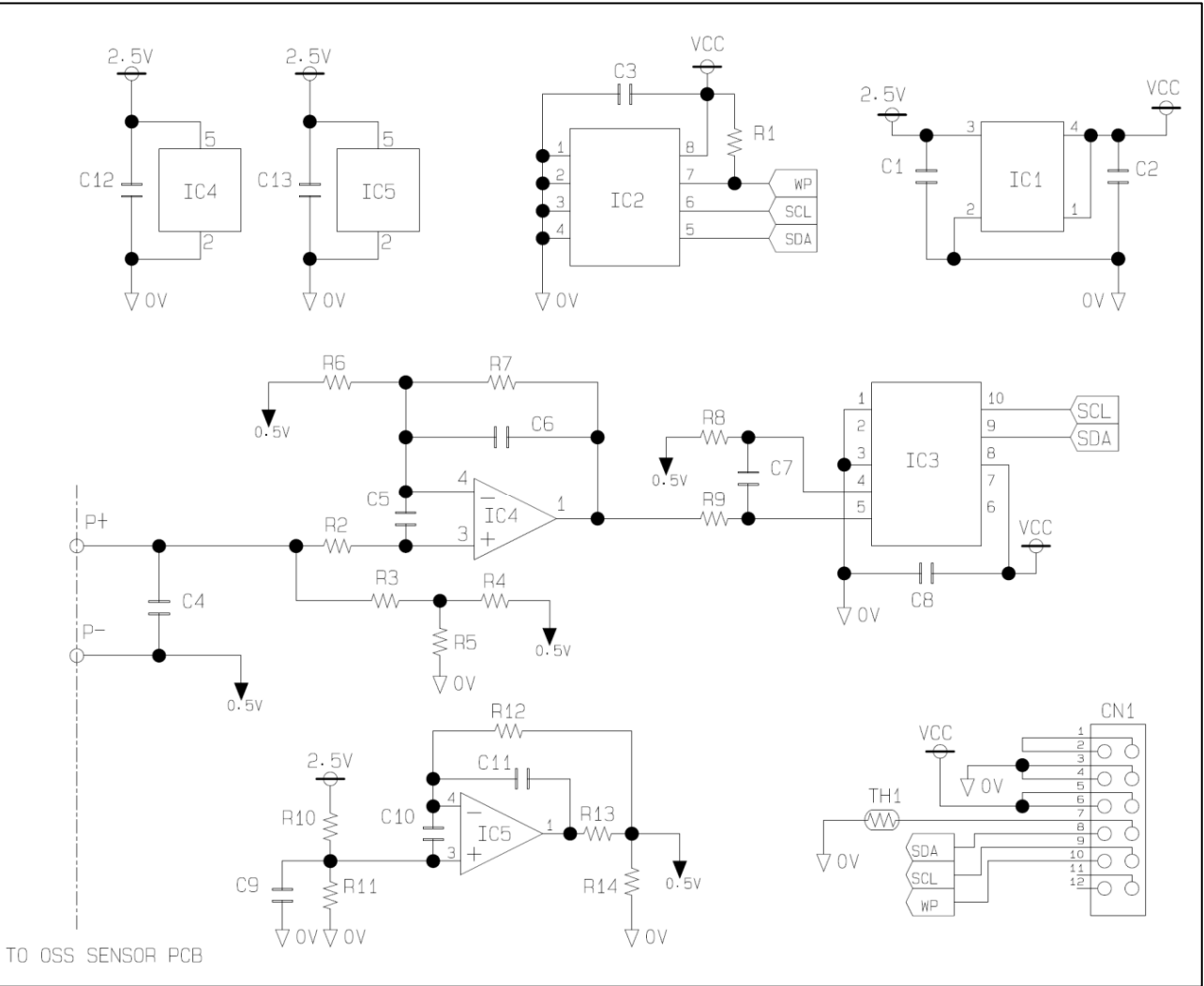
MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 1.0	TH

SPECIFICATION FOR PCB

- PCB No. : RKP-91990P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.3mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	S-1313D25-N4T1	m
IC2	IC (EEPROM)	S-24C16CI-I8T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
IC4	IC(OPAMP)	OPA333AIDBV	m
IC5	IC(OPAMP)	AD8500AKS	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-14	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max,1A (1005)	m
C1,2,3,8,12,13,	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C4	Chip multilayer capacitor	0.01uF / 10%, 25V	m
C5,7,10	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C6,11	Chip multilayer capacitor	1uF / 10%, 10V	m
C9	Chip multilayer capacitor	100pF-6800pF / 10%, 50V	m

m marked parts are mounted or not

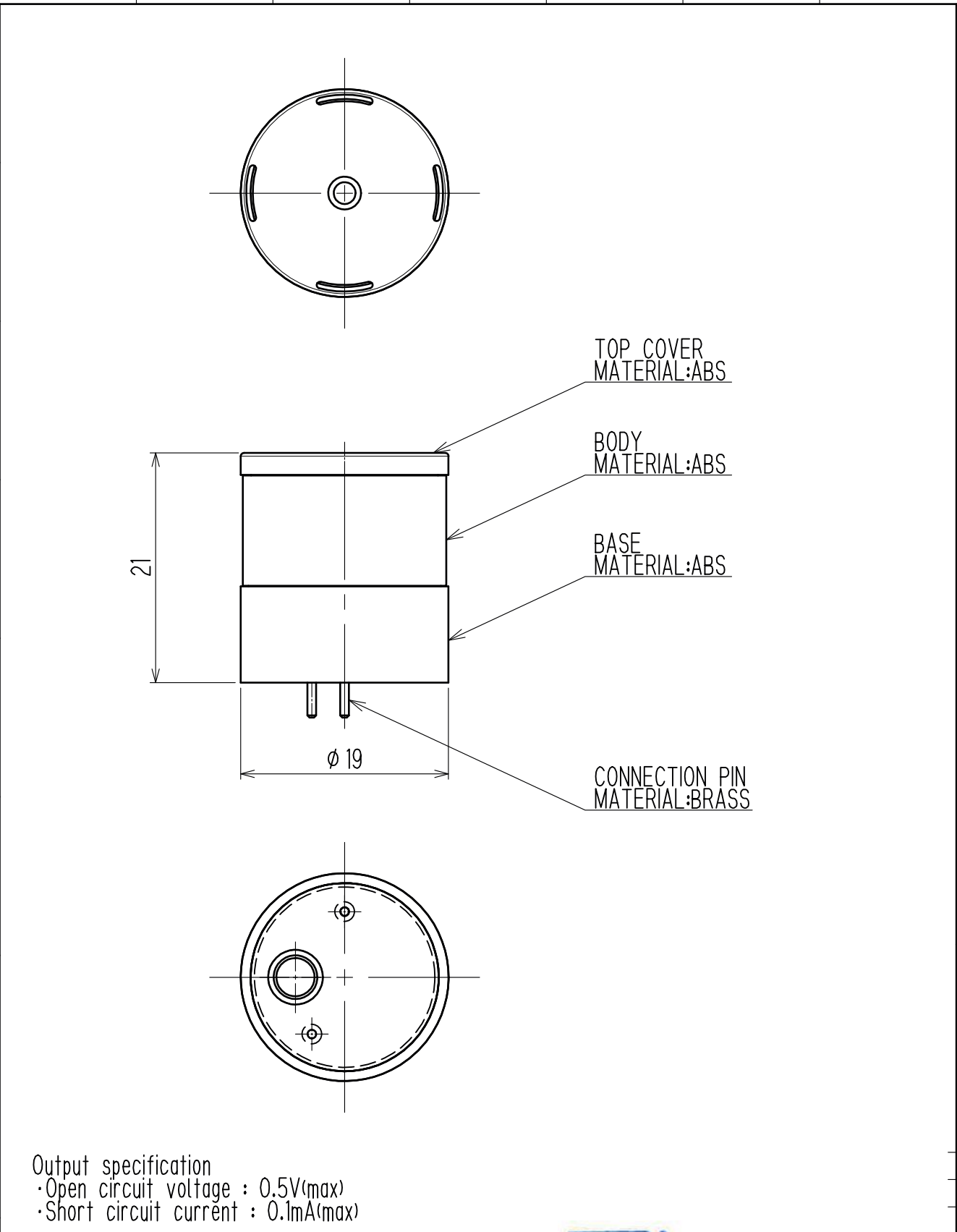
注 記 NOTES		改版担当者 REV. BY		改版日 REVISED DATE		改版理由 REVISED REASON	
改版回数 REV.	0	総頁数 PAGES	1				
承認 APPROVED	石橋勝	検討 CHECKED	北村正英	製図 DRAWN	小野圭	作成日 DATE	2015.2.24
						図番 DWG. NO.	E 3 - 6 9 9 1 - 5 4 5 8 - 7 0 - 0 1 K

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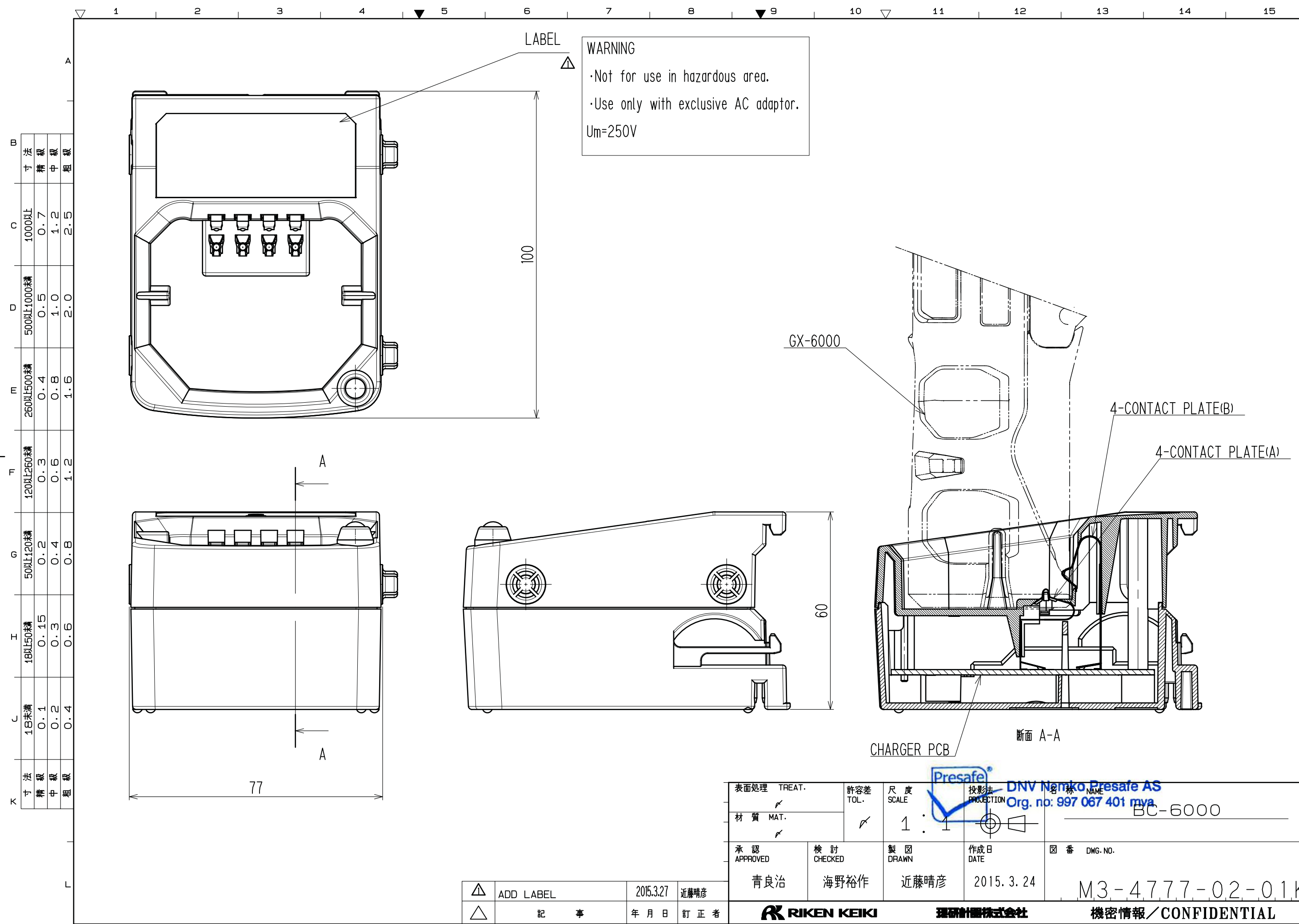
機密情報 / CONFIDENTIAL

寸法	精度	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
許容差	精度	0.1	中級 0.2 高級 0.4	0.2 0.4 0.6	0.3 0.6 1.2	0.4 0.8 1.6	0.5 1.0 2.0	0.7 1.2 2.5



Output specification
 ・Open circuit voltage : 0.5V(max)
 ・Short circuit current : 0.1mA(max)

表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	<div> <div> <div>△</div> <div>Presafe</div> </div> <div> <div>事</div> <div>年 月 日</div> <div>訂 正 者</div> </div> </div>	
材 質 MAT.					<div> <div>名称 NAME</div> <div>Org. no: 997 067 401 mva</div> <div>OXYGEN SENSOR</div> </div>	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
青良治	武井康典	武田直樹	2015. 2. 24	M4-4080-01-02K		
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL		



WARNING

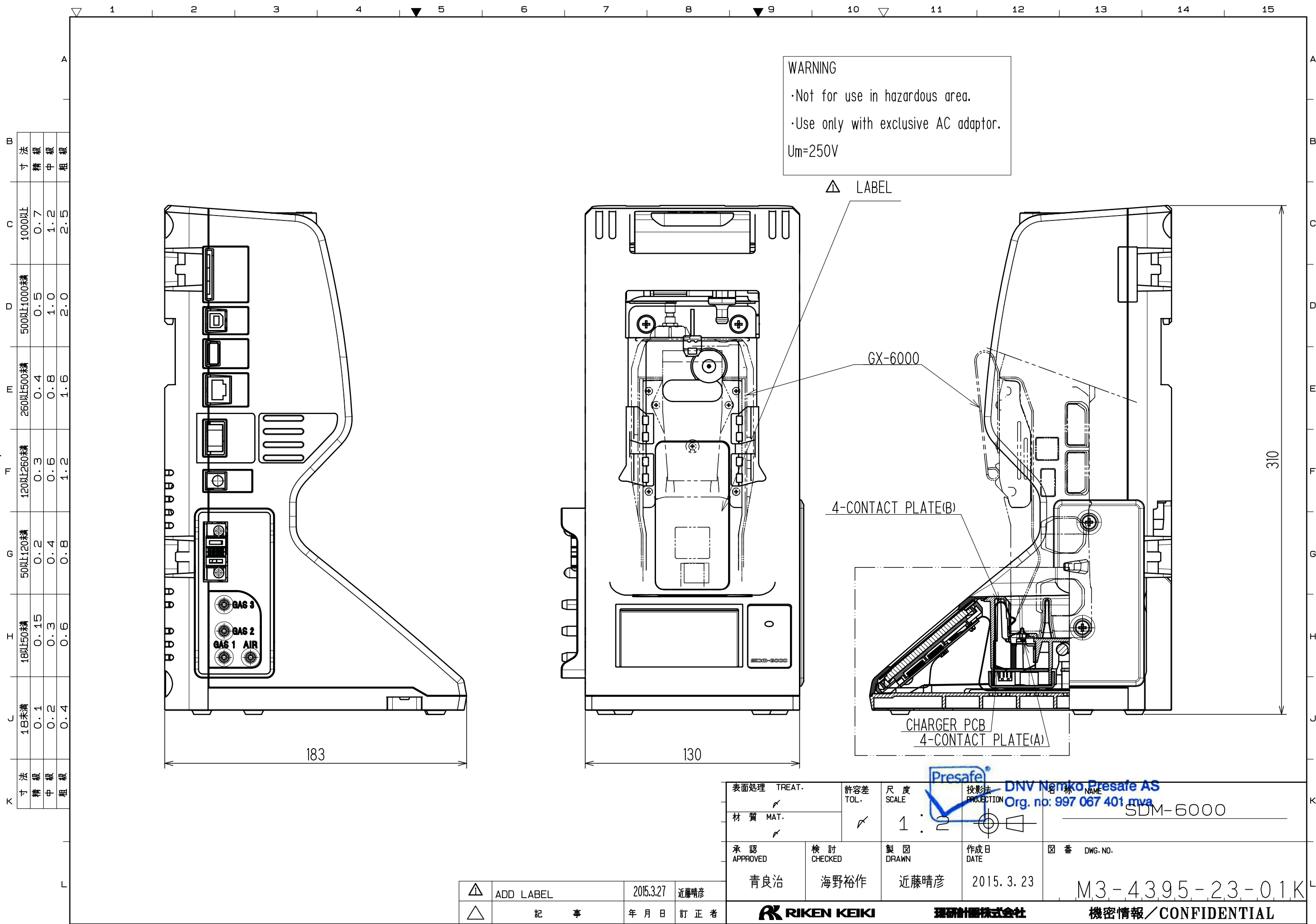
- ・Not for use in hazardous area.
- ・Use only with exclusive AC adaptor.

Um=250V

寸法	精度	中級	粗級
1000以上	0.7	1.2	2.5
500以上1000未満	0.5	1.0	2.0
260以上500未満	0.4	0.8	1.6
120以上260未満	0.3	0.6	1.2
50以上120未満	0.2	0.4	0.8
18以上50未満	0.15	0.3	0.6
18未満	0.1	0.2	0.4
寸法	精度	中級	粗級

△	ADD LABEL	2015.3.27	近藤晴彦
△	記 事	年 月 日	訂 正 者

表面处理 TREAT.	許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名称 NAME
材 質 MAT.		1 : 1		BC-6000
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
青良治	海野裕作	近藤晴彦	2015. 3. 24	M3-4777-02-01K
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL				



寸法				公差			
精級	中級	粗級	1000以上	500以上1000未満	260以上500未満	120以上260未満	50以上120未満
0.7	1.2	2.5	0.5	1.0	1.6	1.2	0.8
0.4	0.8	1.6	0.3	0.6	1.2	0.8	0.4
0.15	0.3	0.6	0.1	0.2	0.4	0.3	0.1
0.1	0.2	0.4	0.05	0.1	0.2	0.15	0.05

