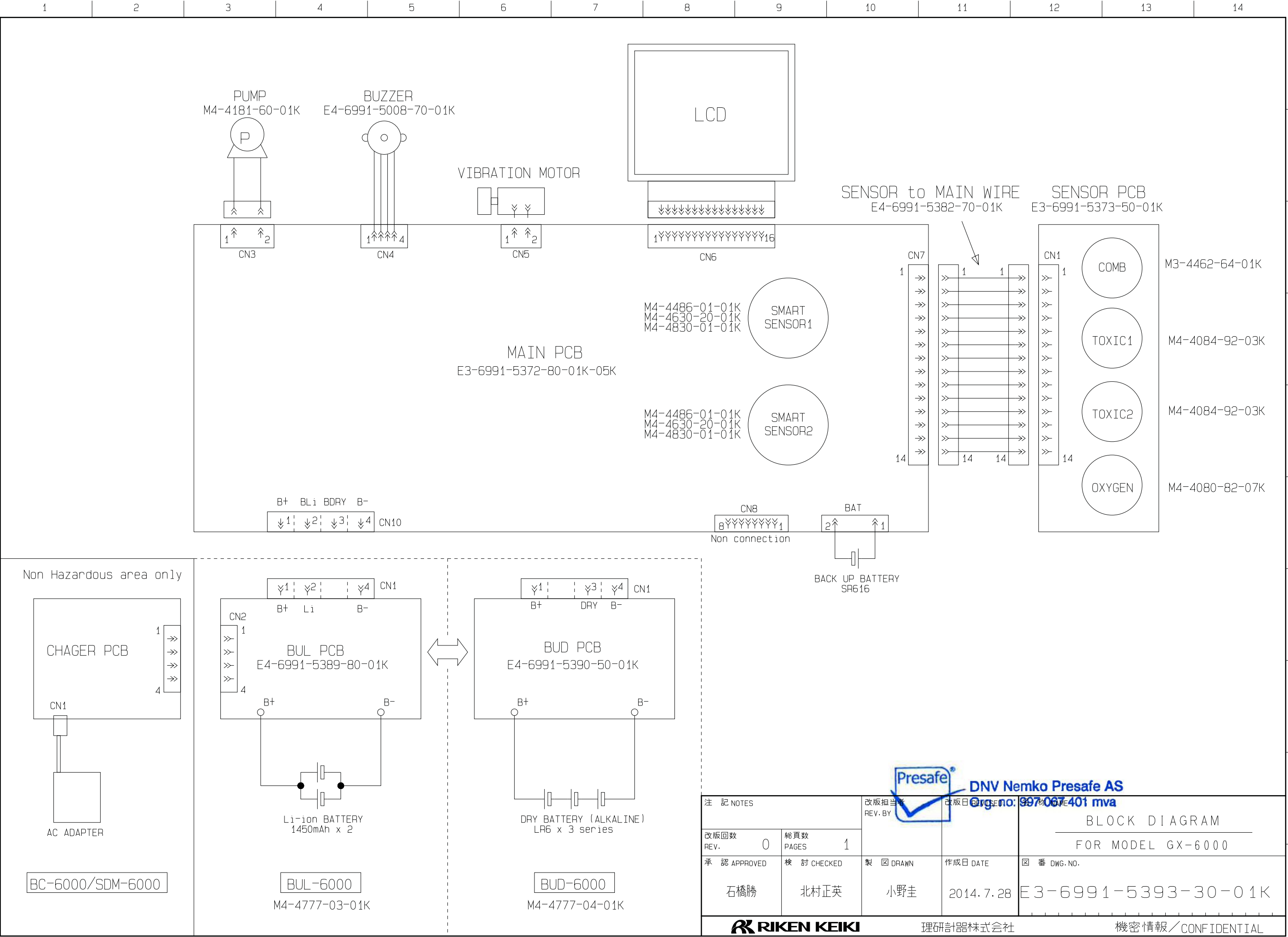


		DRAWING NAME	DRAWING No.	REV	DATE
	01	BLOCK DIAGRAM FOR MODEL GX-6000	E3-6991-5393-30-01K	0	2014.7.28
	02	DIAGRAM FOR I.S. KEEP FOR MODEL GX-6000	E3-6991-5361-10-01K	2	2014.12.16
	03	OUTER STRUCTURE GX-6000	M3-4777-01-01K	0	2014.7.18
	04	MAIN UNIT GX-6000	M2-4777-01-01K	1	2014.9.30
	05	SCHEMATIC MAIN 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

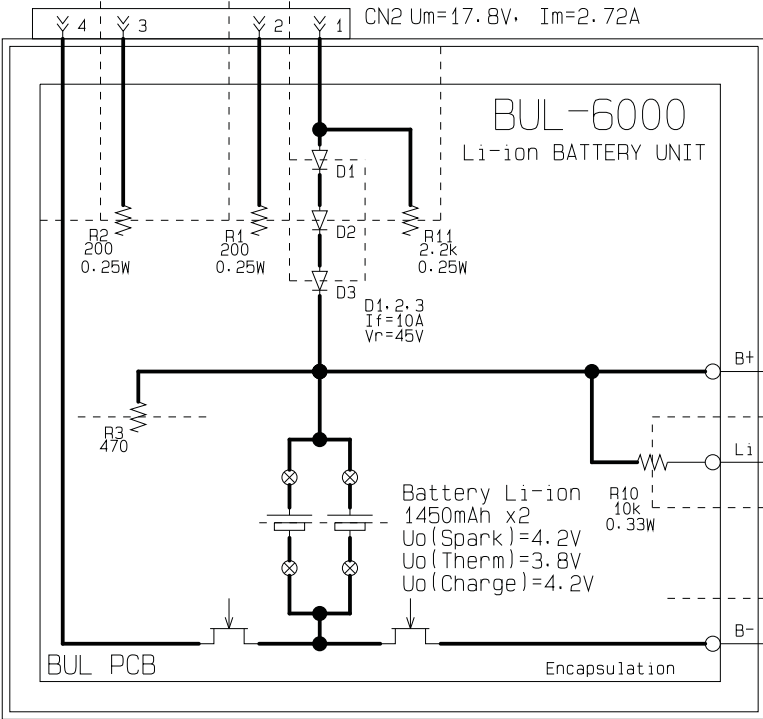
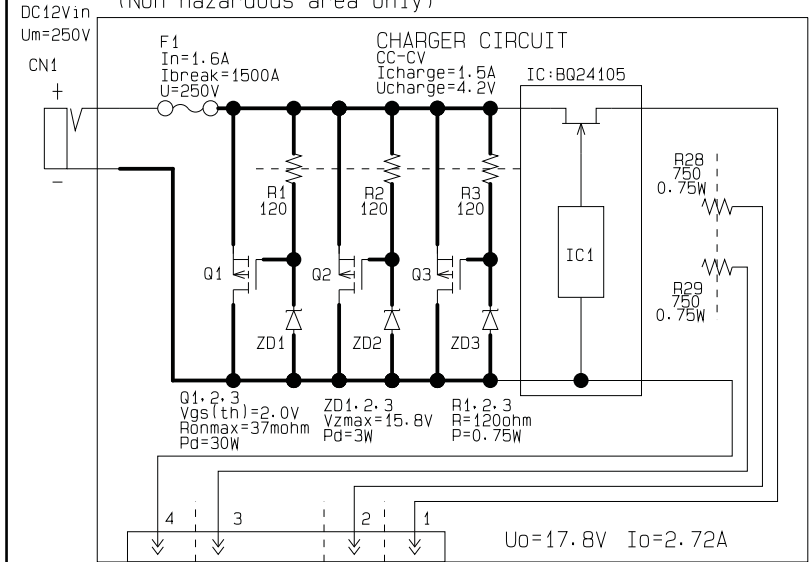
		DRAWING NAME	DRAWING No.	REV	DATE
	31	T- 3/4 BPA LAMP OL-8270BPA	E4-6991-5129-60-01K	0	2012.2.24
	32	SMART SENSOR Type-PIS	M4-4830-01-01K	1	2015.3.25
	33	PIS SENSOR PCB	E4-6991-5387-30-01K	2	2015.3.25
	34	PIS DIGITAL PCB	E3-6991-5388-10-01K	1	2015.3.25
	35	BUL-6000	M3-4777-03-01K	0	2014.7.28
	36	BUL PCB	E3-6991-5389-80-01K	1	2014.9.5
	37	BUD-6000	M3-4777-04-01K	1	2015.3.6
	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	2	2015.3.18
	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	0	2014.12.16
	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

注 記 NOTES		改版担当者 REV. BY		改版日 REVISED	改版場所 REVISED
No.29,45		小野圭		2015.6.12	
改版回数 REV.	3	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	2015.3.6	E 3 - 6 9 9 1 - 5 4 7 0 - 7 0 - 0 1 K	
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL					

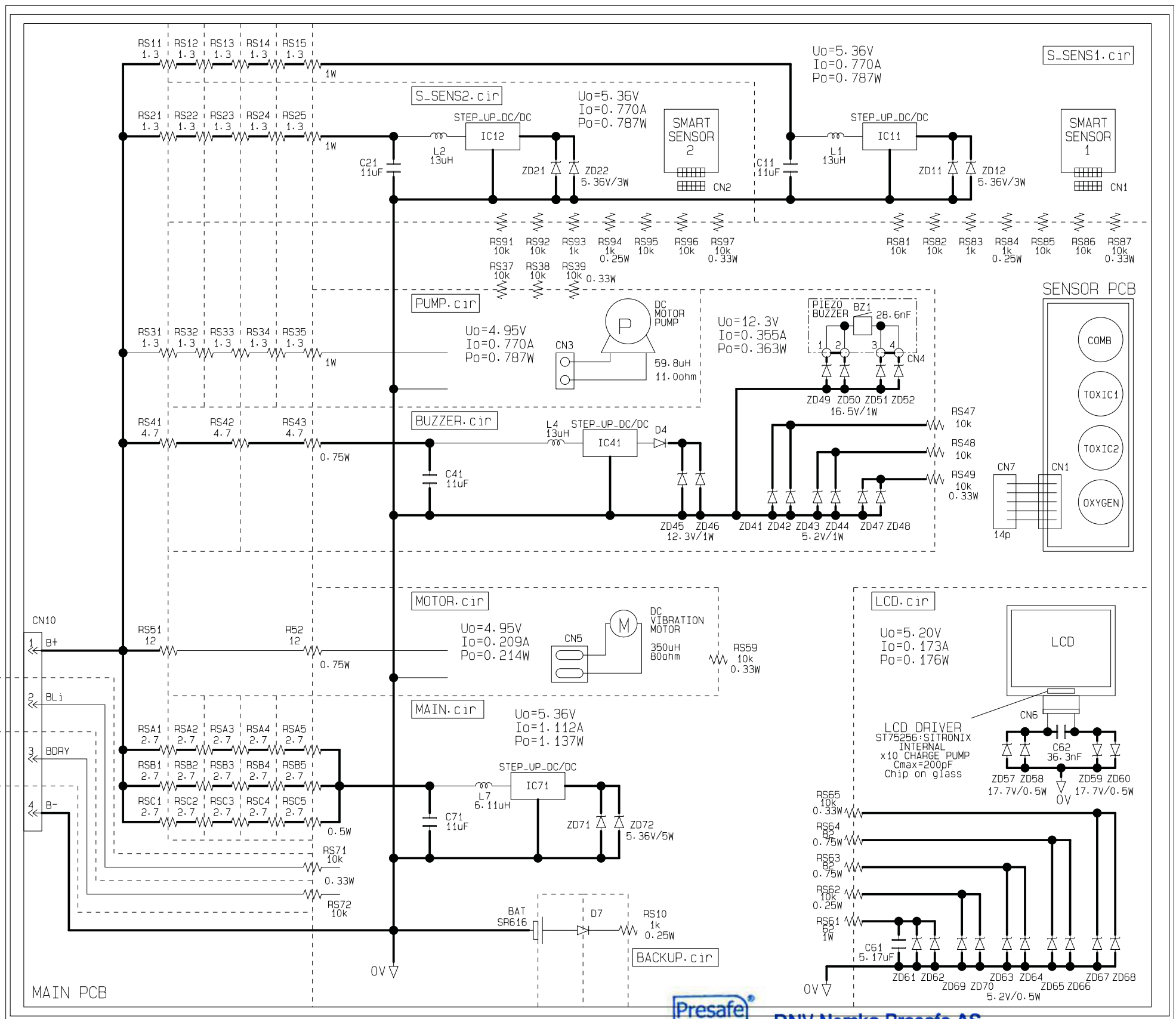
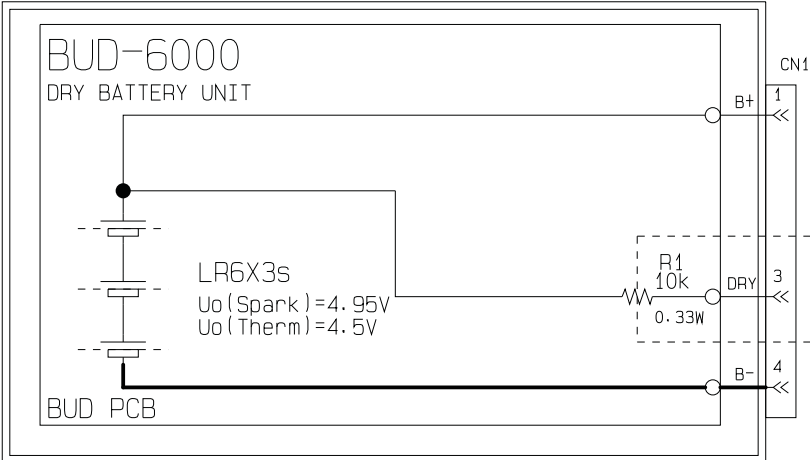




BATTERY CHARGER
BC-6000/SDM-6000
(Non hazardous area only)



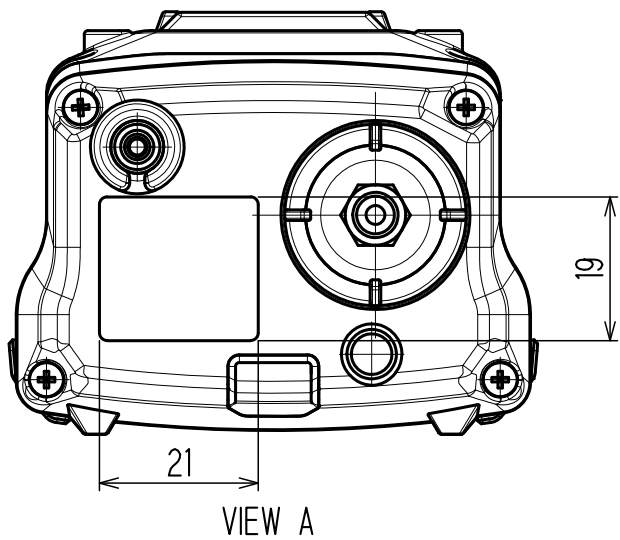
The battery unit
even the end user is
possible to replace.
(Non hazardous area only)



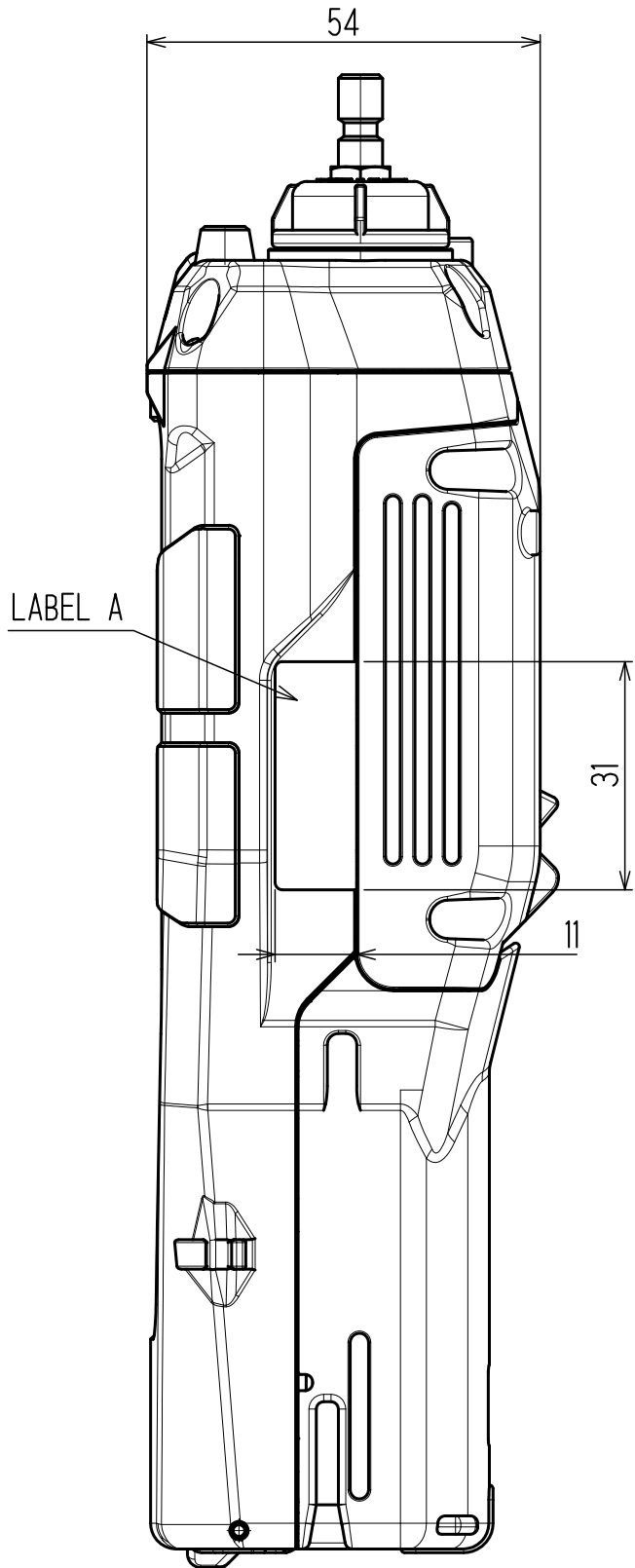
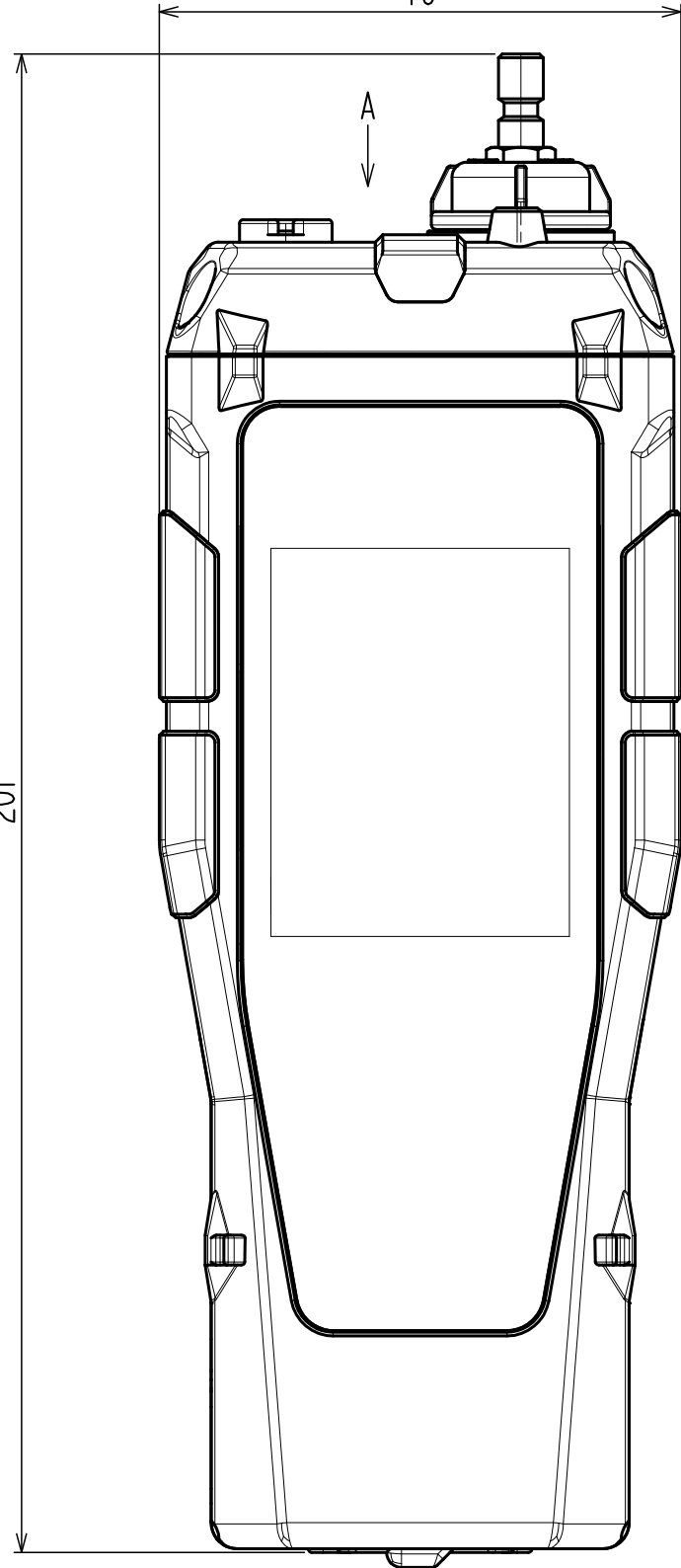
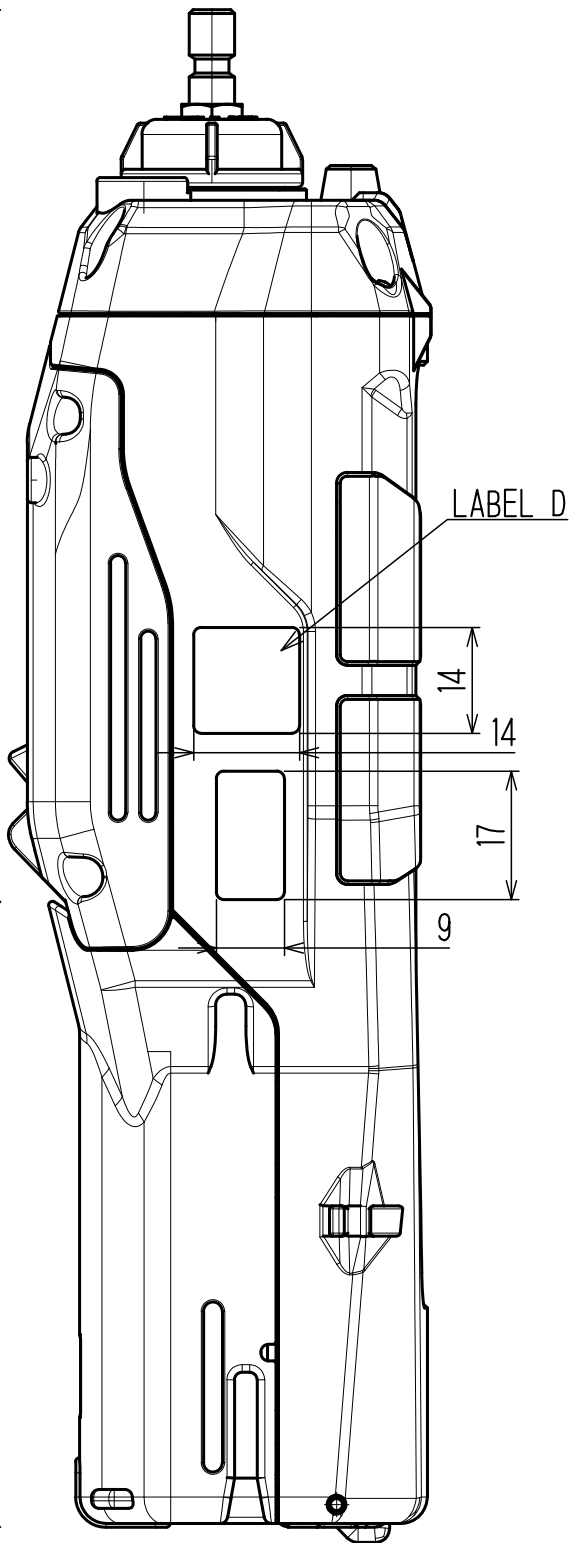
注 記 NOTES RS78→RS71, RS79→RS72		改版担当者 REV. BY	改版日 REV. DATE	図番 DWG. NO.
改版回数 REV.		総頁数 PAGES	小野圭 2014.12.16	DIAGRAM FOR I. S. KEEP FOR MODEL GX-6000
承認 APPROVED		検討 CHECKED	製図 DRAWN	作成日 DATE
石橋勝		北村正英	小野圭	2014.6.23
E3-6991-5361-10-01K				

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

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



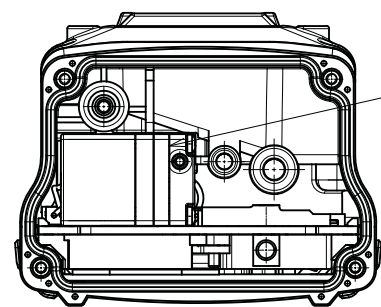
BATTERY UNIT
BUL-8000
M3-4777-03-01K
OR
BUD-8000
M3-4777-04-01K



PROTECTION GRADE:MORE THAN IP 20

表面处理 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	M3-4777-01-01K
△ 記 事		年 月 日 訂 正 者		機密情報 / CONFIDENTIAL

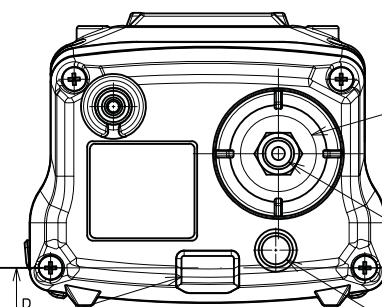
1 2 3 4 5 6 7 8 9 10 11



PUMP
M4-4181-61-01K

FIGURE WITHOUT TOP COVER

ALARM LAMP
MATERIAL:PC
SURFACE AREA:120mm²

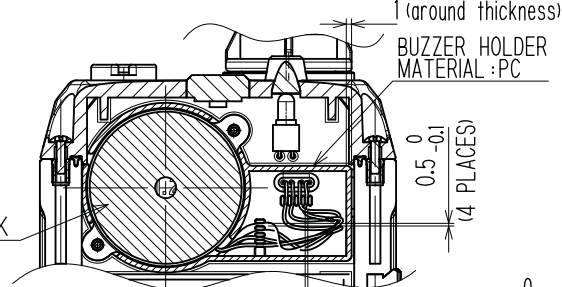


FILTER CASE
MATERIAL:PC
SURFACE AREA:397mm²

NIPPLE
MATERIAL:STAINLESS STEEL

ALARM LAMP
MATERIAL:PC
SURFACE AREA:60cm²

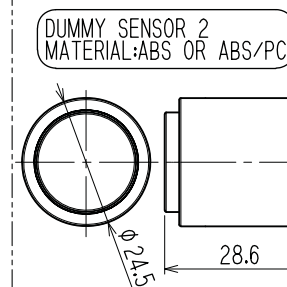
BUZZER
E4-6991-5008-70-01K



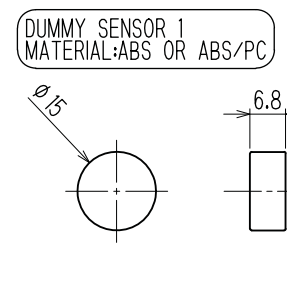
B-B SECTION

CABLE CLAMPING FOR BUZZER

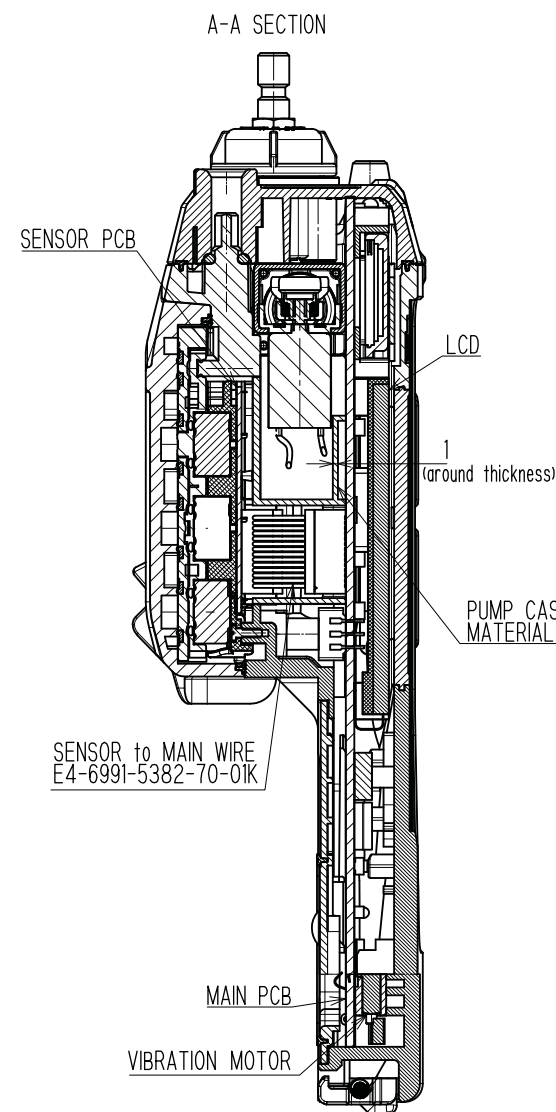
SENSOR COVER
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP



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)

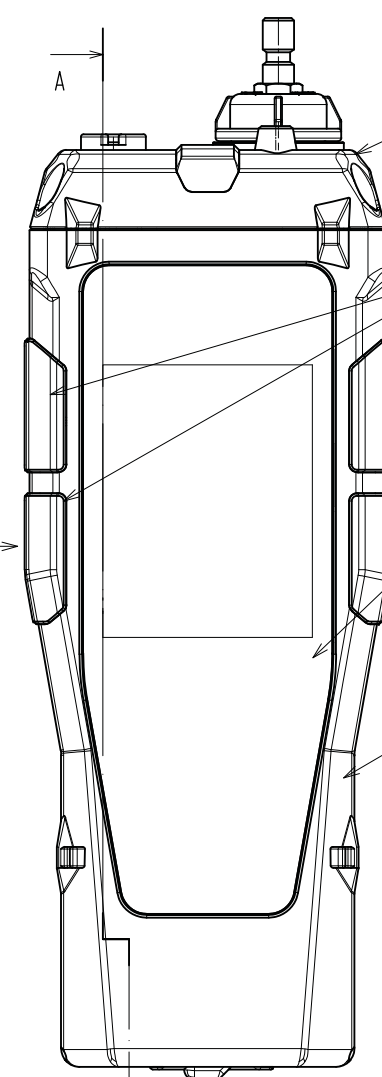
PUMP CASE
MATERIAL:PC

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

MAIN PCB

VIBRATION MOTOR

VIEW C



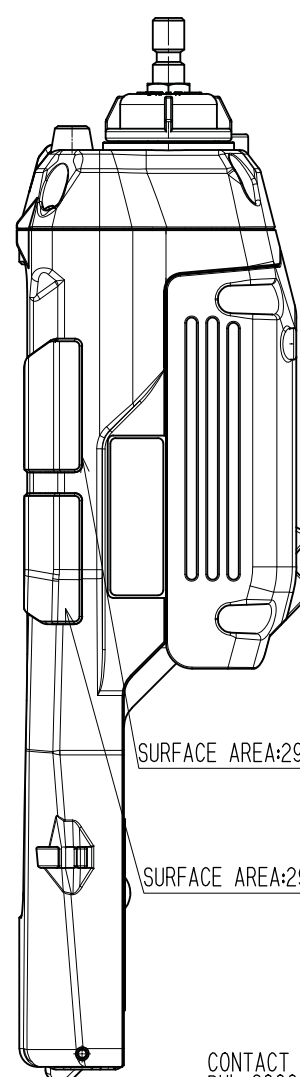
TOP COVER
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP

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

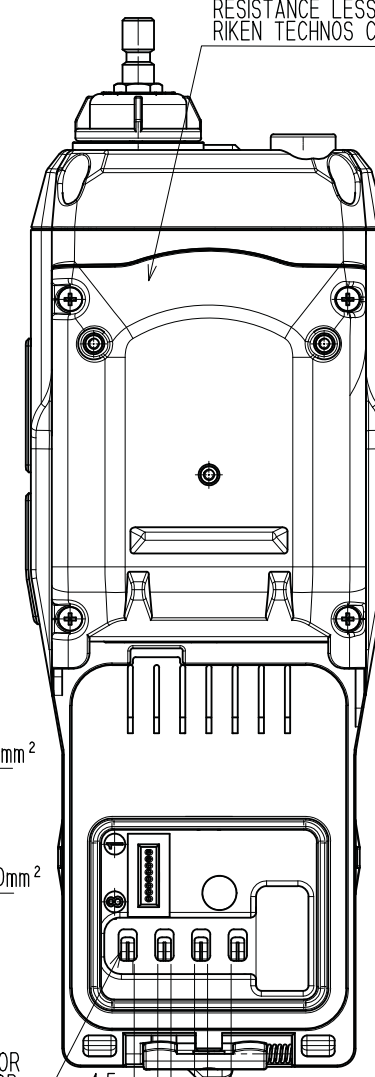
HOUSING
ABS/PC ESC9448N(BLACK)
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP



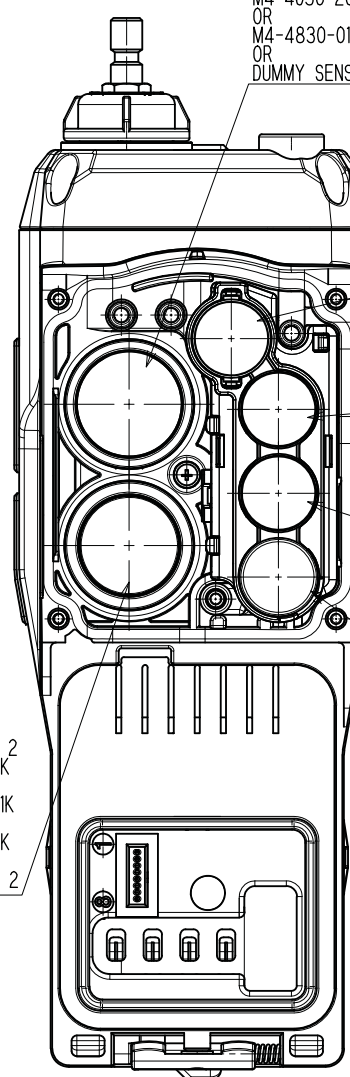
SURFACE AREA:290mm²

SURFACE AREA:290mm²

CONTACT FOR
BUL-6000 OR
BUD-6000



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

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

FIGURE WITHOUT SENSOR COVER,SENSOR PACKING



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

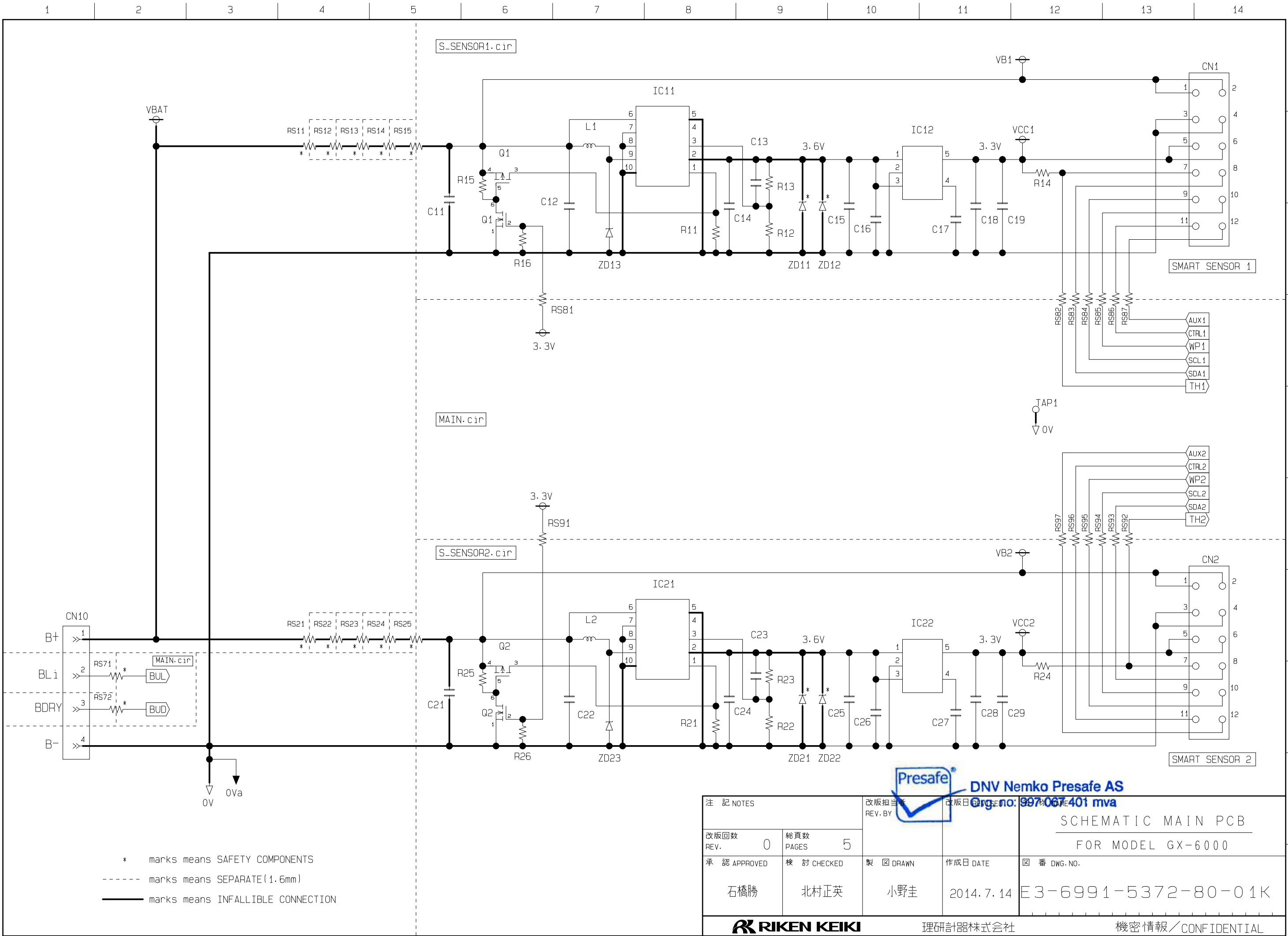
表面处理 TREAT.	許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME
材質 MAT.		1:1		MAIN UNIT GX-6000
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.
青良治	近藤晴彦	海野裕作	2014.7.22	M2-4777-01-01K

RIKEN KEIKI

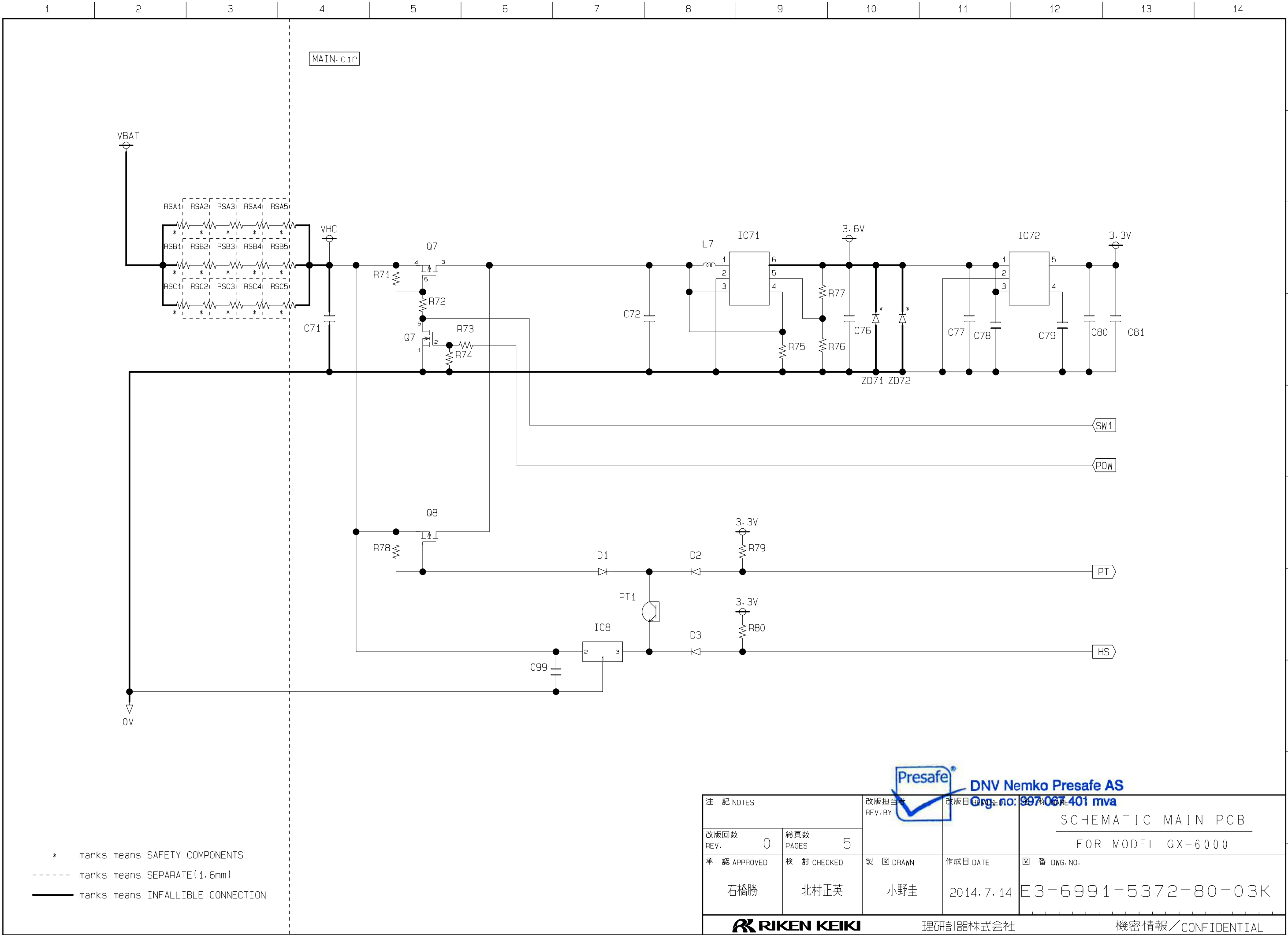
理研計測株式会社

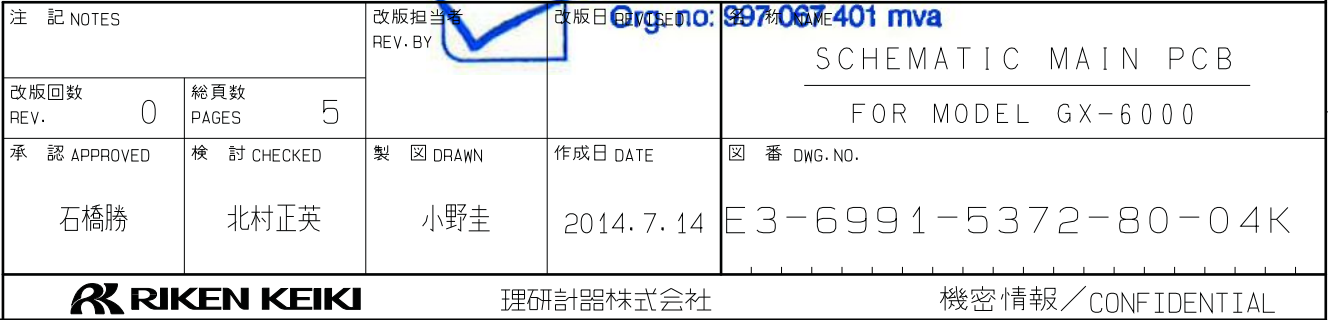
機密情報/CONFIDENTIAL

ADD PANEL SHEET C5	2014.9.30	海野裕作
記事	年月日	訂正者











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

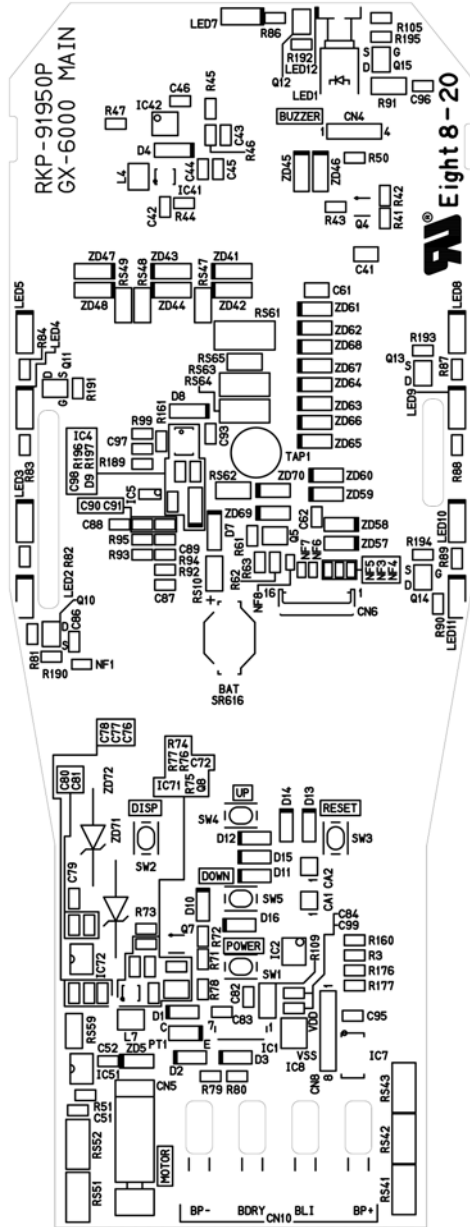
Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
D1-3,10-16	Schottky barrier diode	RB160VA-40	m
D7	Schottky barrier diode	MMSD301, ON Semiconductor Vr = 30 V, If = 0.2 A	*
D4,8,9	Schottky barrier diode	MMSD301	m
ZD5	Zener diode	TFZ 5.1B	m
ZD61-70	Zener diode	TFZ 5.1B , ROHM Vz = 4.94 - 5.20V , 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 <div style="text-align: right;">  DNV Nemko Presafe AS Org. no: 997 067 401 mva </div>		
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. <div style="text-align: right;">  DNV Nemko Presafe AS Org. no. 997 067 401 inva </div>		
REV.	1	NAME	PARTS LIST OF MAIN PCB
DATE	2014.11.5	DWG.No.	PLT-6991-5372-80 (3/4)
RIKEN KEIKI CO., LTD.			

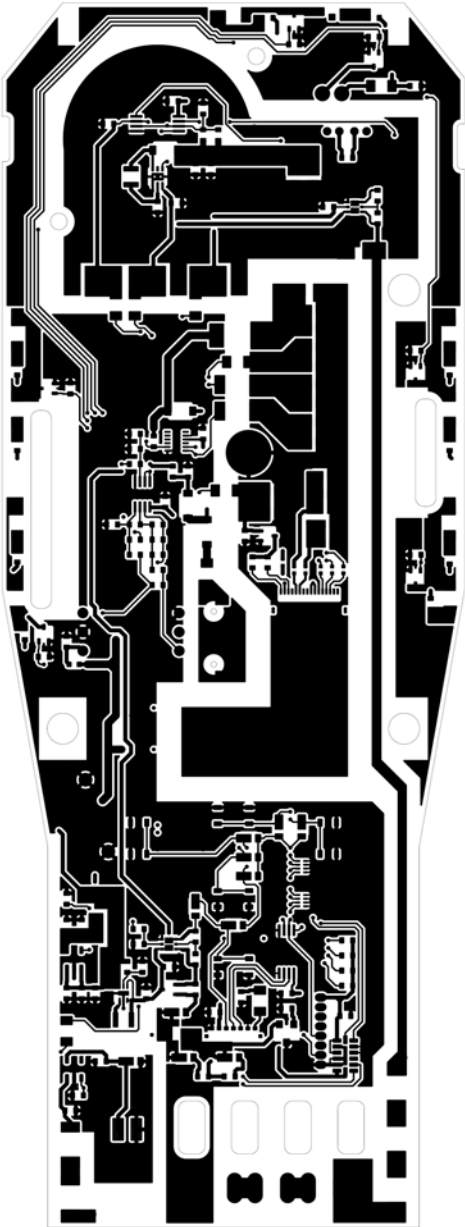
Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
L1,2,4	Chip multilayer inductor	10uH / 30% (2520)	m
L7	Chip multilayer inductor	4.7uH / 30% (2520)	m
PT1	Photo transistor	PS1192HB	m
PS1	Pressure sensor	P-2000-101G	m
X1	Crystal	DSX321, 14.7456MHz	m
NF1,2	Noise filter	BLM18AG151	m
NF3-8	Noise 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.			



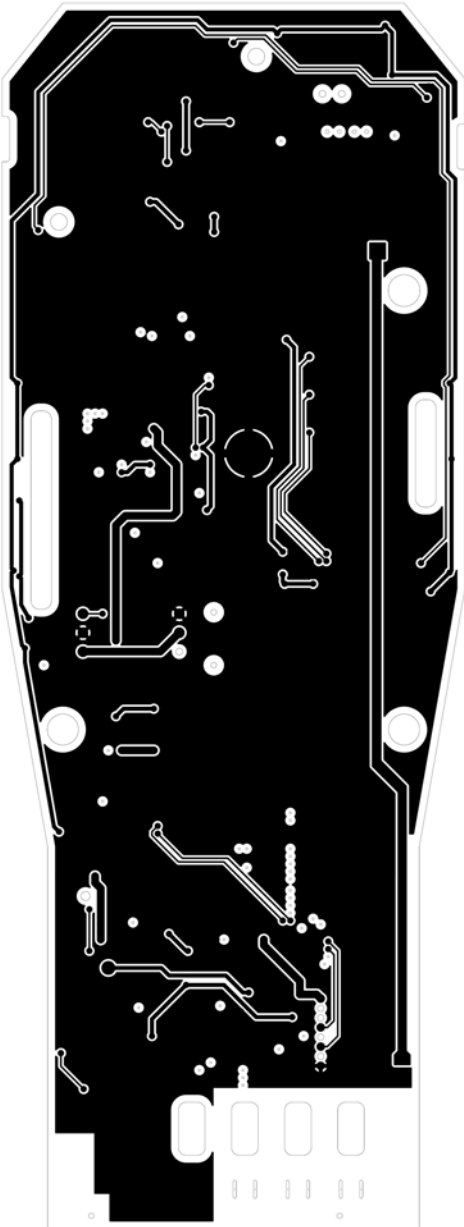
DNV Nemko Presafe AS
Org. no: 997 067 401 mva



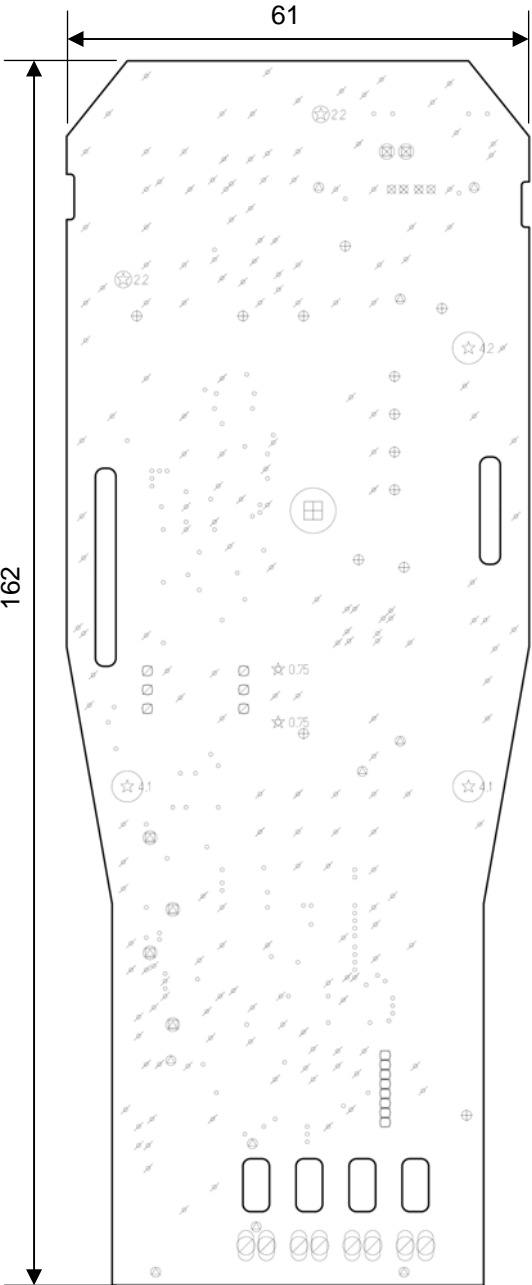
SILK PRINT FOR PARTS SIDE



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

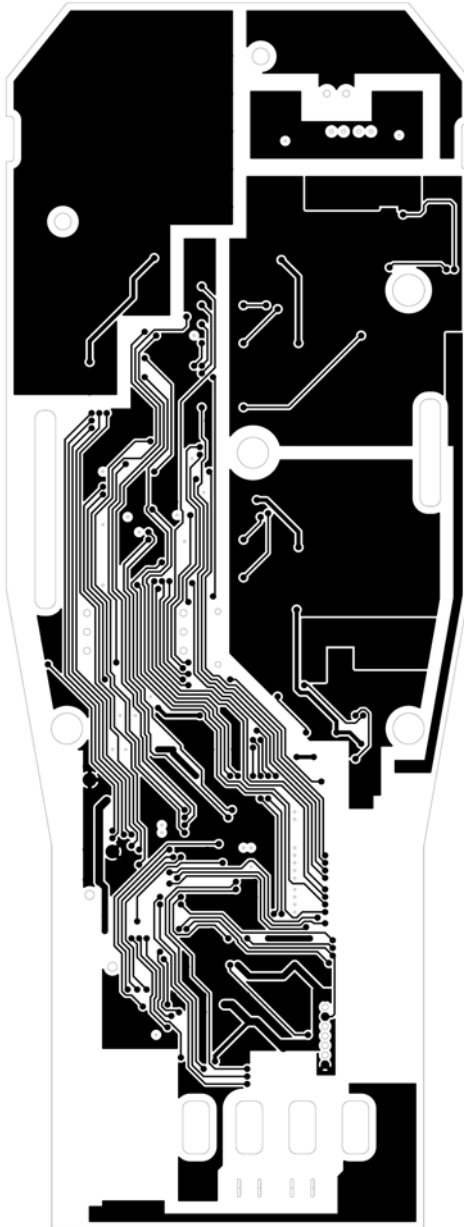
MARK	DIAGRAM	HOLE
○	φ 0.3	1-4VIA
／	φ 0.3	1-2VIA
×	φ 0.5	1-4VIA
△	φ 0.7	1-4VIA
+	φ 0.7	1-2VIA
□	φ 0.85	1-4VIA
▣	φ 0.9	1-4VIA
▤	φ 0.9	1-4VIA
▥	φ 1.2	1-4VIA
▧	φ 4.1	1-4VIA
⊙	φ 0.4×2.4	1-4VIA
☆0.75	φ 0.75	NTH
☆2.2	φ 2.2	NTH
☆4.1	φ 4.1	NTH
☆4.2	φ 4.2	NTH

注 記 NOTES		改版担当者 REV. BY	改版日 REV. DATE	改版理由 REV. 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

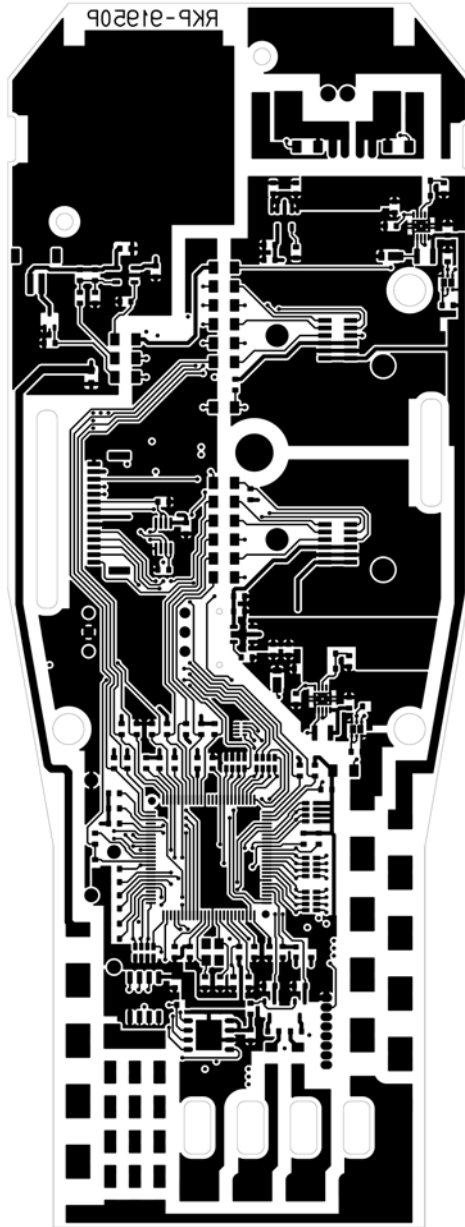
RIKEN KEIKI

理研計器株式会社

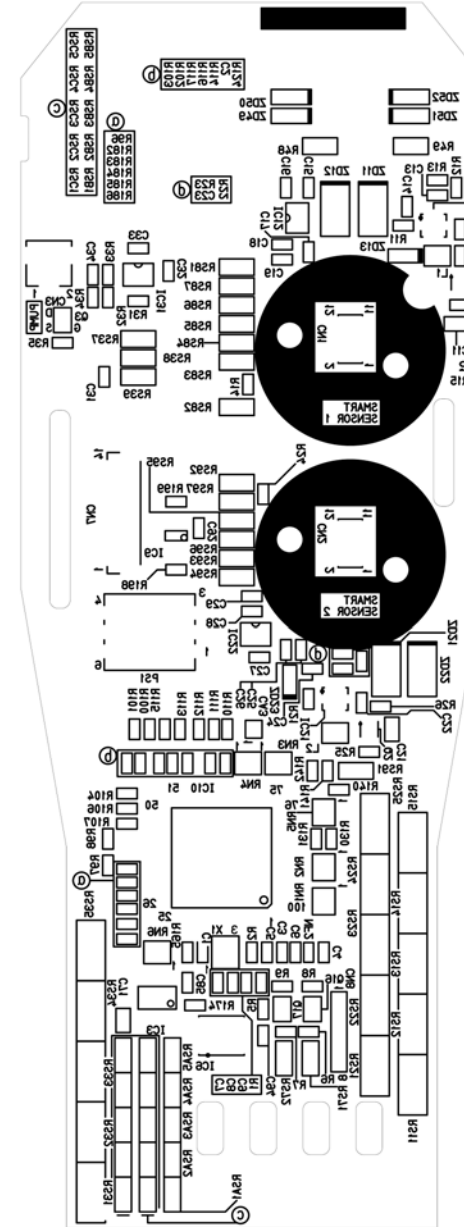
機密情報/CONFIDENTIAL



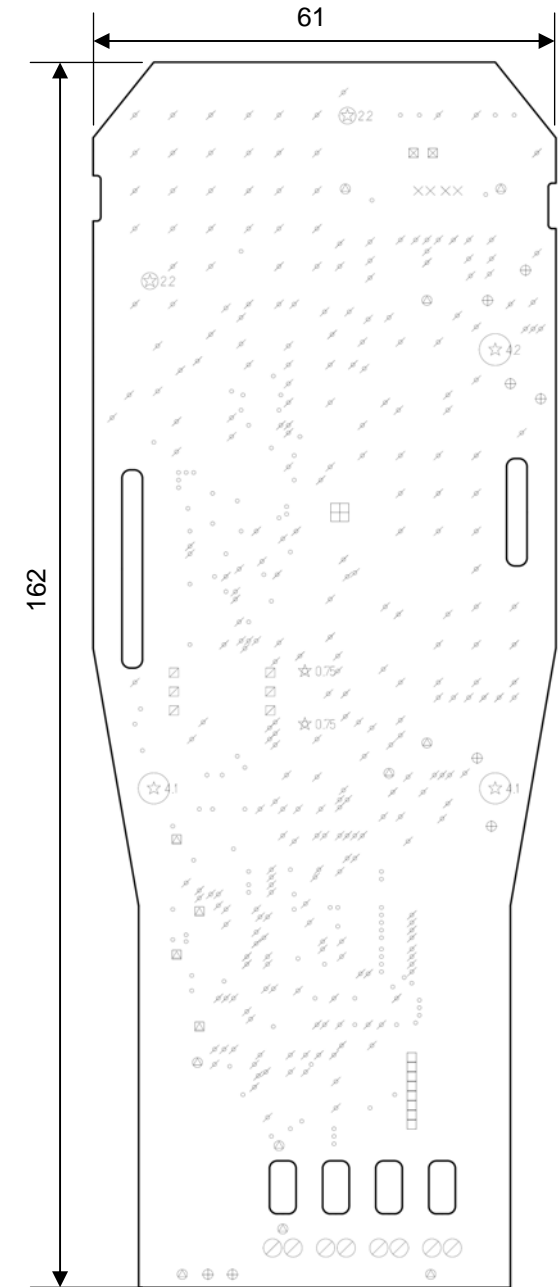
INNER LAYER(3 LAYER)



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				

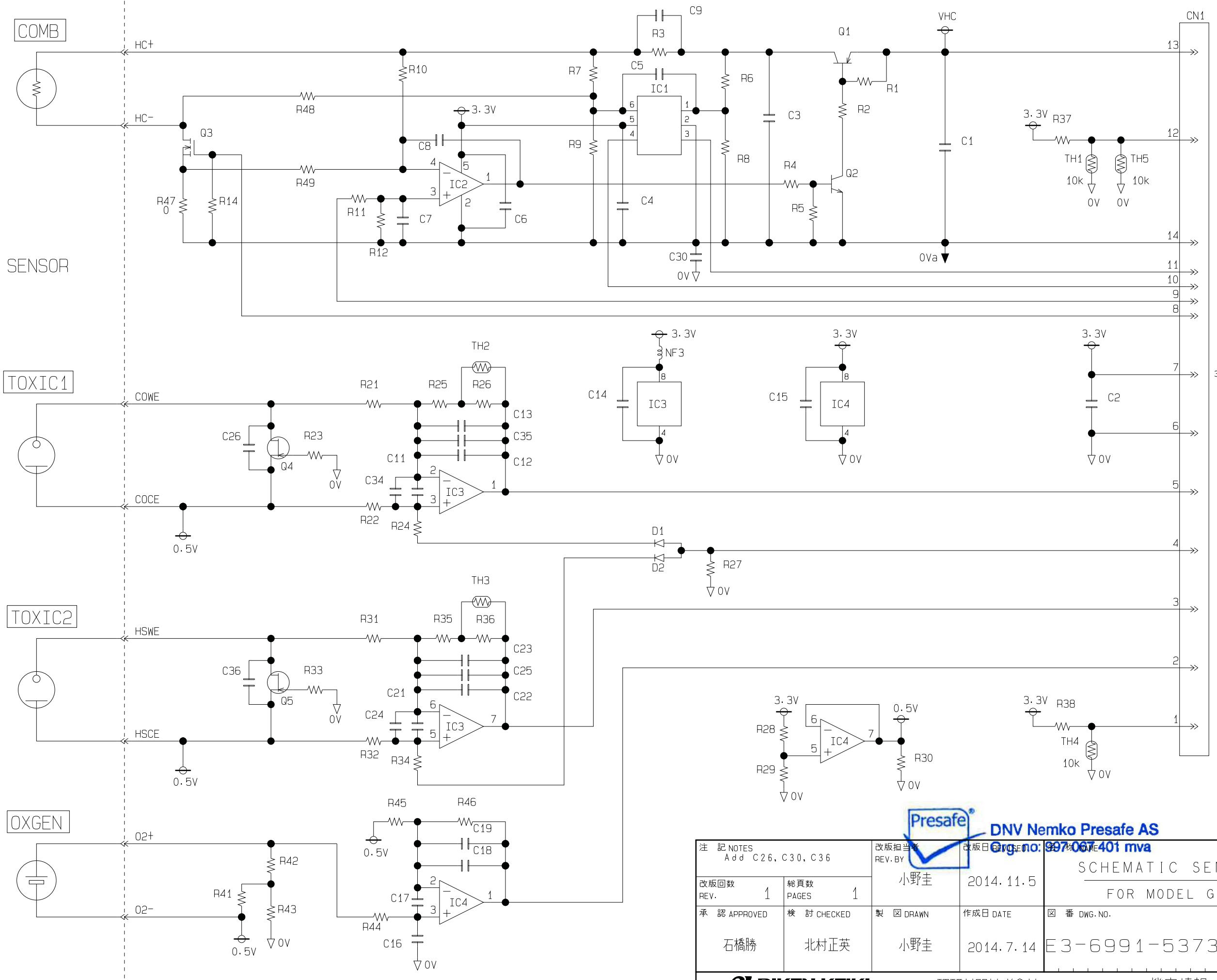
COMB

SENSOR

TOXIC1

TOXIC2

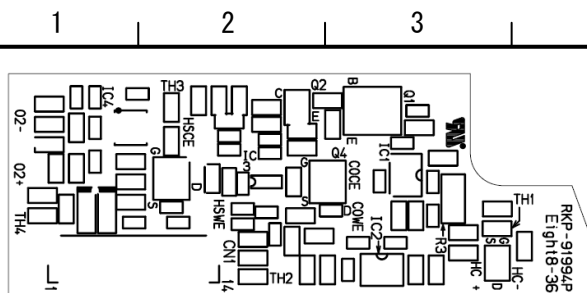
OXGEN



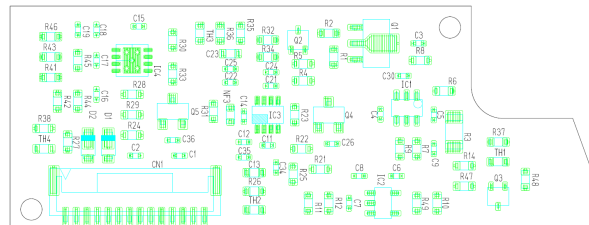
注 記 NOTES Add C26, C30, C36		改版担当者 REV. BY 小野圭	改版日 REVISION DATE 2014. 11. 5	SCHEMATIC SENSOR PCB FOR MODEL GX-6000
改版回数 REV. 1	総頁数 PAGES 1	製 図 DRAWN 小野圭	作成日 DATE 2014. 7. 14	
承 認 APPROVED 石橋勝	検 討 CHECKED 北村正英	製 図 DRAWN 小野圭	作成日 DATE 2014. 7. 14	図 番 DWG. NO. E3-6991-5373-50-01K

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.			

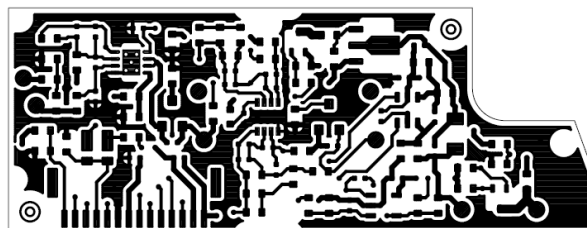

DNV Nemko Presafe AS
Org. no: 997 067 401 mva



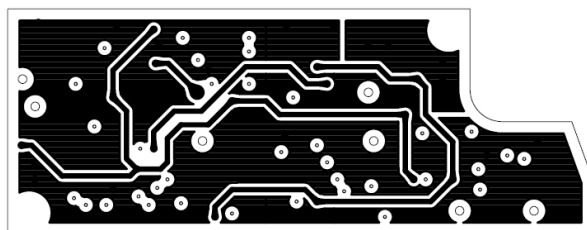
SILK PRINT FOR PARTS SIDE



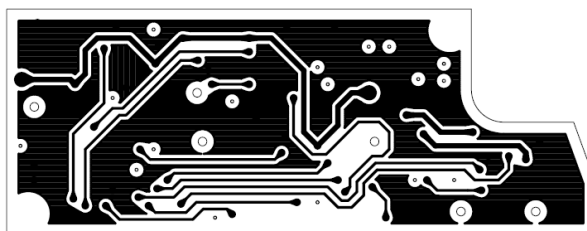
PARTS REFERENCE



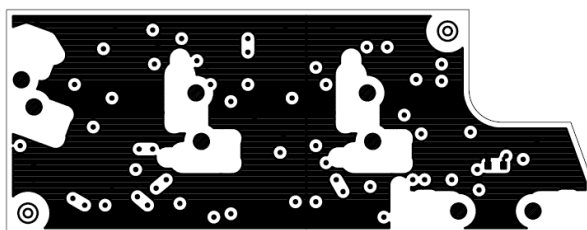
PARTS SIDE



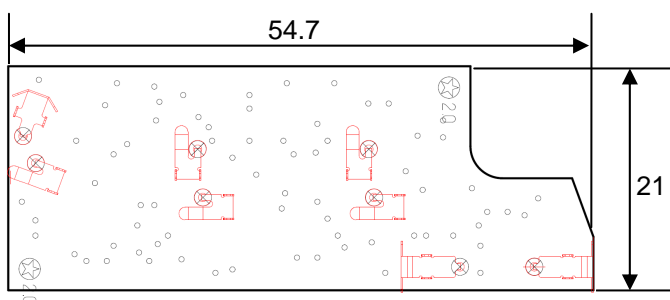
INNER LAYER(2 LAYER)



INNER LAYER(3 LAYER)



SOLDERING SIDE



VIA HOLES FOR SOLDERING SIDE

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

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

NAME _____

SCALE = $\sqrt{2} : 1$

DNV Nemko Presafe AS

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				Org. no: 997 067 401 mva SENSOR PCB
改版回数 REV.	1	総頁数 PAGES	1	小野圭
2014.11.5				FOR MODEL GX-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	2014.7.14	E 4 - 6 9 9 1 - 5 3 7 3 - 5 0 - 0 1 A

1 2 3 4 5 6 7

A

B

C

D

E

F

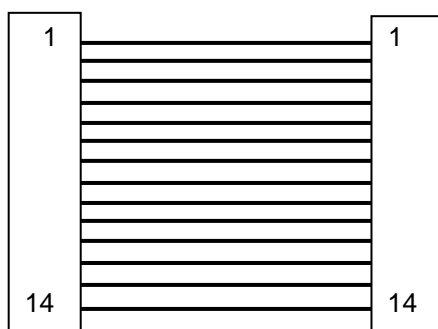
G

H

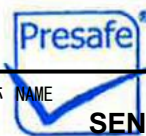
I

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
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	2014.7.14	E 4 - 6 9 9 1 - 5 3 8 2 - 7 0 - 0 1 K

	1	2	3	4	5	6	7	
寸法 許容差	1000以上	1000以上1000未満	500以上1000未満	250以上500未満	120以上250未満	50以上120未満	18以上50未満	18未満
	1.2	1.2	2.0	0.8	0.6	0.4	0.3	0.1
	0.7	0.7	1.0	0.4	0.3	0.2	0.15	0.1
	1.2	1.2	2.0	0.8	0.6	0.4	0.3	0.1
	0.7	0.7	1.0	0.4	0.3	0.2	0.15	0.1
	1.2	1.2	2.0	0.8	0.6	0.4	0.3	0.1
	0.7	0.7	1.0	0.4	0.3	0.2	0.15	0.1
	1.2	1.2	2.0	0.8	0.6	0.4	0.3	0.1
	0.7	0.7	1.0	0.4	0.3	0.2	0.15	0.1
	1.2	1.2	2.0	0.8	0.6	0.4	0.3	0.1
<p>△</p> <p>SPECIFICATION OF MOTER</p> <p>L=59.8μH(max) [CASE1]</p> <p>R=11Ω(min) [CASE2]</p> <p>CASE1 : One commutator segment contact the brush.</p> <p>CASE2 : Two commutator segments contact the brush.</p> <p>17.5</p> <p>25.5</p> <p>36.35</p> <p>MOTOR</p> <p>A12B-09-SS</p> <p>A12B-09-S-X △</p> <p>C.I.KASEI CO.,LTD.</p> <p>CABLE LENGTH</p> <p>LESS THAN 48mm</p> <p>Wall thickness</p> <p>of insulation:0.25mm</p> <p>CONNECTOR</p> <p>ZHR-2</p> <p>JST Mfg. Co., Ltd.</p> <p>△</p> <p>REVISION</p> <p>2013.1.29</p> <p>近藤晴彦</p> <p>△</p> <p>Correction</p> <p>2012.4.9</p> <p>島田聡</p> <p>△</p> <p>REVISION</p> <p>2011.5.13</p> <p>島田聡</p> <p>△</p> <p>Presafe</p> <p>事 年 月 日 訂正者</p> <p>名称 NAME</p> <p>Org. no: 997 067 401 mva</p> <p>PUMP</p> <p>RP-12</p> <p>図 番 DWG. NO.</p> <p>M4-4181-61-01K</p> <p>表面処理 TREAT.</p> <p>材 質 MAT.</p> <p>許容差 TOL.</p> <p>尺 度 SCALE</p> <p>投影法 PROJECTION</p> <p>承認 APPROVED</p> <p>検 討 CHECKED</p> <p>製 図 DRAWN</p> <p>作成日 DATE</p> <p>田島秀二</p> <p>近藤晴彦</p> <p>青良治</p> <p>2011. 2. 24</p> <p>RIKEN KEIKI</p> <p>理研計測株式会社</p> <p>機密情報 / CONFIDENTIAL</p>								

1 2 3 4 5 6 7

A

B

C

D

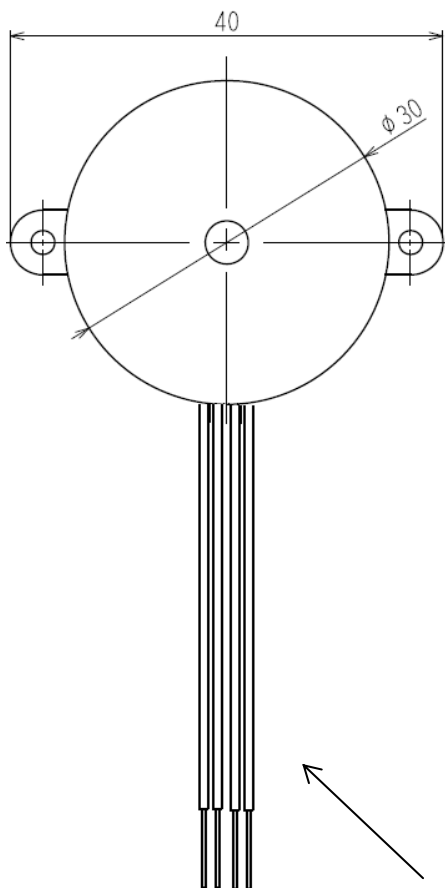
E

F

G

H

I



Cable: UL1571, AWG32
Maximum length: 45mm

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

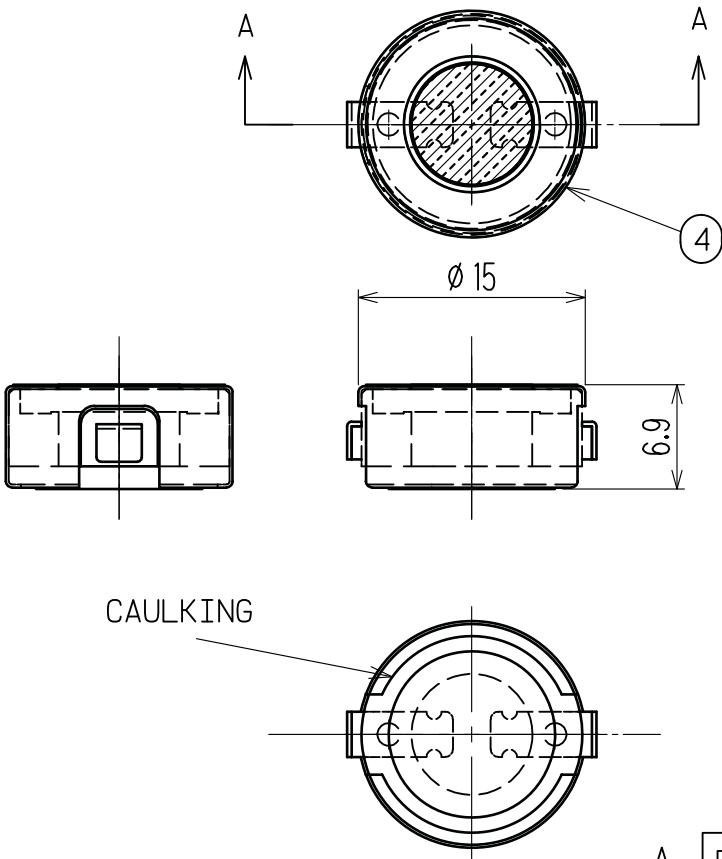


SCALE $\sqrt{2}:1$
DNV Nemko Presafe AS
Org. no: 997 067 401 mva
Buzzer

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

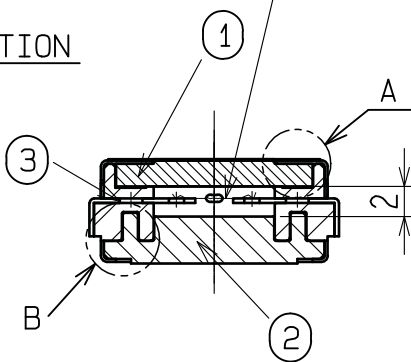
寸法	精度	中級	粗級
1000以上	0.7	1.2	2.5
500以上1000未満	0.5	1.0	2.0
260以上500未満	0.4	0.8	1.6
120以上260未満	0.3	0.6	1.2
50以上120未満	0.2	0.4	0.8
18以上50未満	0.15	0.3	0.6
18未満	0.1	0.2	0.4
寸法	精度	中級	粗級



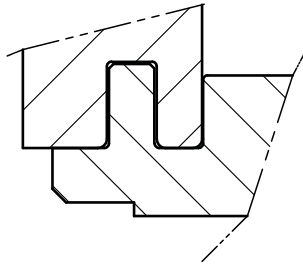
CAULKING

INSIDE SPACE
CAPACITY 0.1CC

A-A SECTION

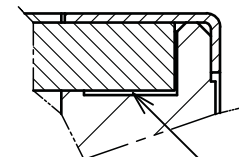


B DETAIL DRAWING



3^{+0.4}₀
※ EPOXY RESIN POTTED

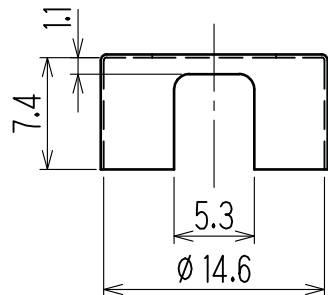
A DETAIL DRAWING



④ CAP

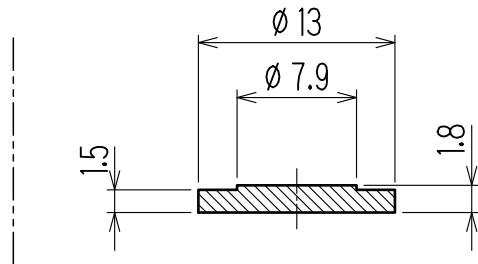
MATERIAL:STAINLESS STEEL(SUS304) t0.2
CHEMICAL COMPOSITIONS:

	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



① FLAME ARRESTOR

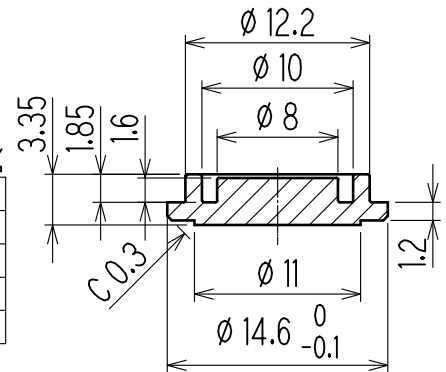
MATERIAL:SINTERED BRONZE METAL
CHEMICAL COMPOSITIONS Cu:Sn=90:10



② BOTTOM CAP

MATERIAL:ALUMINIUM ALLOY(A5056)
CHEMICAL COMPOSITIONS:

	UNIT %
Si	0.30 or less
Fe	0.40 or less
Cu	0.10 or less
Mn	0.05~0.20
Mg	4.5~5.6
Cr	0.05~0.20
Zn	0.10 or less
OTHER COMPONENTS	INDIVIDUAL 0.05 or less TOTAL 0.15 or less
Al	rem

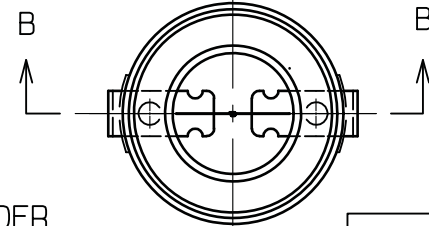


③ ELEMENT HOLDER
HOLDER

MATERIAL:PHENOLIC RESIN
MANUFACTURE:HITACHI CHEMICAL
CP-J-1900

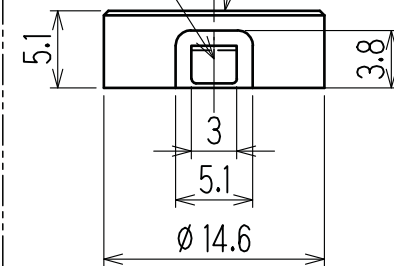
TERMINAL
MATERIAL:PHOSPHOR BRONZE(C5191)
CHEMICAL COMPOSITIONS: UNIT %

Pb	0.05 or less	Zn	0.20 or less
Fe	0.10 or less	P	0.03~0.35
Sn	5.5~7.0	Cu+Sn+P	99.5 or more

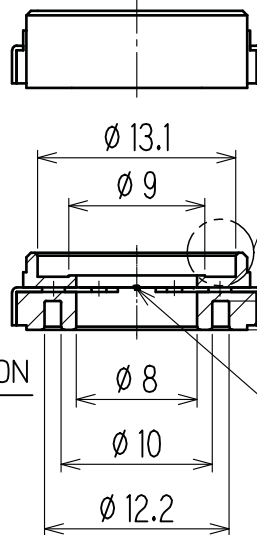


DETAIL DRAWING

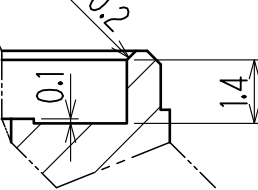
TERMINAL HOLDER



B-B SECTION



COIL



8 of active coils

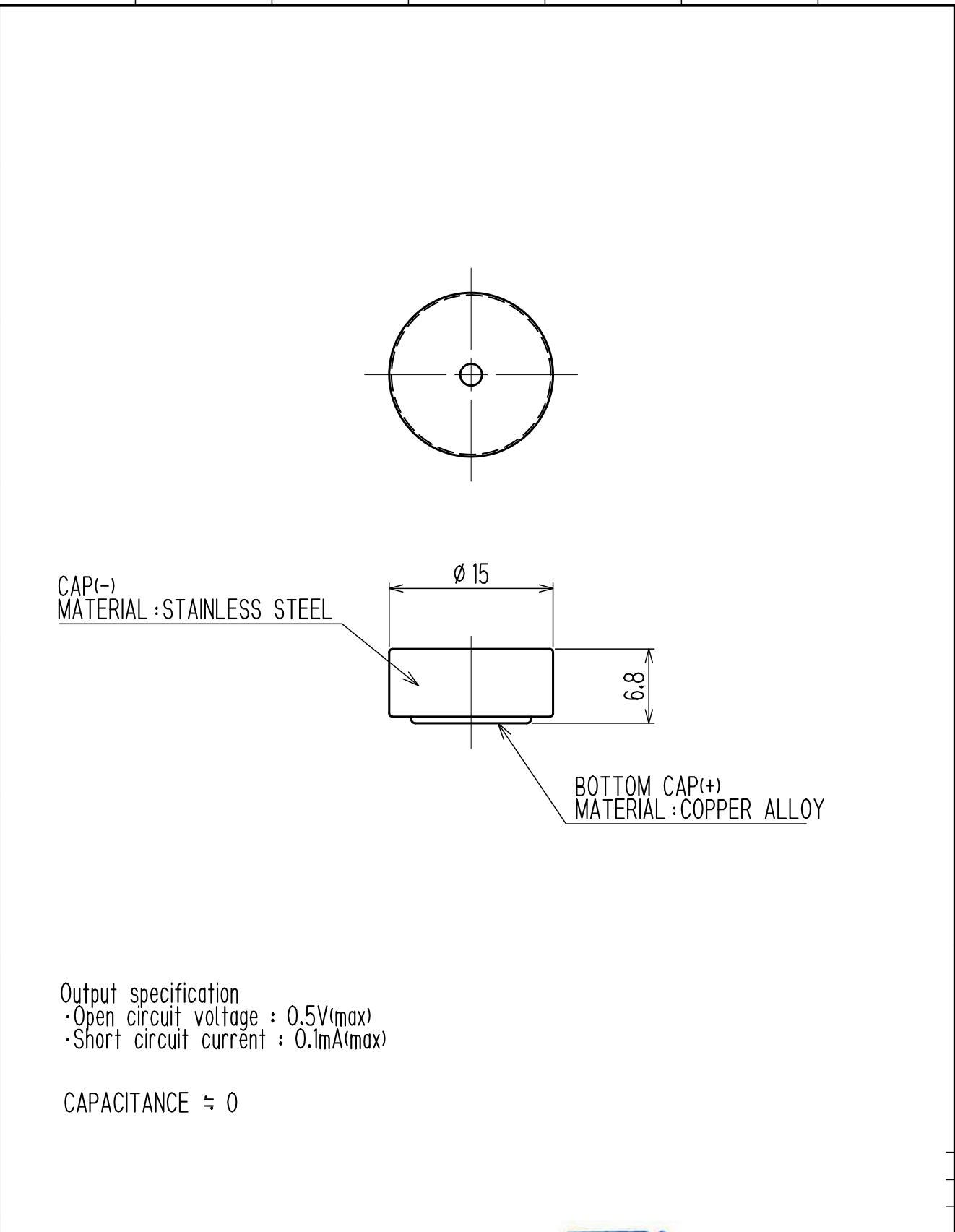
MATERIAL Pt

DETAIL DRAWING

表面処理 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
記 事	年 月 日 訂 正 者	理研計器株式会社 RIKEN KEIKI CO.,LTD.		

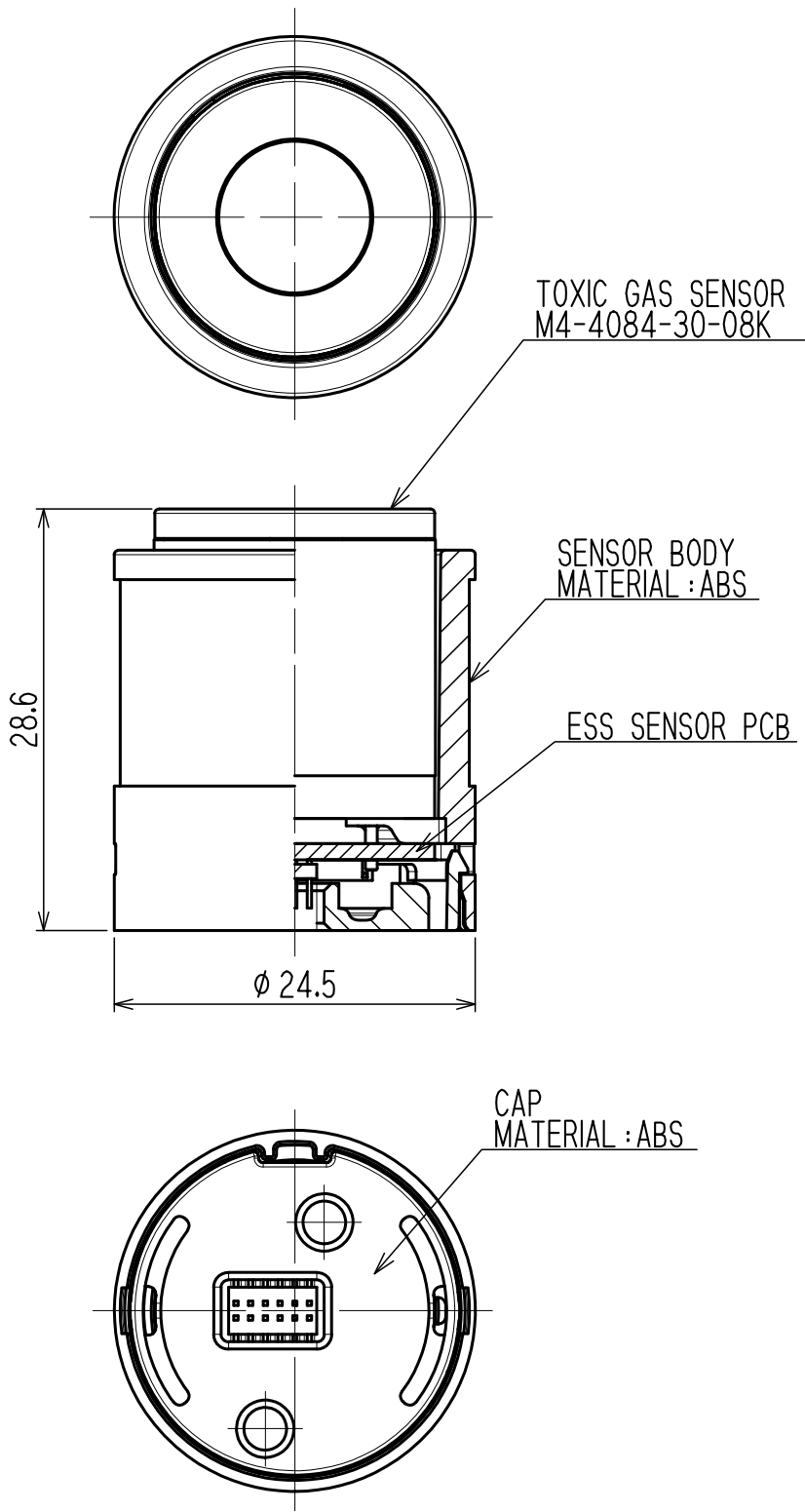
(Remarks)
Binder in section1.2.6 of
the type approval
guide:Uses epoxy resin
which has enough thermal
stability at min.120℃

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													



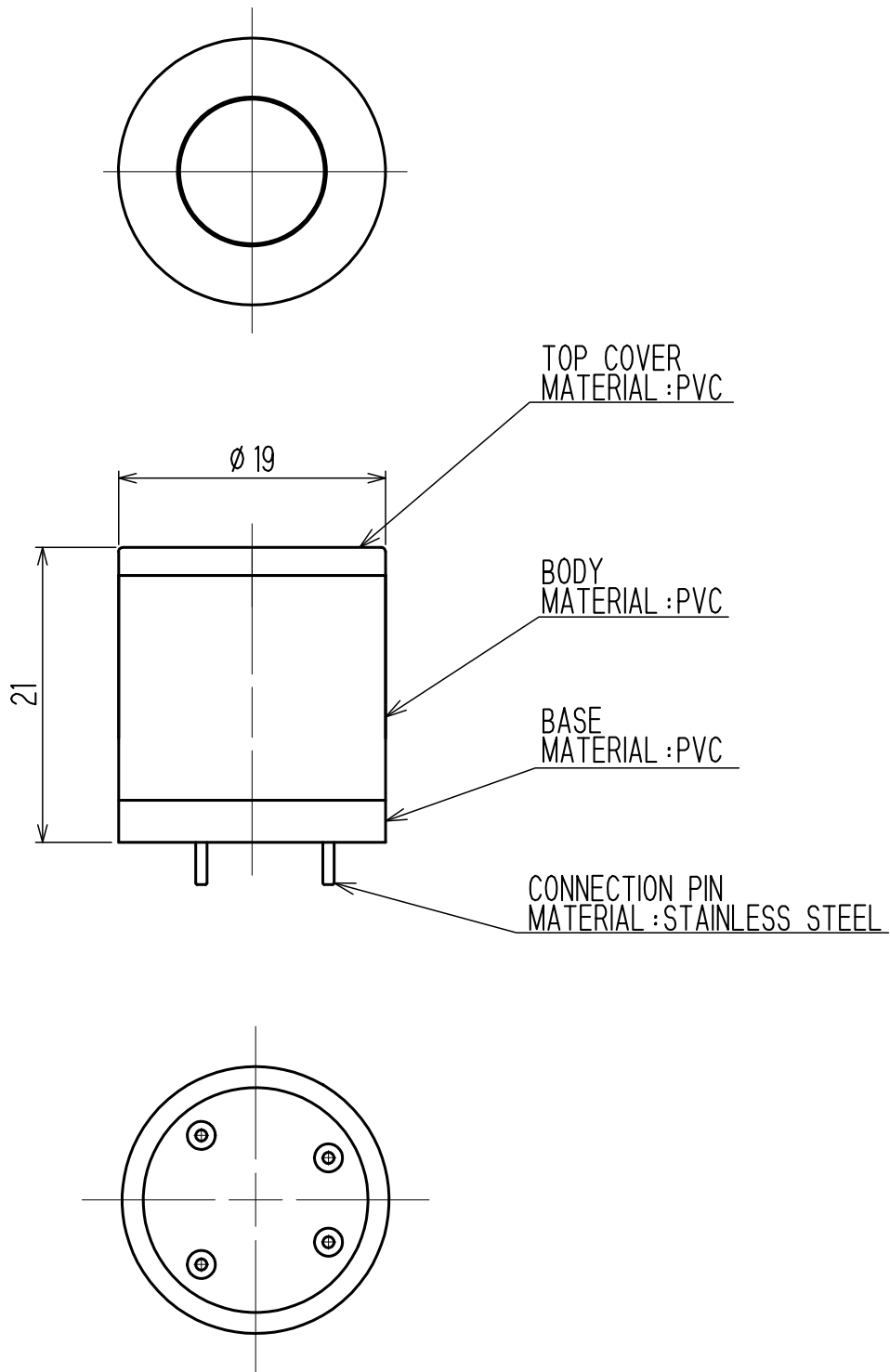
表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	△ Presafe 記 事 年 月 日 訂 正 者	
材 質 MAT.					名 称 NAME	
			2 : 1		Org. no: 997 067 401 mva OXYGEN SENSOR	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
青良治	近藤晴彦	海野裕作	2014. 7. 30	M4-4080-82-07K		
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL		

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
公差	精 0.1	中 0.2	粗 0.4	粗 0.2	0.15	0.3	0.6
公差	0.1	0.2	0.4	0.6	0.8	1.2	2.5



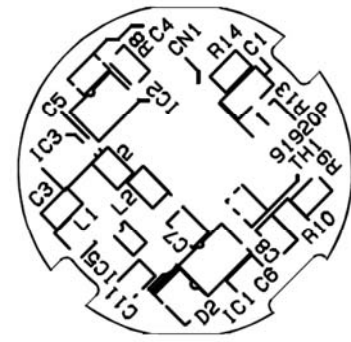
表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	△ Presafe 記 年 月 日 訂 正 者	
材 質 MAT.					名 称 NAME	
承 認 APPROVED		検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.	
青良治		近藤晴彦	武井康典	2014. 7. 30	M4-4486-01-01K	
RIKEN KEIKI			理研計測株式会社		機密情報 / CONFIDENTIAL	

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
公差	精度	0.1	0.15	0.2	0.3	0.4	0.5	0.7
	精度	0.2	0.3	0.4	0.6	0.8	1.0	1.2
	精度	0.4	0.6	0.8	1.2	1.6	2.0	2.5

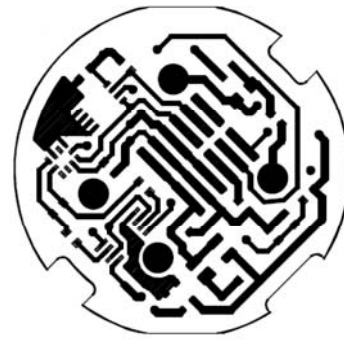


Output specification
 ・Open circuit voltage : 0.4V(max)
 ・Short circuit current : 0.1mA(max)

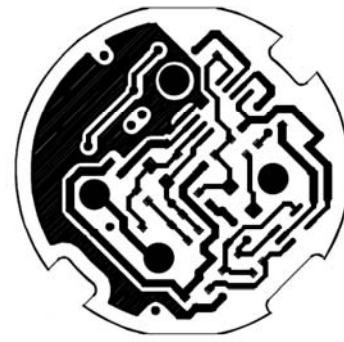
表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	Presafe 記 年 月 日 訂 正 者	
材 質 MAT.					名 称 NAME	
承認 APPROVED		検 査 CHECKED	製 図 DRAWN	作成日 DATE	DNV Nemko Presafe AS Org. no: 997 067 401 mva TOXIC GAS SENSOR	
青良治					図 番 DWG. NO.	
近藤晴彦		武井康典		2014. 7. 30		M4-4084-30-08K
RIKEN KEIKI			理研計測株式会社		機密情報 / CONFIDENTIAL	



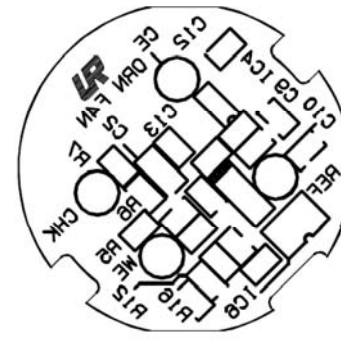
SILK PRINT FOR PARTS SIDE



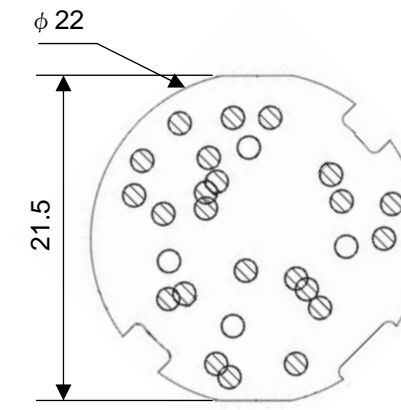
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

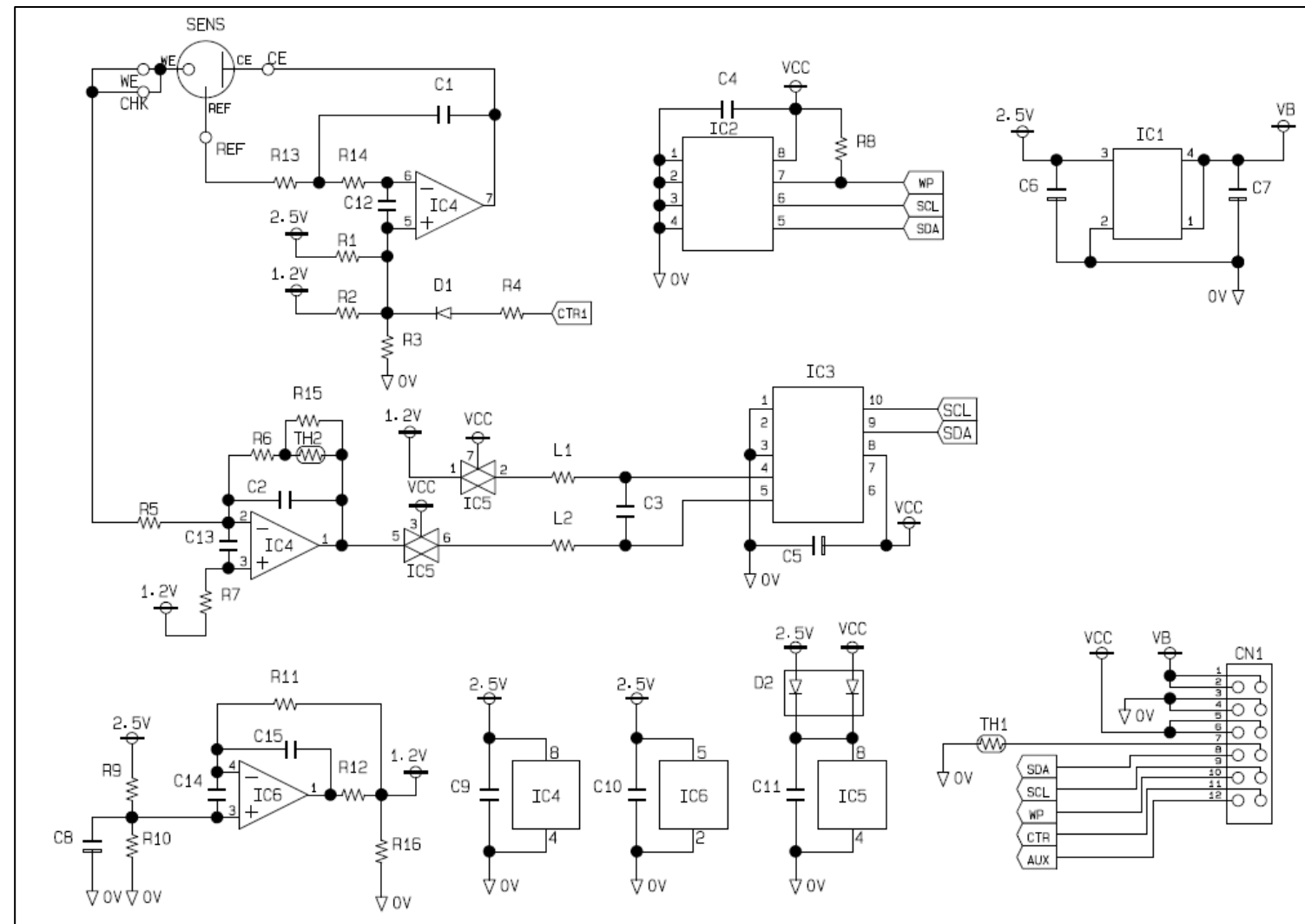
MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 1.0	TH

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

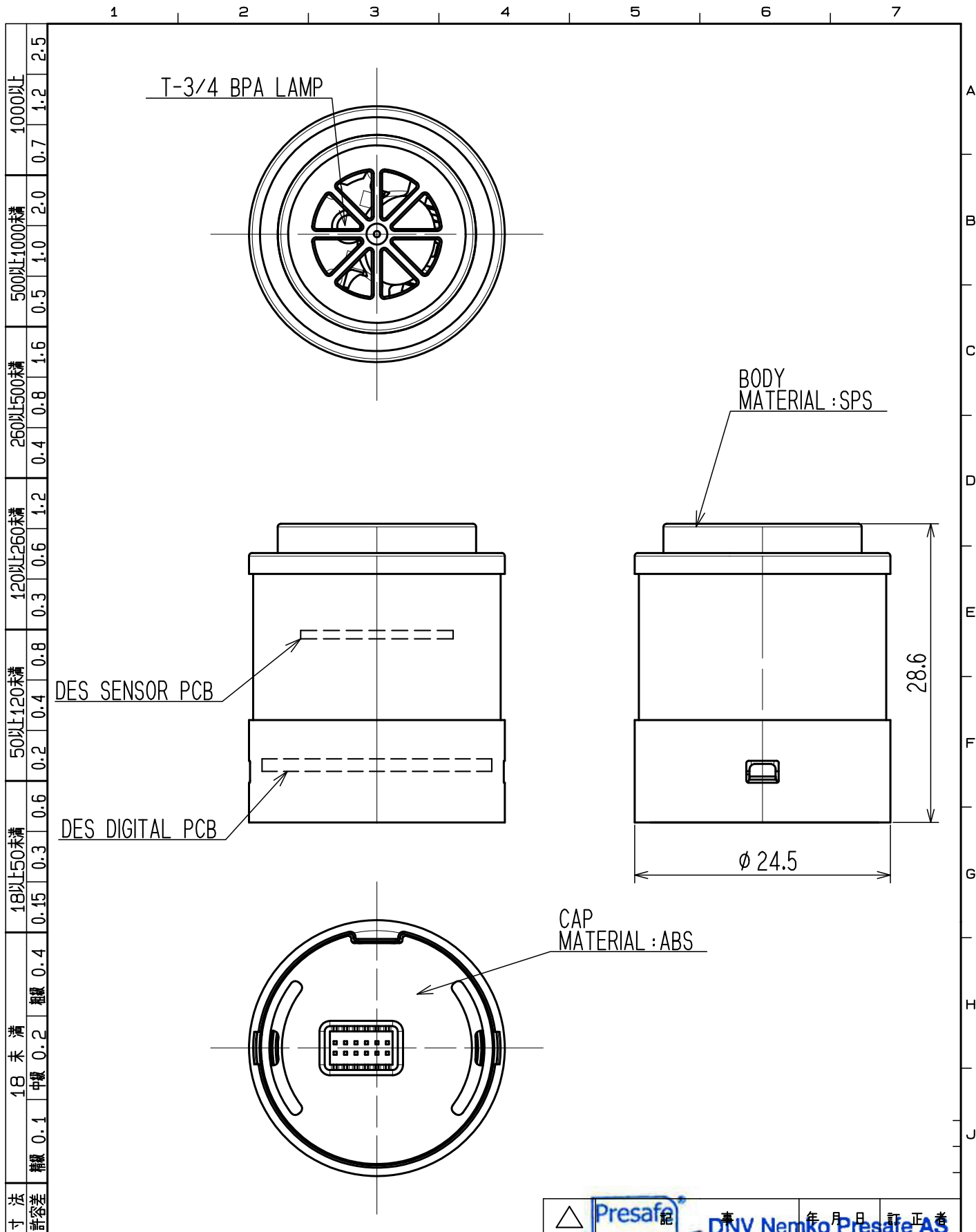
m marked parts are mounted or not

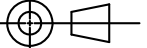

注 記 NOTES		改版担当者 REV. BY	改版日 REV. DATE	改版理由 REV. REASON
改版回数 REV.	0	総頁数 PAGES	1	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小野圭	2014.7.14	E 3 - 6 9 9 1 - 5 3 8 4 - 1 0 - 0 1 K

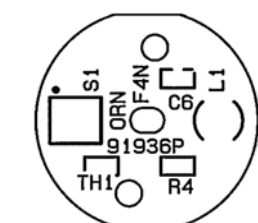
RIKEN KEIKI

理研計器株式会社

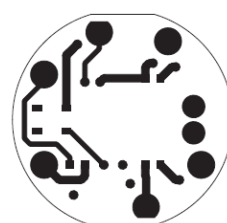
機密情報/CONFIDENTIAL



表面処理 TREAT. ✍		許容差 TOL. ✍	尺度 SCALE 2 : 1	投影法 PROJECTION 	名 称 NAME  Org. no: 997 067 401 mva SMART SENSOR Type-DES
材 質 MAT. ✍					
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	図 番 DWG. NO. M4-4630-20-01K	
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL	



SILK PRINT
FOR PARTS SIDE



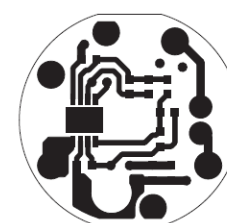
PARTS SIDE



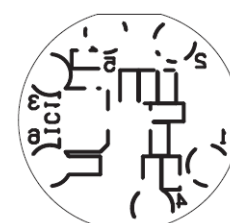
Lay.2



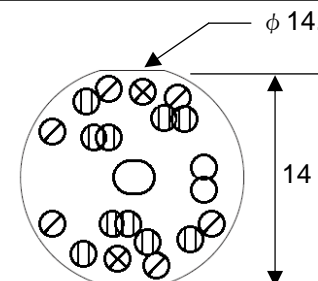
Lay.3



SOLDERING SIDE



SILK PRINT FOR
SOLDERING SIDE

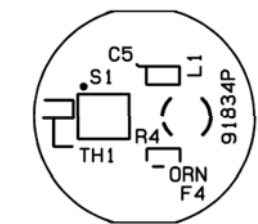


THROUGH HOLE
DATA

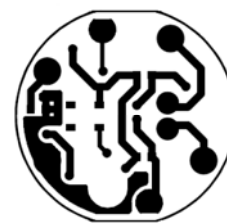
MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 0.5	TH
⊗	φ 0.8	TH
⊗	φ 1.7	NTH

SPECIFICATION FOR PCB

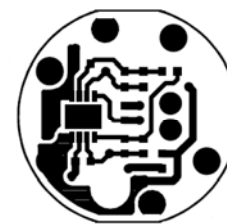
- PCB No. : RKP-91936P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 4
- Thickness copper film : 18um
- Minimum conductor width : 0.2mm
- CTI : 100 above



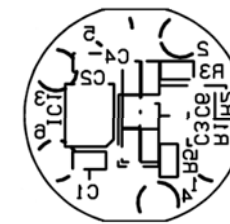
SILK PRINT
FOR PARTS SIDE



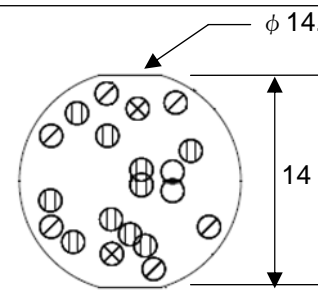
PARTS SIDE



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

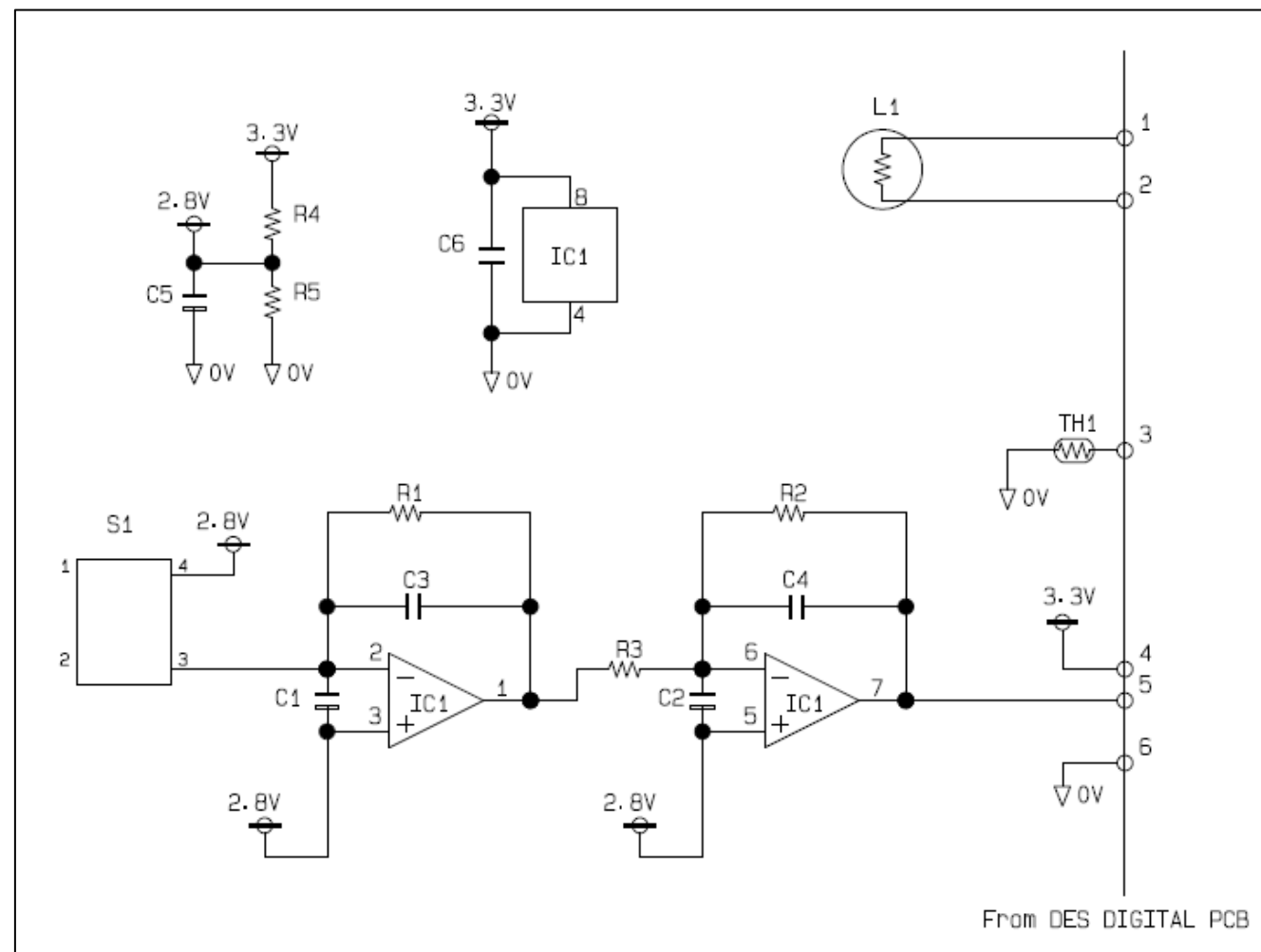
All drawings are view of parts side

SCALE 2:1

PARTS LIST

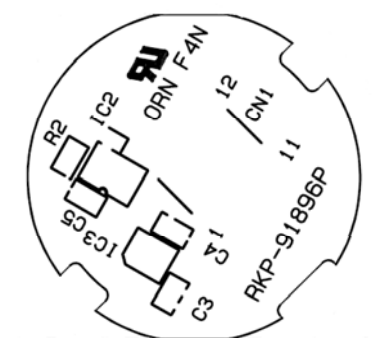
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
S1	IR Sensor	IR1011	
IC1	IC (OPAMP)	LTC2055HDD	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1,2,3,4,5	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max,1A (1005)	m
C1,2	Chip multilayer 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	図 番 DWG. NO.
Add RKP-91936P		小野圭	2015.5.25	DES SENSOR PCB
改版回数 REV.	1	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 8 5 - 9 0 - 0 1 K
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL				



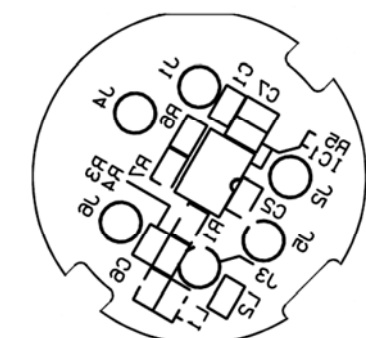
SILK PRINT FOR PARTS SIDE



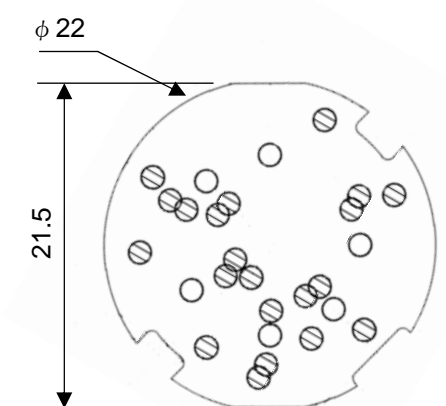
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

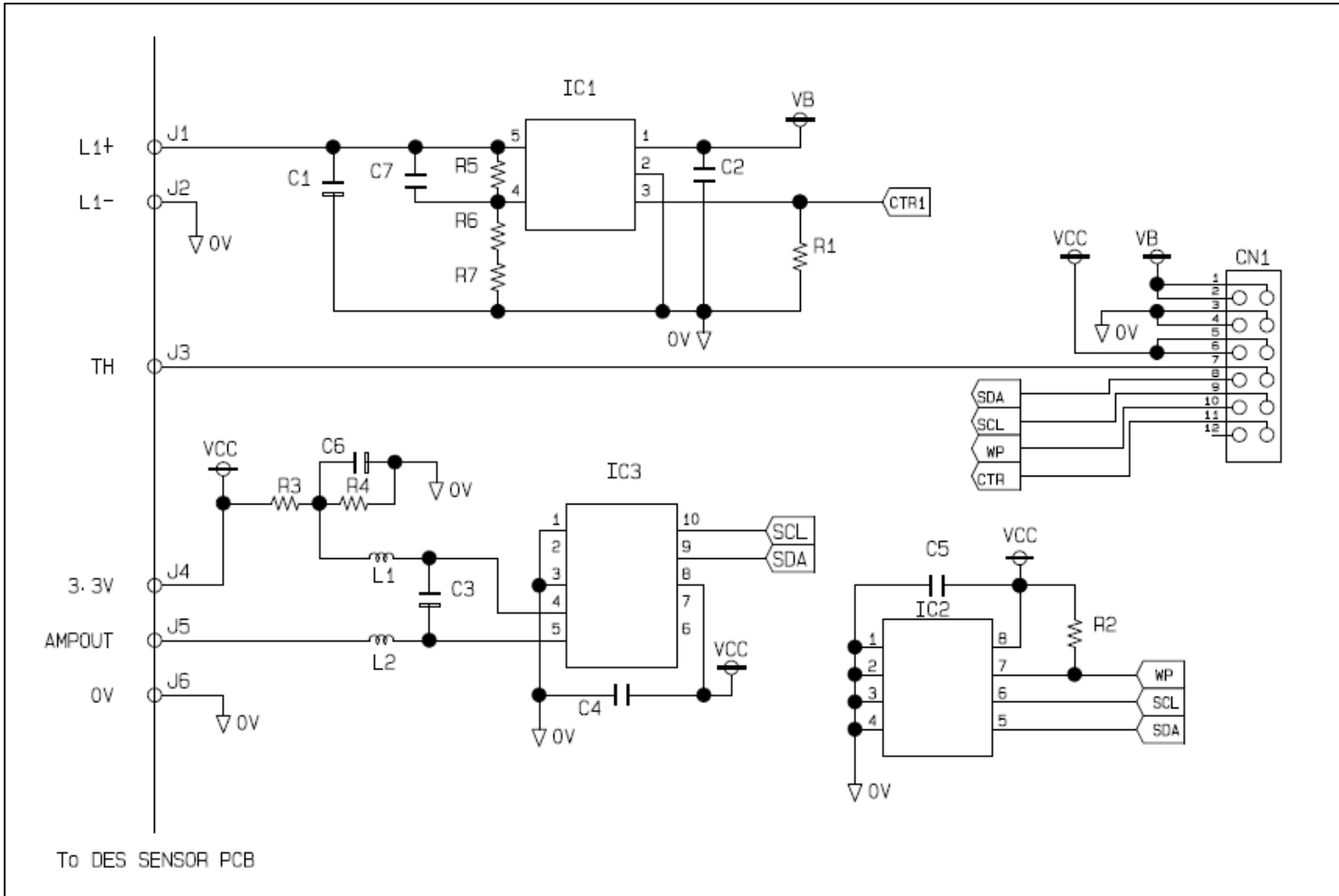
MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 0.9	TH

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



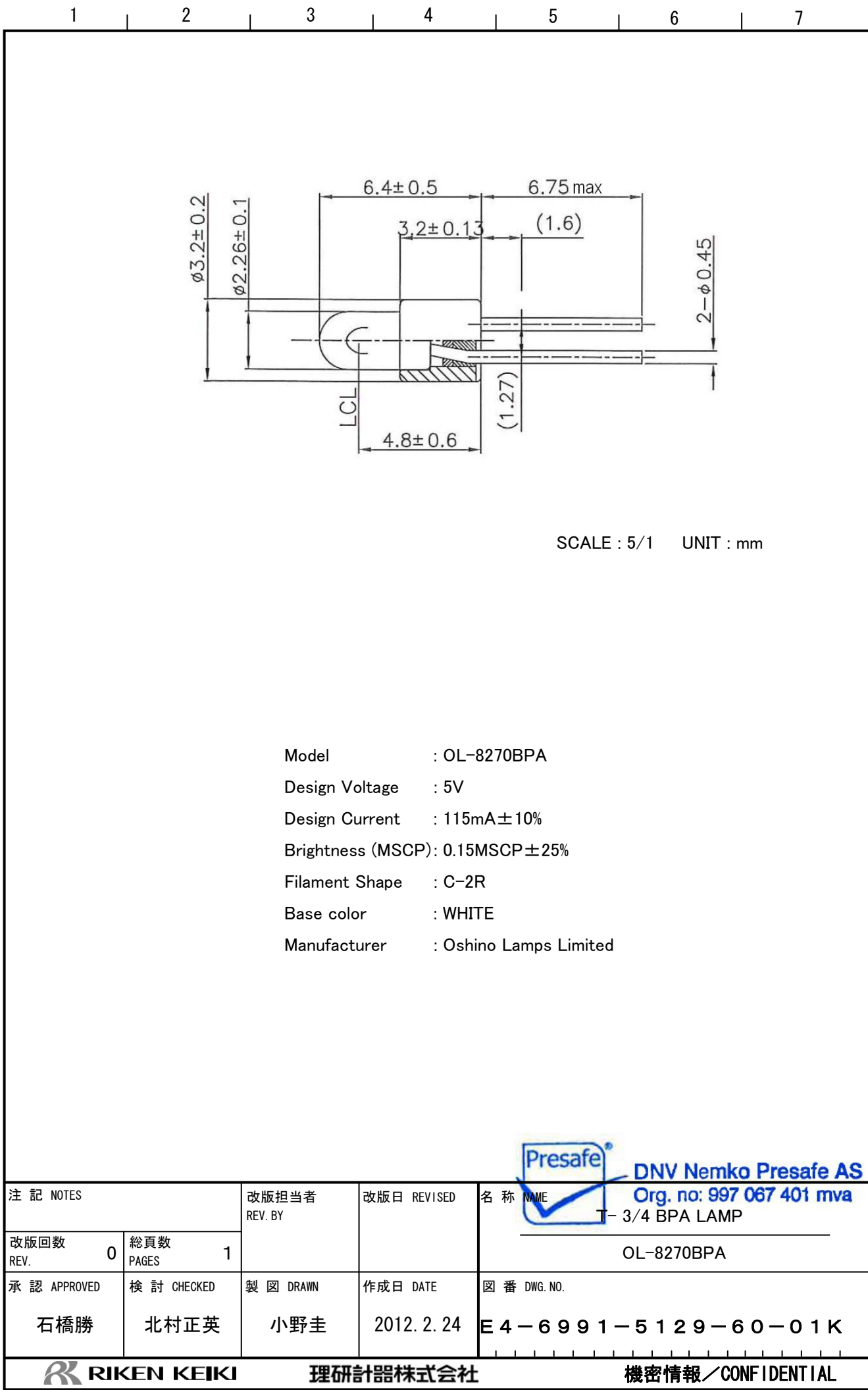
SCHEMATIC

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	改版日 REVISED 2015.2.24	DES DIGITAL PCB	
改版回数 REV.	1	総頁数 PAGES	1	小野圭	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			
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

VOC GAS SENSOR
MINI PID 3PIN
Ion Science Ltd.
IDENTIFICATION
II 1G Ex ia IIC T4 (-40℃≤Ta≤+55℃)
0.1W limitation
CERTIFICATE
Baseefa 07ATEX0060U
IECEx BAS 07.0030U

28.6

24.5

minimum 2.5

SENSOR BODY
MATERIAL: ABS

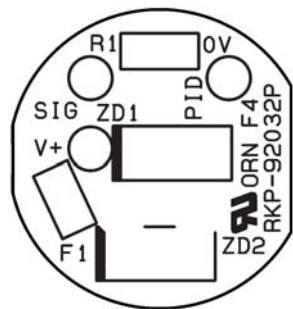
PIS SENSOR PCB

EPOXY RESIN

PIS DIGITAL PCB

CAP
MATERIAL: ABS

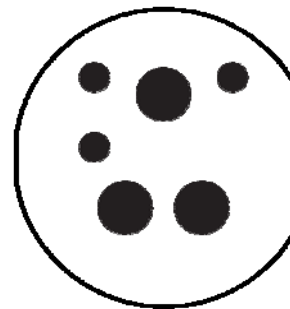
1991. 9. CAD A4



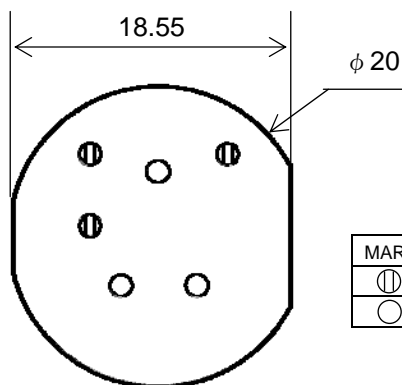
SILK PRINT FOR PARTS SIDE





PARTS SIDE



SOLDERING SIDE



THROUGH HOLE DATA

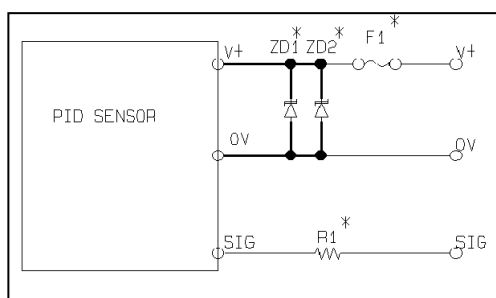
MARK	DIAGRAM	HOLE
	$\phi 0.6$	TH
	$\phi 1.8$	TH

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

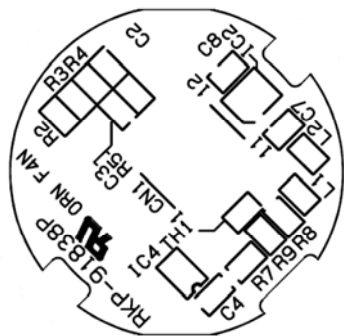
PARTS LIST

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.



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

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
PID=>PIS				Org. no: 997 067 401 mva PIS SENSOR PCB
改版回数 REV.	2	総頁数 PAGES	1	小野圭
承認 APPROVED		検 討 CHECKED	製 図 DRAWN	作成日 DATE
石橋勝		北村正英	小野圭	2015.3.25
				図 番 DWG. NO.
				E 4 - 6 9 9 1 - 5 3 8 7 - 3 0 - 0 1 K



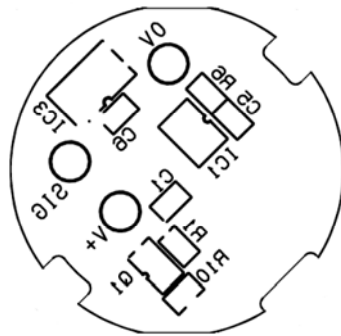
SILK PRINT FOR PARTS SIDE



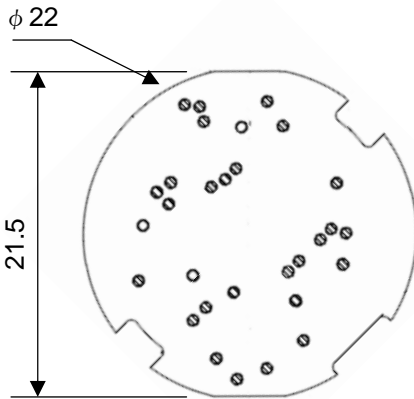
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

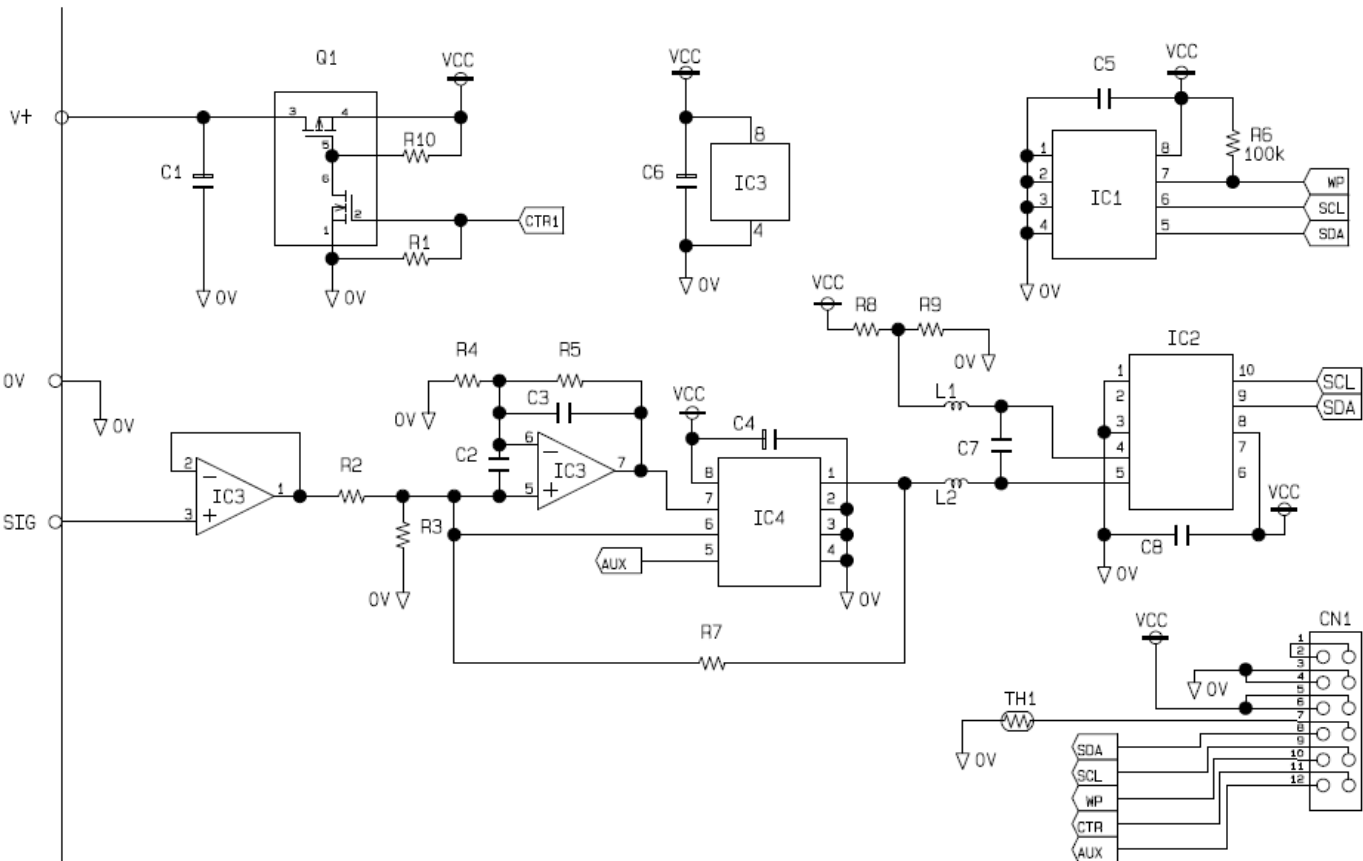
MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 1.0	TH

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

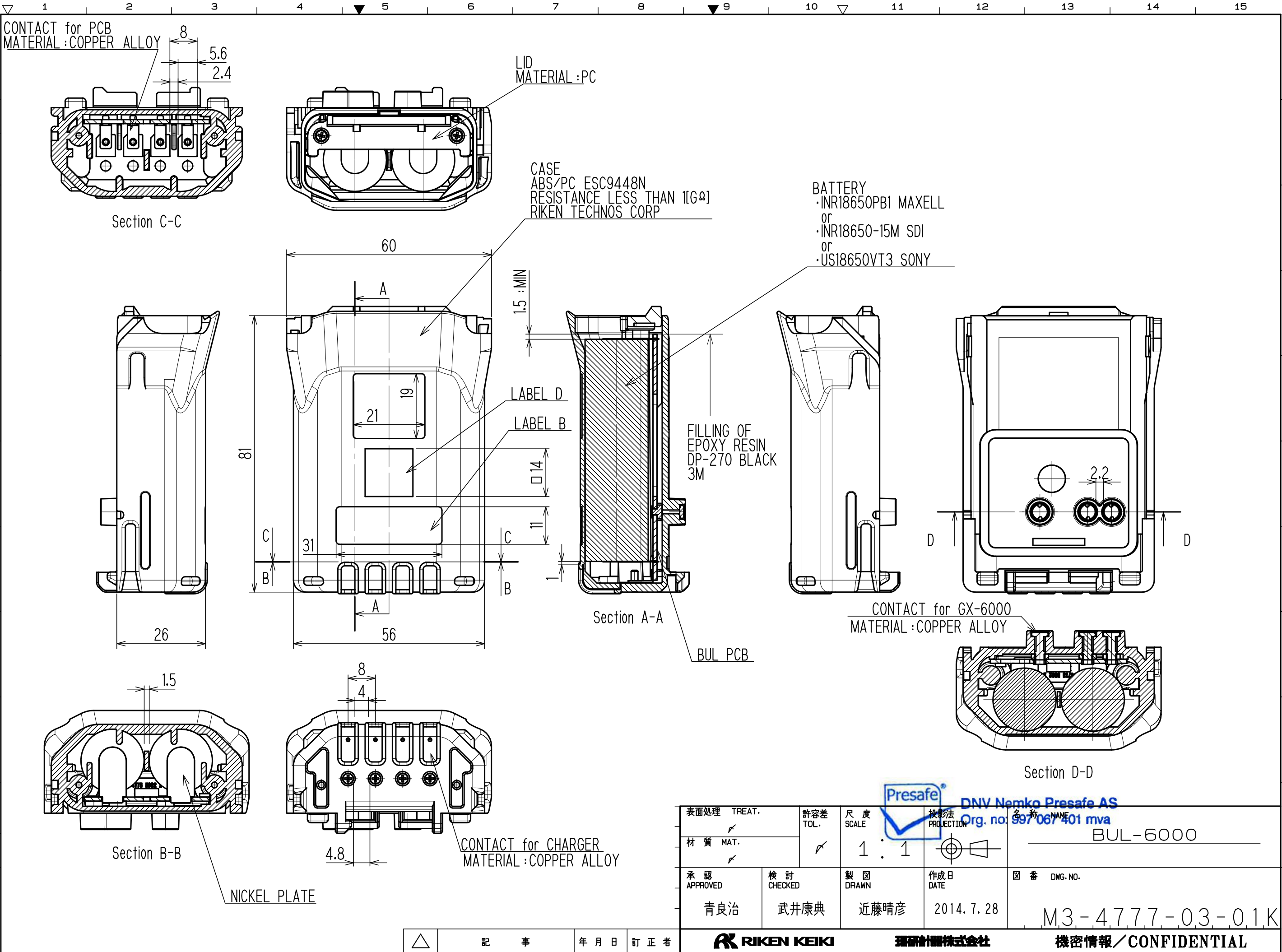
注 記 NOTES		改版担当者 REV. BY		改版日 REVISED DATE	
改版回数 REV.		PID=>PIS 総頁数 PAGES		小野圭 2015.3.25	
承認 APPROVED		検 討 CHECKED		製 図 DRAWN	
石橋勝		北村正英		小野圭	
				作成日 DATE	
				2014.7.14	
				図 番 DWG. NO.	
				E 3 - 6 9 9 1 - 5 3 8 8 - 1 0 - 0 1 K	

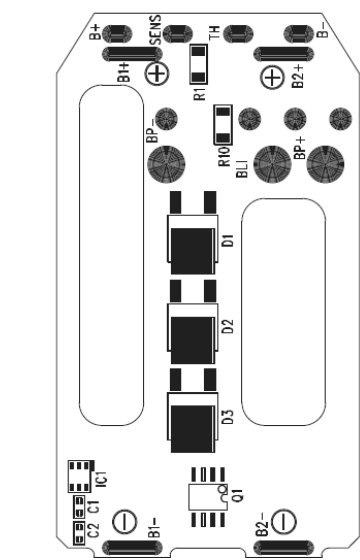
RIKEN KEIKI

理研計器株式会社

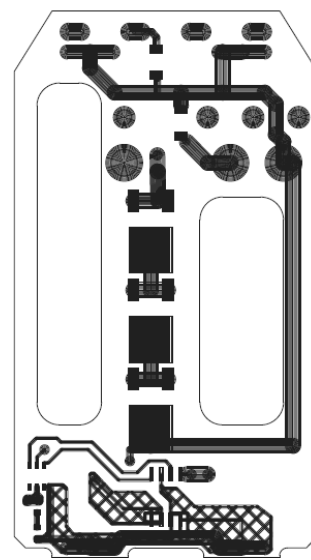
機密情報 / CONFIDENTIAL

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

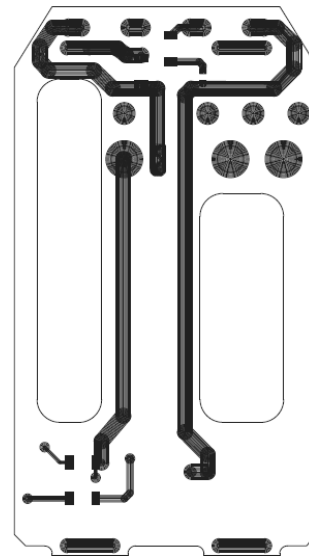




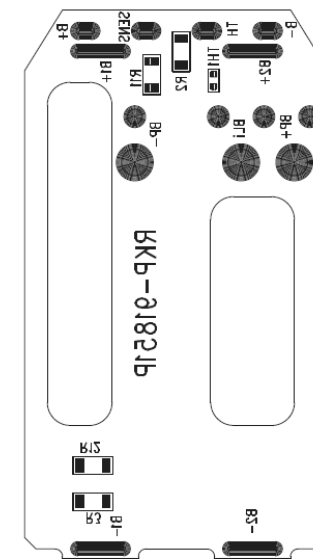
SILK PRINT FOR PARTS SIDE



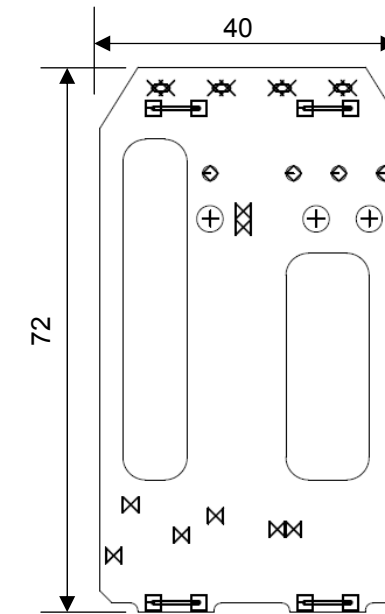
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



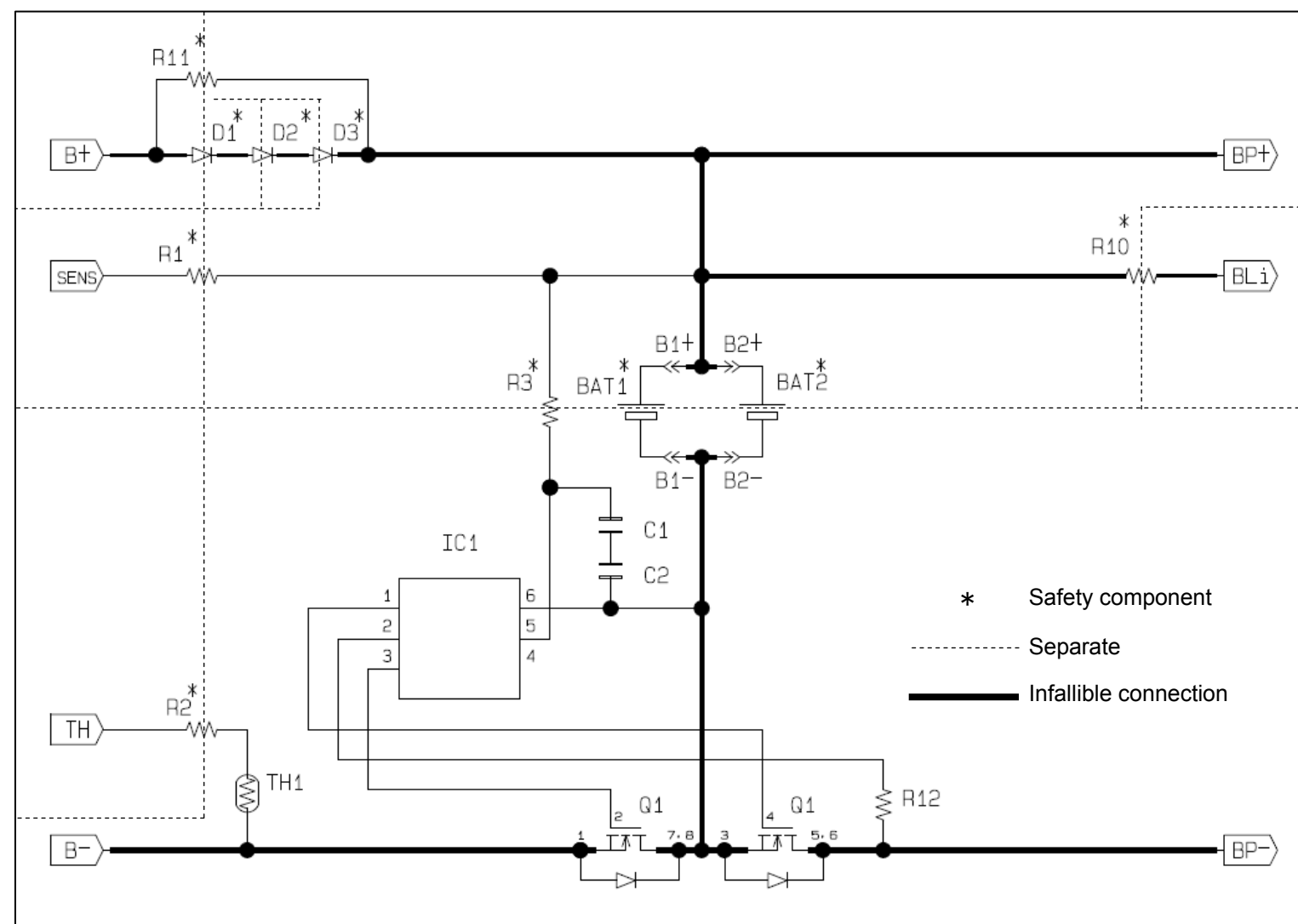
THROUGH HOLE DATA

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

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	MCR18EZIP_2000, ROHM or RK73H2BT_2000, KOA 200ohm / 1% , 0.25W	*
R3	Chip fixed resistor	MCR18EZIP_4700, ROHM or RK73H2BT_4700, KOA 470ohm / 1% , 0.25W	*
R10	Chip fixed resistor	MCR18EZIP_1002, ROHM or RK73H2BT_1002, KOA 10k ohm / 1% , 0.25W	*
R11	Chip fixed resistor	MCR18EZIP_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

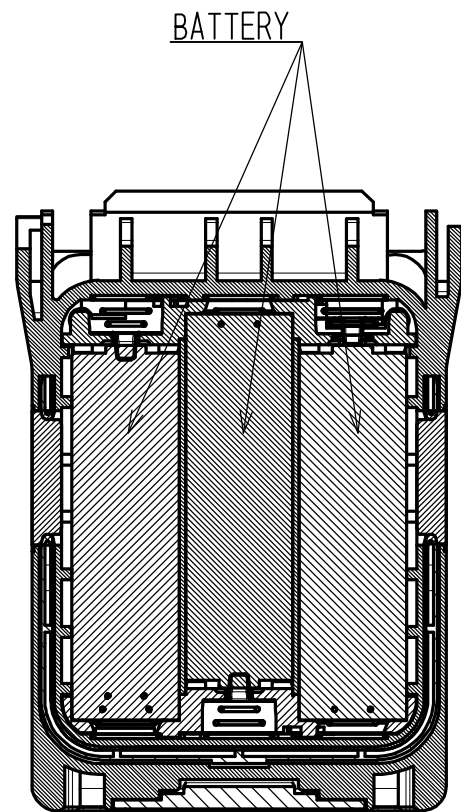
担当者	改版
-----	----

DNV Nemko Presafe AS
REVISED 名称 NAME
0397 067 401 mva

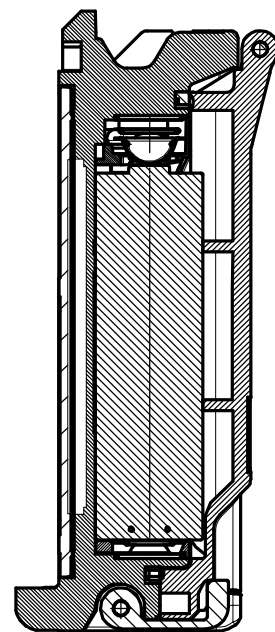
BUL PCB

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED 2014.9.5	図 番 DWG. NO. E 3 - 6 9 9 1 - 5 3 8 9 - 8 0 - 0 1 K
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	

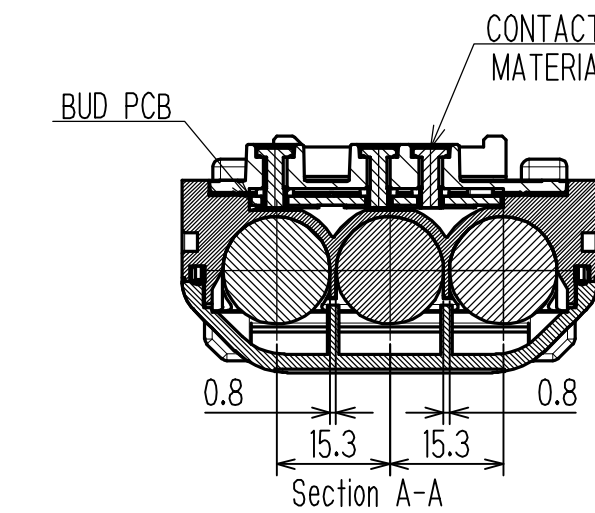
寸法	精度	中級	粗級
1000以上	0.7	1.2	2.5
500以上1000未満	0.5	1.0	2.0
260以上500未満	0.4	0.8	1.6
120以上260未満	0.3	0.6	1.2
50以上120未満	0.2	0.4	0.8
18以上50未満	0.15	0.3	0.6
18未満	0.1	0.2	0.4
寸法	精度	中級	粗級



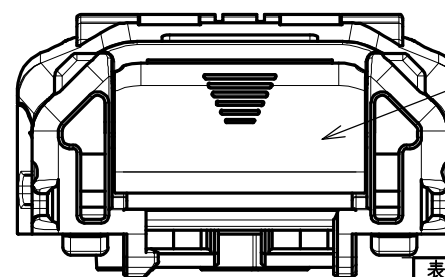
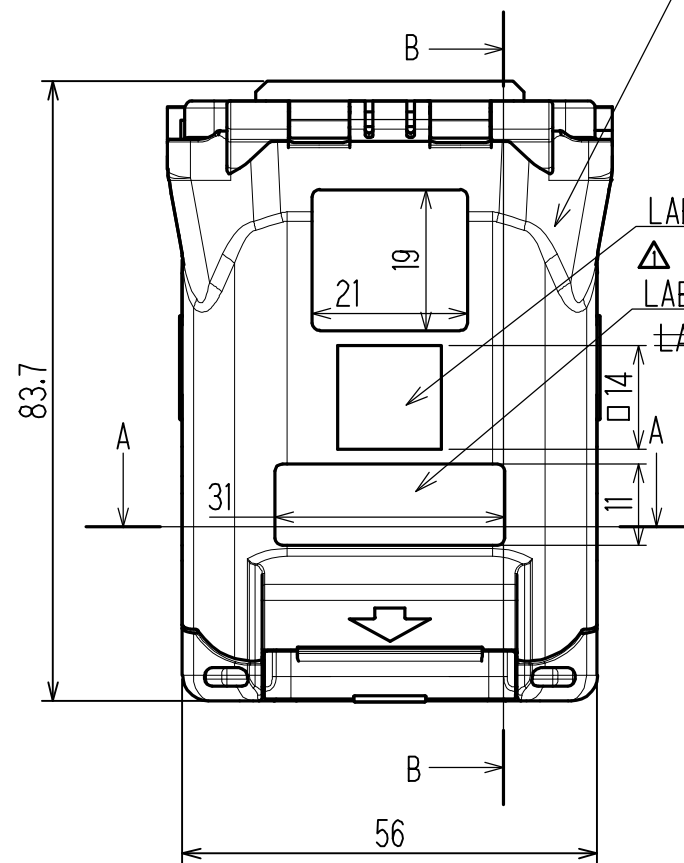
Section C-C



Section B-B



Section A-A



LID
ABS/PC ESC9448N
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP

CASE
ABS/PC ESC9448N
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP

LID
MATERIAL:PC

LOCK PLATE
ABS/PC ESC9448N
RESISTANCE LESS THAN 1[GΩ]
RIKEN TECHNOS CORP

表面処理 TREAT.	許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME
材質 MAT.		1 : 1		BUD-6000
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.
青良治	武井康典	近藤晴彦	2014. 7. 28	M3-4777-04-0.1K

△	REVISION E9	2015.3.6	海野裕作
△	記 事	年 月 日	訂 正 者

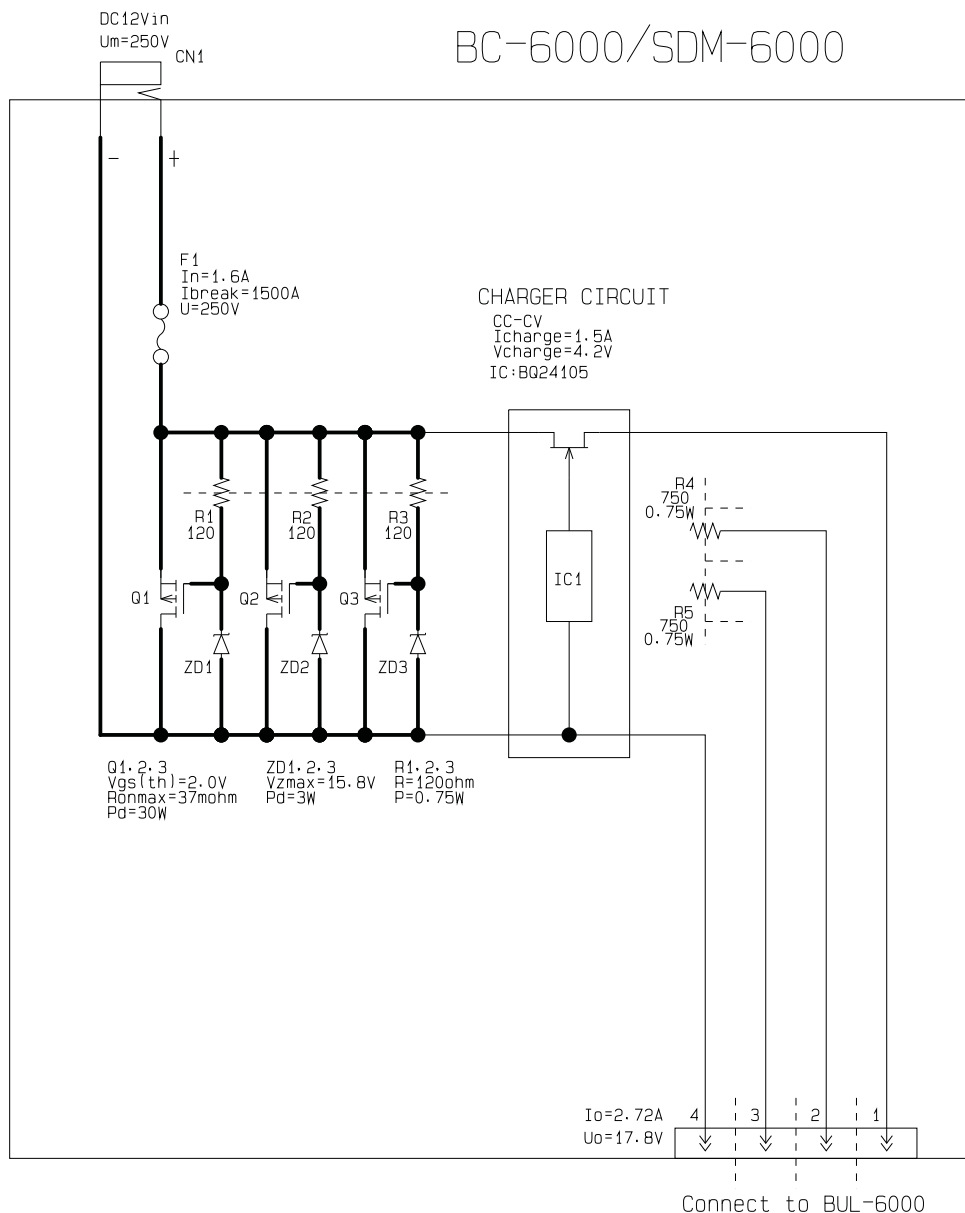
RIKEN KEIKI

理研計測株式会社

機密情報/CONFIDENTIAL

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
総頁数 PAGES	1			FOR MODEL BC-6000/SDM-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. 7. 30	E4-6991-5395-80-01K

1	2	3	4	5	6	7
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	18以上50未満	18未満
1.2	0.7	1.6	0.8	0.4	0.3	0.2
2.5	2.0	1.0	0.6	0.2	0.15	0.1
						精度
						公差

GX-6000(LABEL A)

MODEL GX-6000

INST.No.

RIKEN KEIKI CO.,LTD

2-7-6 Azusawa,Itabashi-ku,Tokyo 174-8744,Japan

BUL-6000(LABEL B)

△ MODEL BUL-6000

INST.NO.

RIKEN KEIKI Co.,Ltd./2-7-6Azusawa.

Itabasi-ku,Tokyo 174-8744,Japan

WARNING

Do not charge battery in haz.loc.

BUD-6000(LABEL C)

△ MODEL BUD-6000

INST.NO.

RIKEN KEIKI Co.,Ltd./2-7-6Azusawa.

Itabasi-ku,Tokyo 174-8744,Japan

WARNING

Use only battery types:LR6 TOSHIBA

GX-6000,BUL-6000,BUD-6000(LABEL D)

△

CE 1180 **Ex**

II 1G Ex ia IIC T4 Ga

Presafe15ATEX6171

IECEX PRE 15.0011

-20℃≤Ta≤+50℃

WARNING

Read manual for safety info.

Do not open in haz.loc.

△

△	REVISION	2015.3.18	海野裕作
△	REVISION	2015.3.6	海野裕作
△	Presafe 配	年月日	訂正者

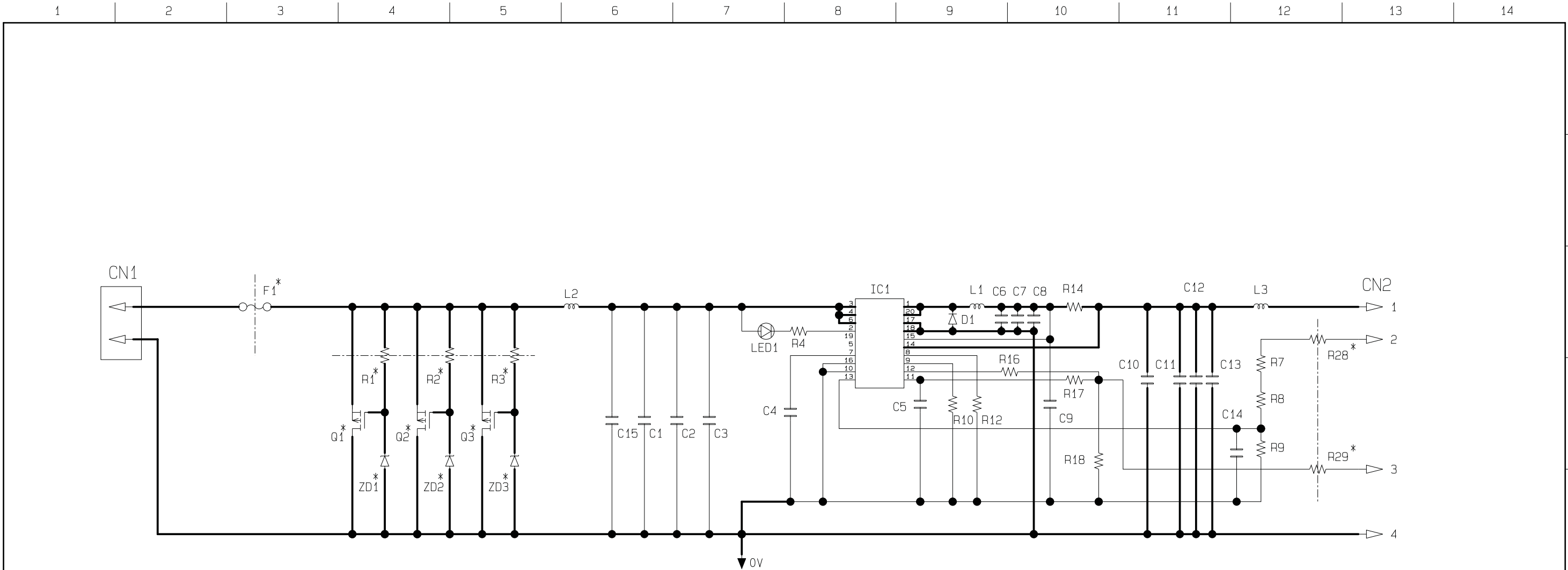
表面处理 TREAT.	許容差 TOL.	尺度 SCALE	投影法 PROJECTION
材質 MAT.		4 : 1	
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE
青良治	近藤晴彦	海野裕作	2014. 7. 25

名称 NAME	番号 DWG. NO.
	M4-4777-01-01K

RIKEN KEIKI

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機密情報/CONFIDENTIAL

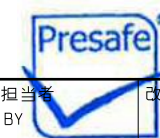
	1	2	3	4	5	6	7																					
寸法 許容差	1000以上	500以上1000未満	260以上500未満	120以上260未満	50以上120未満	18以上50未満	18未満																					
	1.2	2.0	1.6	1.2	0.8	0.6	0.4																					
	0.7	1.0	0.8	0.6	0.4	0.3	0.2																					
	0.5	0.5	0.4	0.3	0.2	0.15	0.1																					
	0.4	0.4	0.3	0.2	0.15	0.1	0.05																					
	0.3	0.3	0.2	0.15	0.1	0.05	0.02																					
	0.2	0.2	0.15	0.1	0.05	0.02	0.01																					
	0.1	0.1	0.05	0.02	0.01	0.005	0.002																					
	0.05	0.05	0.02	0.01	0.005	0.002	0.001																					
	0.02	0.02	0.01	0.005	0.002	0.001	0.0005																					
<div><div><div>60</div><div>25</div><div><div><div>警告 WARNING</div><div><ul style="list-style-type: none">・本来の使用目的以外の使用はしないでください。・Do not use for any purpose other than original intended use.・落下や水は故障の原因となります。・Protect from impact and moisture.・充電は非危険場所にて行なってください。・Not for use in hazardous area.・指定のACアダプタを使用してください。・Use only with exclusive AC adaptor.</div><div><div>注意 CAUTION</div><div><ul style="list-style-type: none">・ご使用前に取扱説明書を必ずお読みください。・Read and understand operation manual before use.</div></div></div></div></div><div><div>40</div><div>20</div><div><div>MODEL _____</div><div>INST. No. _____</div><div>DATE _____</div><div><div>CE</div><div>DC INPUT : 12V --- 0.8A</div><div>DC OUTPUT : 6V --- 1.6A</div><div>RIKEN KEIKI Co., Ltd. JAPAN</div></div></div></div><div><div>"BC-6000"</div><div>or "SDM-6000"</div></div></div> <table><tr><td colspan="2">表面処理 TREAT.</td><td rowspan="2">許容差 TOL.</td><td rowspan="2">尺度 SCALE</td><td rowspan="2">投影法 PROJECTION</td><td rowspan="2">名称 NAME</td><td rowspan="2">Presafe 記 DNV Nemko Presafe AS Org. no: 997 067 401 mva LABEL BC-6000/SDM-6000</td></tr><tr><td colspan="2">材質 MAT.</td></tr><tr><td>承認 APPROVED</td><td>検討 CHECKED</td><td>製図 DRAWN</td><td>作成日 DATE</td><td colspan="2">図番 DWG. NO.</td></tr><tr><td>青良治</td><td>武井康典</td><td>近藤晴彦</td><td>2014. 7. 28</td><td colspan="2">M4-4777-01-02K</td></tr></table> <div><div>RIKEN KEIKI</div><div>理研計測株式会社</div><div>機密情報 / CONFIDENTIAL</div></div>								表面処理 TREAT.		許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME	Presafe 記 DNV Nemko Presafe AS Org. no: 997 067 401 mva LABEL BC-6000/SDM-6000	材質 MAT.		承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.		青良治	武井康典	近藤晴彦	2014. 7. 28	M4-4777-01-02K	
表面処理 TREAT.		許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME	Presafe 記 DNV Nemko Presafe AS Org. no: 997 067 401 mva LABEL BC-6000/SDM-6000																						
材質 MAT.																												
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.																								
青良治	武井康典	近藤晴彦	2014. 7. 28	M4-4777-01-02K																								



* marks means safety components

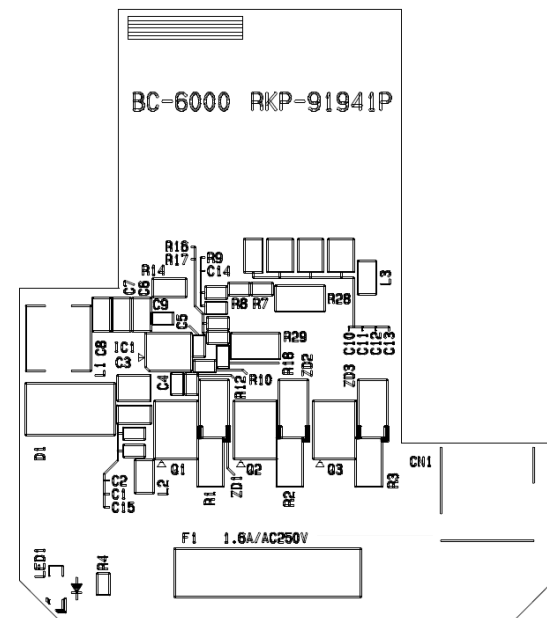
----- marks means separate

———— marks means infallible connection

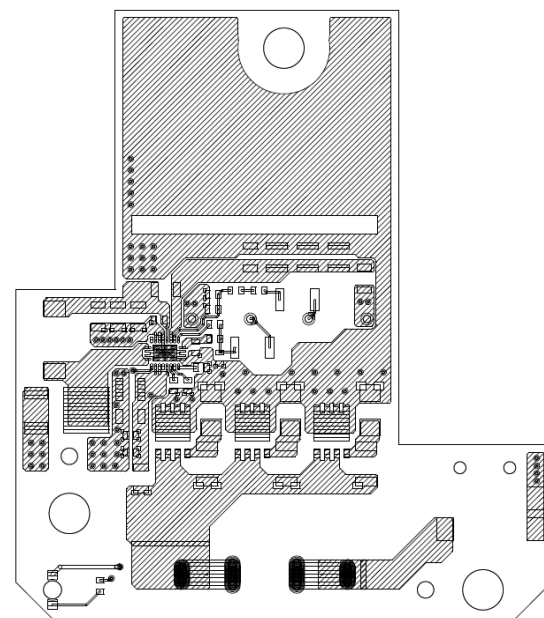


DNV Nemko Presafe AS
Org no: 997067401 mva

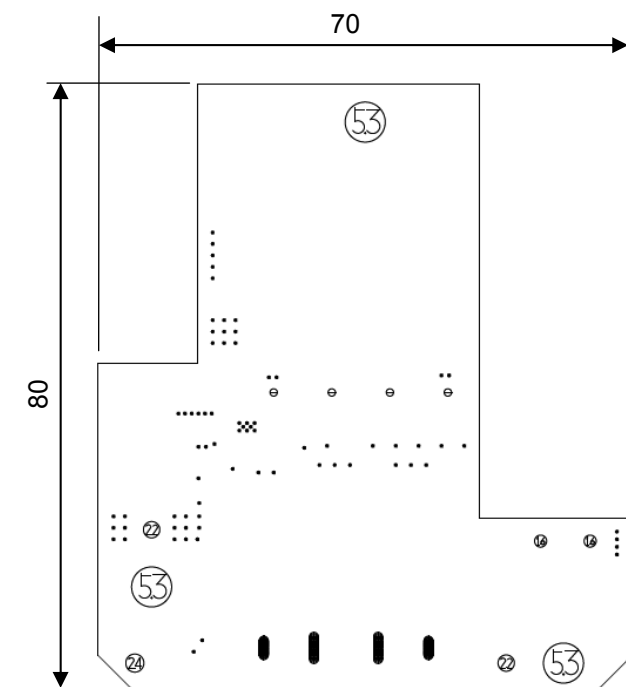
注 記 NOTES		改版担当者 REV. BY	改版日 REV. DATE	図 番 DWG. NO.
改版回数 REV.	総頁数 PAGES			SCEHMATIC CHARGER PCB FOR MODEL BC-6000
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	E 3 - 6 9 9 1 - 5 2 5 5 - 8 0 - 0 1 K
石橋勝	北村正英	小野圭	2014. 12. 16	
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL				



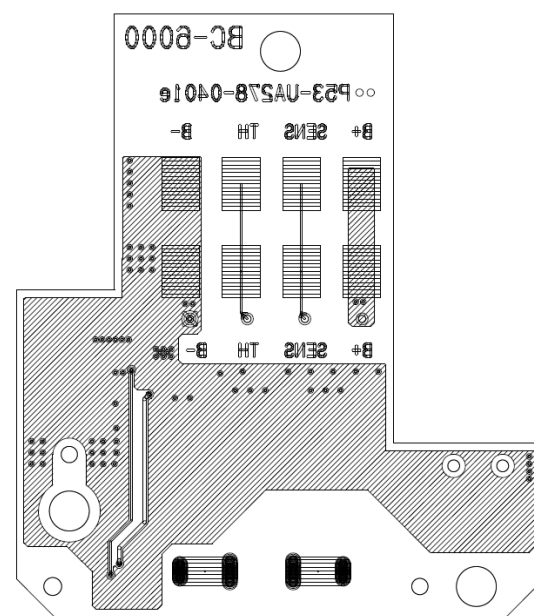
SILK PRINT FOR PARTS SIDE



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
⑳	Φ2.2	NTH
㉔	Φ2.4	NTH
㉟	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

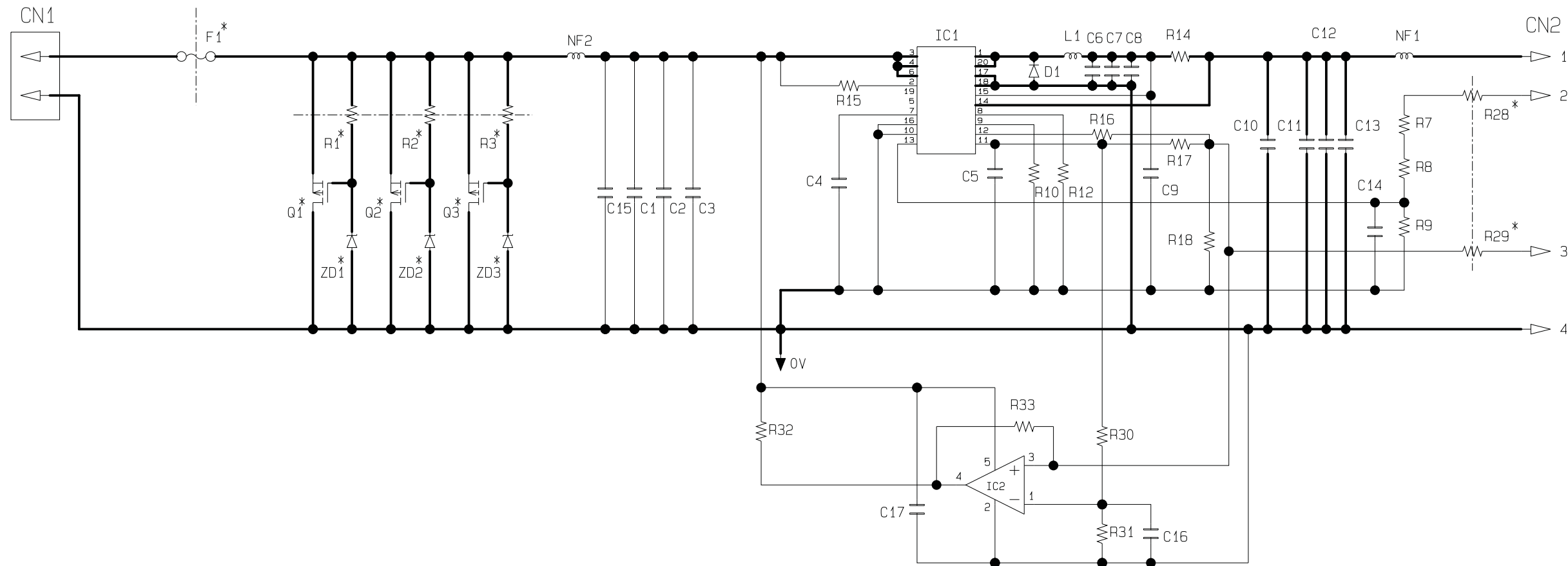
PARTS LIST

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	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

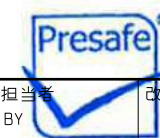
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改版回数 REV.	0	総頁数 PAGES	1	Presafe® DNV Nemko Presafe AS Reg. no. 997 067 401 mva	
承認 APPROVED		検 討 CHECKED		製 図 DRAWN	
石橋勝		北村正英		小野圭	
				作成日 DATE	
				2014.12.16	
				図 番 DWG. NO.	
				E 3 - 6 9 9 1 - 5 2 5 5 - 8 0 - 0 1 A	



* marks means safety components

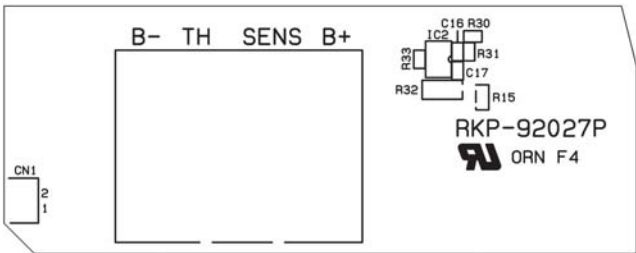
----- marks means separate

———— marks means infallible connection

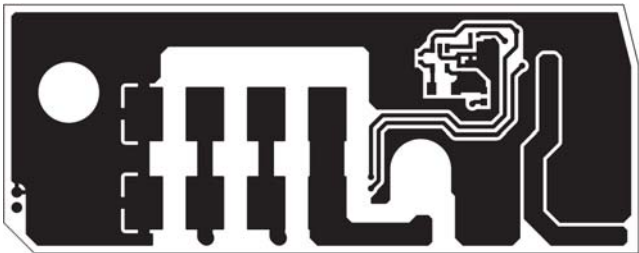


DNV Nemko Presafe AS
Org no: 997 067 401 mva

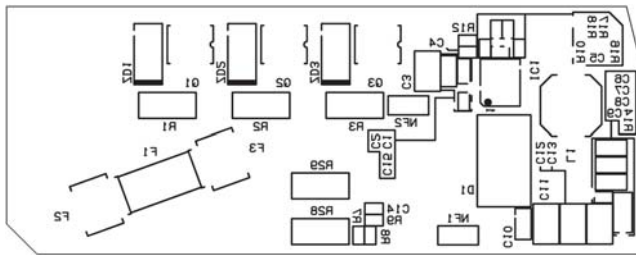
注 記 NOTES		改版担当者 REV. BY	改版日 REVISED DATE	図 番 DWG. NO.
改版回数 REV.	1	総頁数 PAGES	1	高橋俊介
承認 APPROVED	石橋勝	検 討 CHECKED	北村正英	製 図 DRAWN
			小野圭	作成日 DATE
			2014. 12. 16	E 3 - 6 9 9 1 - 5 4 4 5 - 6 0 - 0 1 K
RIKEN KEIKI		理研計器株式会社		機密情報 / CONFIDENTIAL



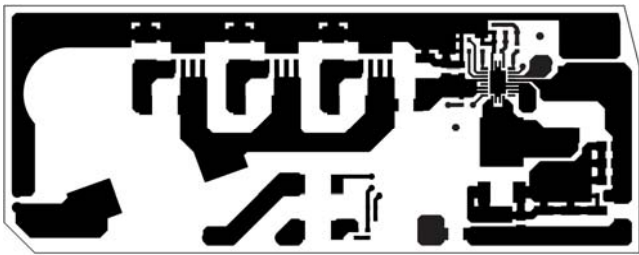
SILK PRINT FOR SOLDERING SIDE



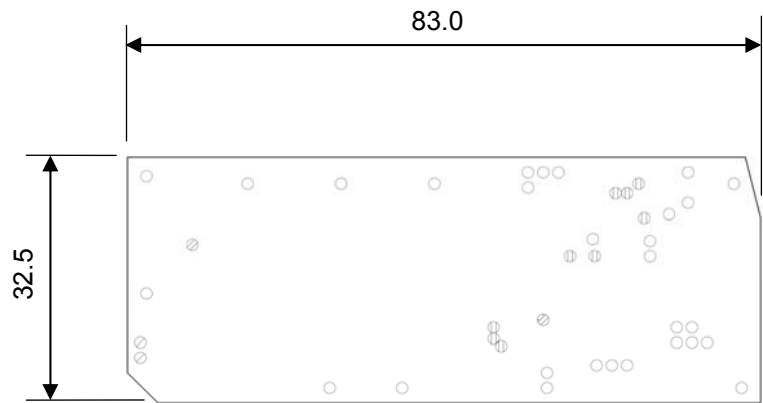
SOLDERING SIDE



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

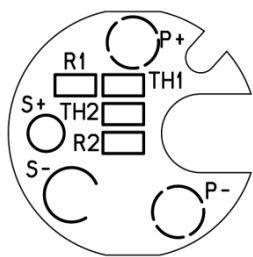
PARTS LIST

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

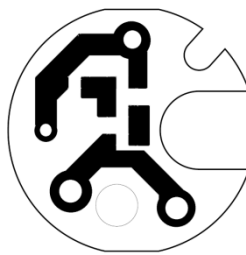
* marked parts are for safety

m marked parts are mounted or not

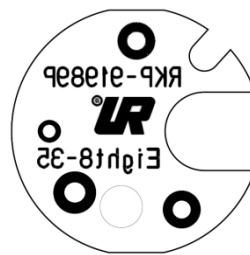
注 記 NOTES		改版担当者 REV. BY		改版日 REVISION	名 義 者
C4,C14		小野圭		2015.6.12	Presafe® DNV Nemko Presafe AS 097 067 401 mva
改版回数 REV.	2	総頁数 PAGES	1	CHARGER PCB FOR MODEL SDM-6000	
承認 APPROVED	石橋勝	検 討 CHECKED	北村正英	製 図 DRAWN	小野圭
		作成日 DATE		図 番 DWG. NO.	E 3 - 6 9 9 1 - 5 4 4 5 - 6 0 - 0 1 A
		2014.12.15			



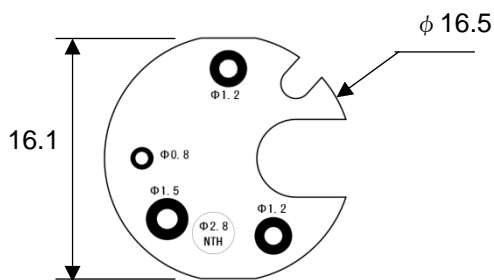
SILK PRINT FOR PARTS SIDE



PARTS SIDE



SOLDERING SIDE



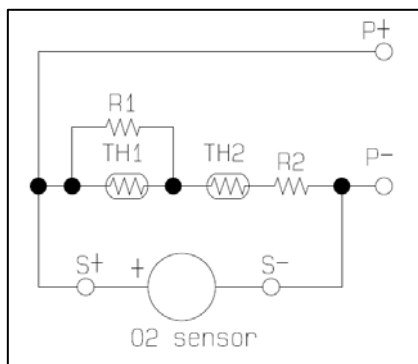
THROUGH HOLE DATA

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



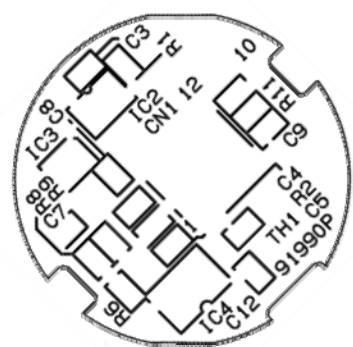
SCHEMATIC

PARTS LIST

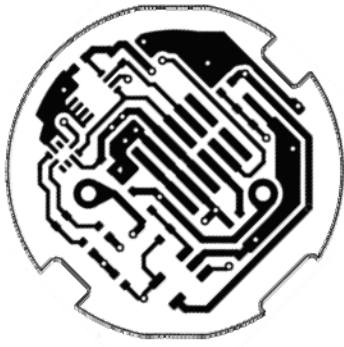
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
O2 SENSOR	OXYGEN SENSOR	Refer to M4-4080-01-01K	
R1,2	Chip fixed resistor or Chip jumper	10 ohm – 1M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
TH1,2	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1608)	m

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



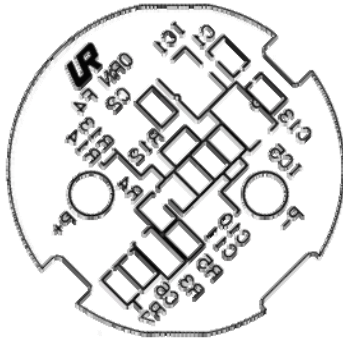
SILK PRINT FOR PARTS SIDE



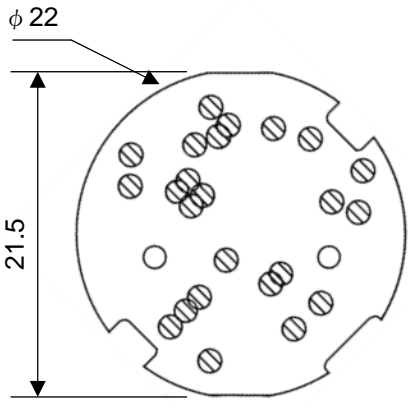
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

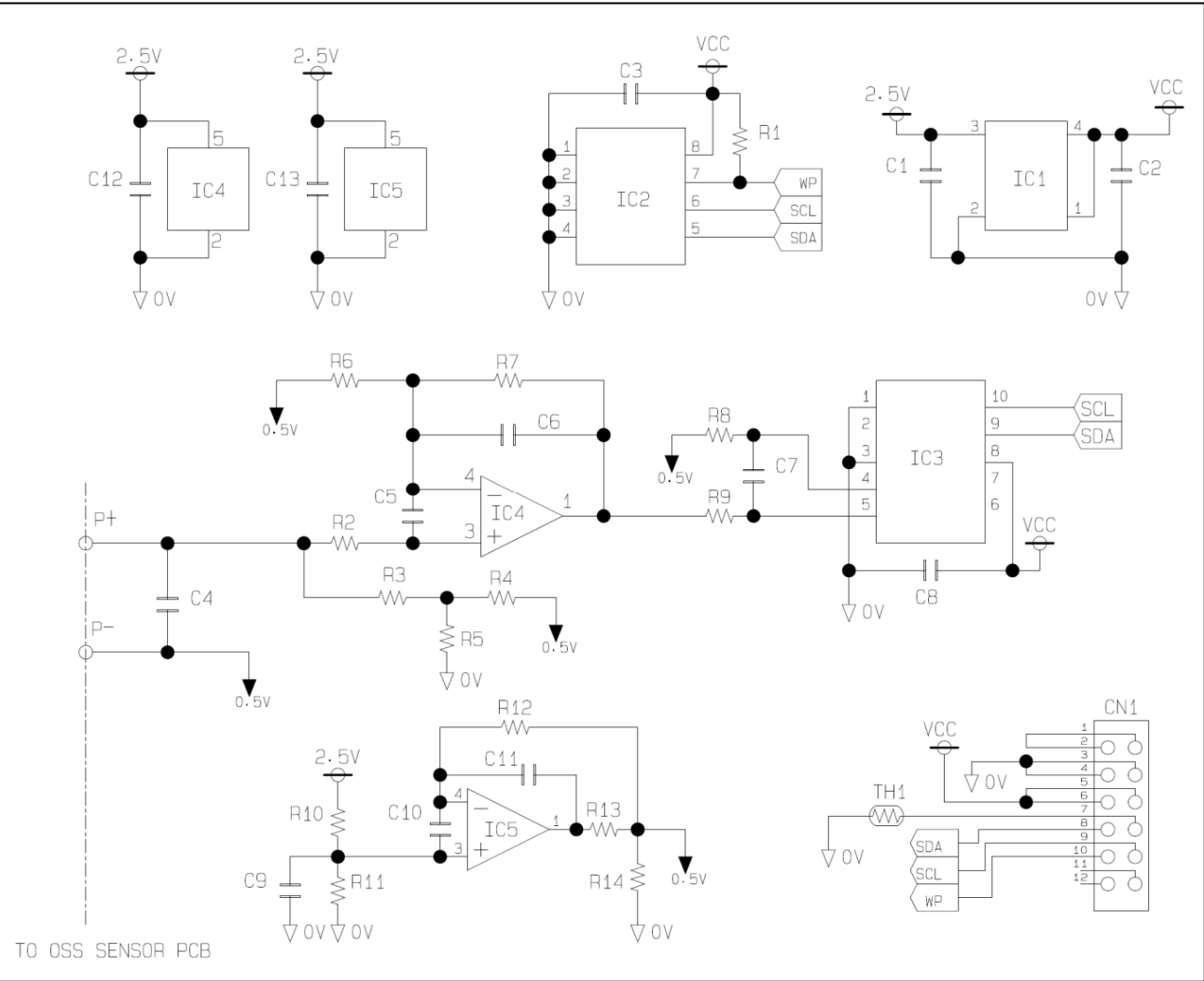
MARK	DIAGRAM	HOLE
⊙	φ 0.3	TH
○	φ 1.0	TH

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

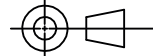
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	S-1313D25-N4T1	m
IC2	IC (EEPROM)	S-24C16CI-I8T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
IC4	IC(OPAMP)	OPA333AIDBV	m
IC5	IC(OPAMP)	AD8500AKS	m
TH1	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	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 改版日 REVISED BY DATE		Presafe® DNV Nemko Presafe AS Oss Digital PCB	
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
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL					

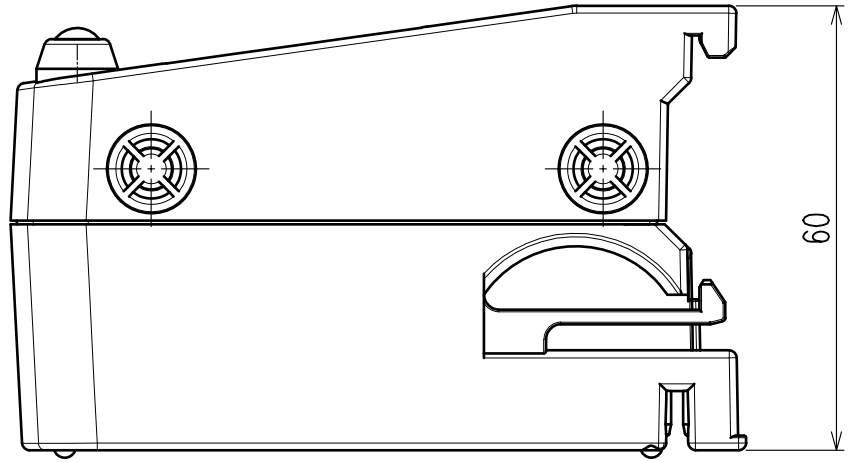
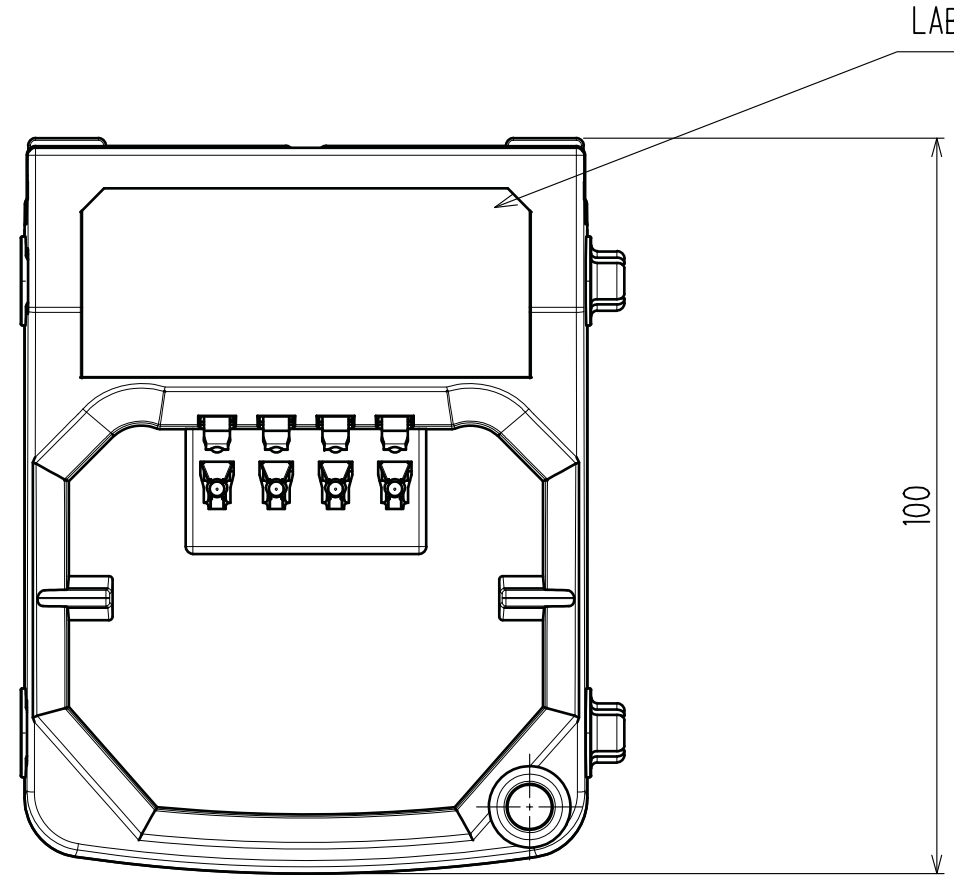
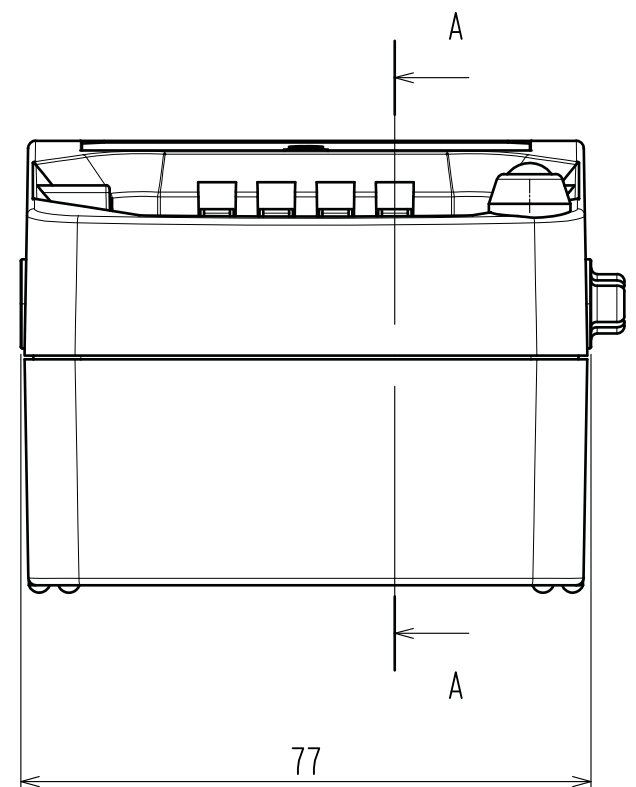
寸法	精度	0.1	中級	0.2	粗級	0.4	0.15	0.3	0.6	0.2	0.4	0.8	0.3	0.6	1.2	0.4	0.8	1.6	0.5	1.0	2.0	1000以上	1.2	1.2	2.5
18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上																			

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 2 : 1	投影法 PROJECTION 
材 質 MAT. ✍				
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	
青良治	武井康典	武田直樹	2015. 2. 24	

<div> <div>△ Presafe 記</div> <div> <div>名称 NAME</div> <div>OXYGEN SENSOR</div> </div> </div>		<div> <div>事 年 月 日</div> <div>訂 正 者</div> </div>
<div> <div> <div>DNV Nemko Presafe AS</div> <div>Org. no: 997 067 401 mva</div> </div> </div>		
<div> <div>図 番 DWG. NO.</div> <div>M4-4080-01-02K</div> </div>		

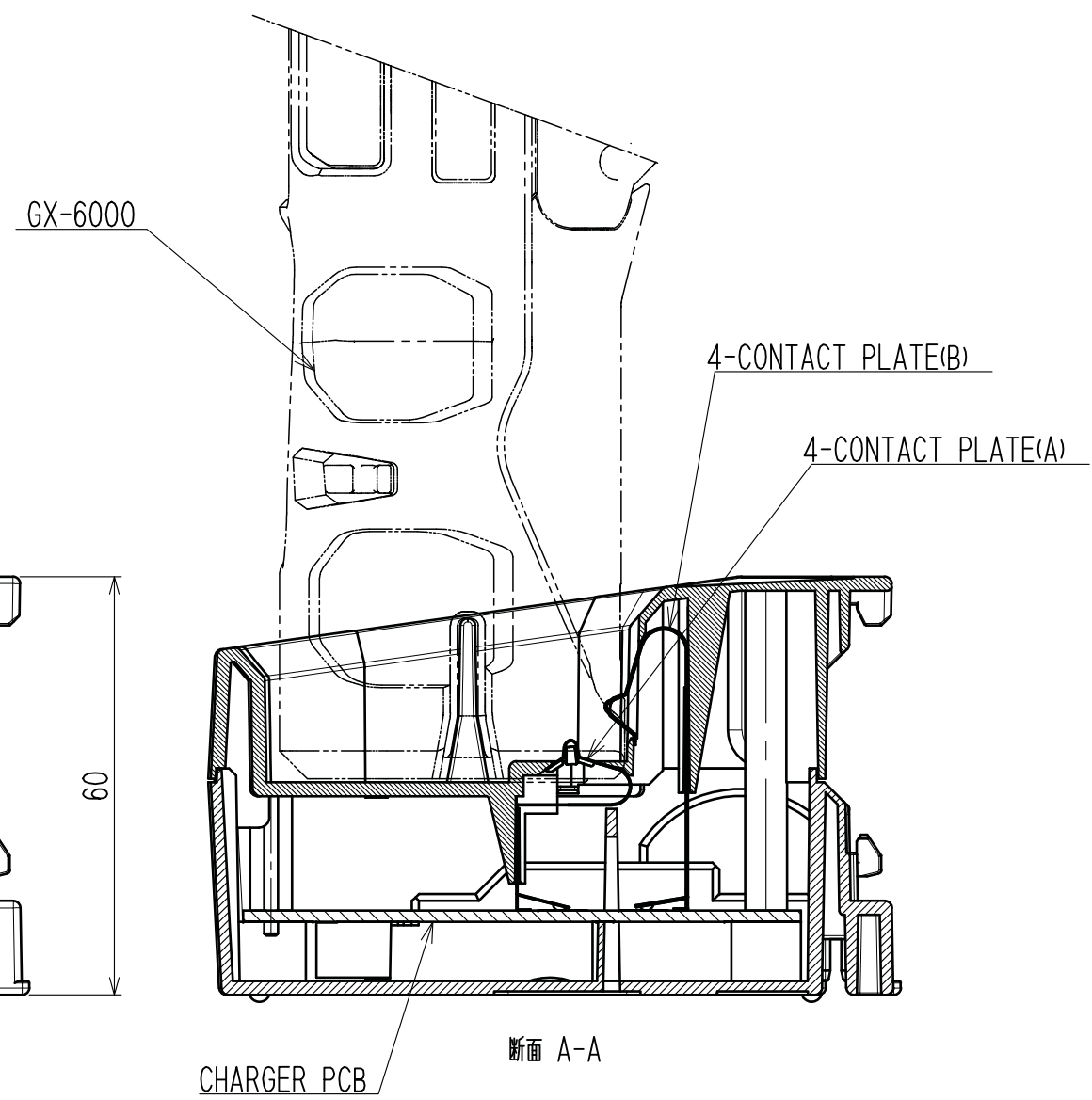
寸法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上	寸法
精度	0.1	0.15	0.2	0.3	0.4	0.5	0.7	精度
中級	0.2	0.3	0.4	0.6	0.8	1.0	1.2	中級
粗級	0.4	0.6	0.8	1.2	1.6	2.0	2.5	粗級



WARNING

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

Um=250V



表面処理 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
ADD LABEL		2015.3.27 近藤晴彦		
記事		年月日 訂正者		
RIKEN KEIKI		Presafe® DNV Namko Presafe AS Org. no: 997 067 401 mya 理研計器株式会社 機密情報 / CONFIDENTIAL		

