

CONSTRUCTION DETAILS

Refer to DETECTOR ASSEMBLY DWG.NO.AF30404000

1. LOWER ENCLOSURE - Component Recognized plastic (QMFZ2) by UL, Acrylonitrile - chlorinated, polyethylene - styrene (ACS), No.NF-920, rated 94V-0, manufactured by ASAHI CHEMICAL INDUSTRY CO.,LTD. Refer to DWG.NO.AF20400901d
Same component as used in Model 7155 photoelectric Smoke Detector.
2. COVER - Same material as item 1.
Refer to DWG.NO.CF20401002a.
3. WIND SCREEN - Same material as item 1.
Fits in the printed wiring board. Refer to DWG.NO.CF30401003
4. SUPPORT PLATE - Component Recognized plastic (QMFZ2) by UL, PC/ABS Polymer Alloy Designated "Iupilon", NO.PM2220, rated 94V-0, manufactured by MITSUBISHI ENGINEERING-PLASTIC CORP.
Refer to DWG.NO.AF30404001.
5. OUTER CHAMBER - Stainless steel plate. Approximate overall dimensions 43.2mm ID at bottom, 34mm ID at top, 20.5mm high, Nominally 0.3mm thick.
With 12 smoke entry openings Approx 4.5mm by 7.0mm on cover side.
Refer to DWG.NO.CF30401005.
6. INTERMEDIATE ELECTRODE - Stainless steel plate. Approximate overall dimensions 27mm OD, 6.2mm high, nominally 0.3mm thick. Refer to DWG.NO.CF40401010.
7. SCREW - Brass, M3X15, Ni plated, four provided.
With spring lock and plain washers.
8. SOURCE - Americium 241 (hermetically sealed)

Manufacturer	AEA Technology plc. Harwell,Oxfordshire,England
Product Code	AMMK 7544
Source Dimension	Overall ϕ 2.381 ~ ϕ 2.391
Radioactivity	0.8 microcurie (29.6kBq)

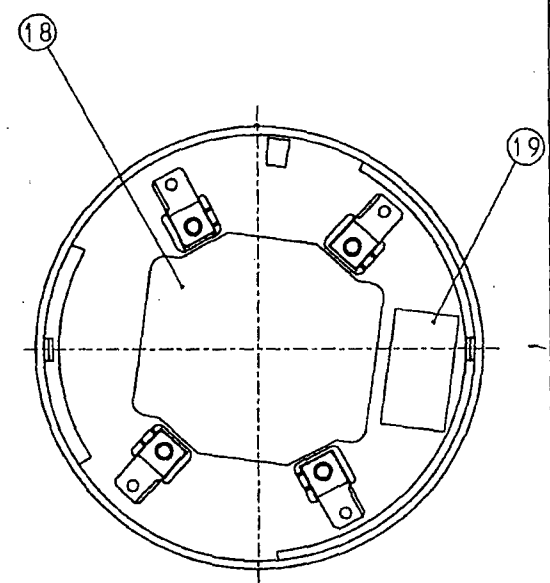
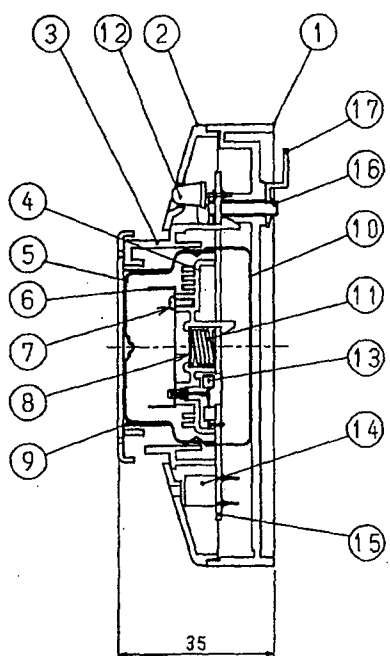
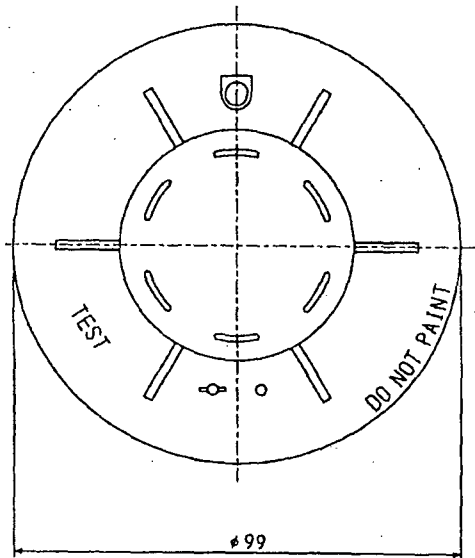
B-46

Number of source 1 piece
per detector

As refer to Certificate of Approval of Design for Special Form Radioactive Material, the source is loaded into a holder, fixed to the printed wiring board together with the support plate, and housed in the outer chamber.

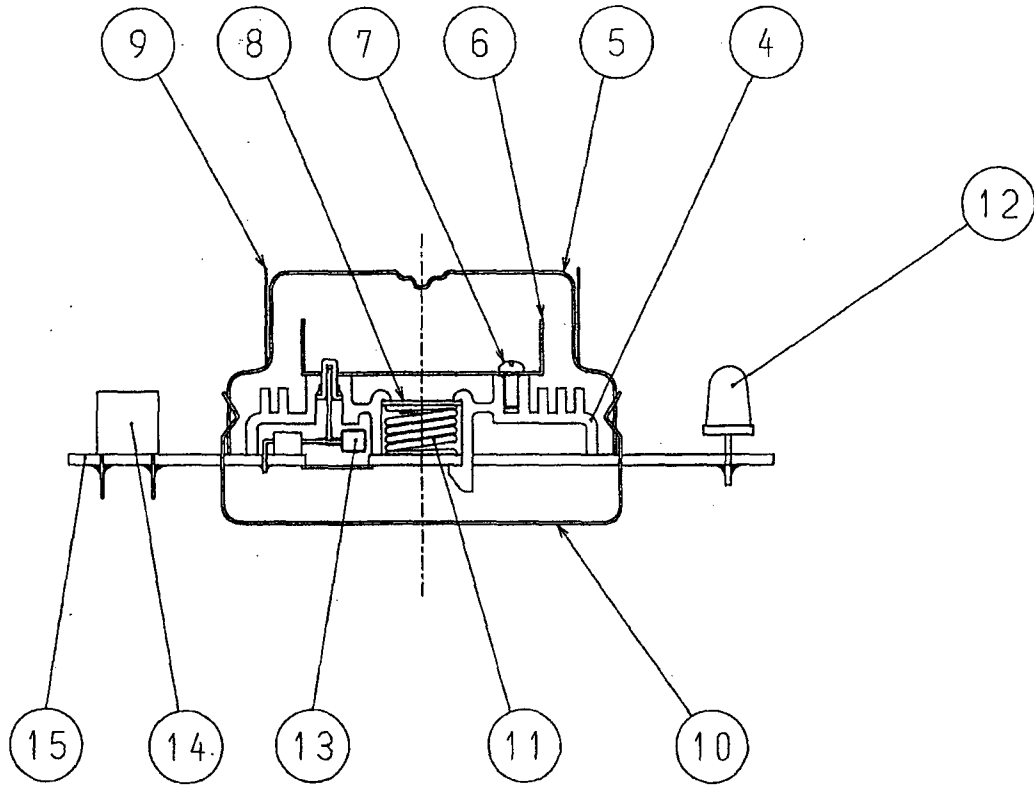
As can be seen from DETECTOR ASSEMBLY DWG. NO. AF30404000 / CHAMBER ASSEMBLY DWG. NO. AF30404098, the whole source is completely shielded with the metallic outer chamber and shield case so that the source can not be readily disassembled nor touched with finger.

9. INSECT SCREEN - Stainless steel screen, fits in item 5. Refer to DWG.NO.CF30401009.
10. SHIELD CASE - Stainless steel plate. Approximate overall dimensions 44.5mm ID, 6.7mm high, nominally 0.3mm thick. Refer to DWG.NO.AF30401006a.
11. SPRING - Stainless steel spring. Approximate overall dimensions 7.2mm O.D, 9.0mm high, nominally 0.8mm thick. Refer to DWG.NO.AF40404003
12. INDICATING LED - Built-in type.
13. FET - Refer to ELECTRICAL PARTS LIST(Q1)
14. CHECK TERMINAL - Phosphorus bronze, Sn plated, two provided. Nominally 0.3mm thick. Covered with thermoplastic cube (overall dimensions approx 6.5 by 6.8mm, 7.2mm high).
15. PRINTED WIRING BOARD - Component Recognized(ZPMV2) NO.YS-114, maximum solder bath temperature and time limits are not to be exceeded, Has a minimum flame rating of 94V-0. Refer to DWG.NO.SF30404004 and SF40404005 for Marking and Circuit Patterns information.
16. SCREW - Steel, Zn plated
17. CONTACT BLADE - Brass, Zn-Sn alloying plated, four provided. Nominally 1.0mm thick. Same component as used in the 7155 Detector.



- 1. LOWER ENCLOSURE
- 2. COVER
- 3. WIND SCREEN
- 4. SUPPORT PLATE
- 5. OUTER CHAMBER
- 6. INTERMEDIATE ELECTRODE
- 7. SCREW
- 8. SOURCE
- 9. INSECT SCREEN
- 10. SHIELD CASE
- 11. SPRING
- 12. INDICATING LED
- 13. FET
- 14. CHECK TERMINAL
- 15. PRINTED WIRING BOARD
- 16. SCREW
- 17. CONTACT BLADE
- 18. NAME PLATE
- 19. UL LABEL

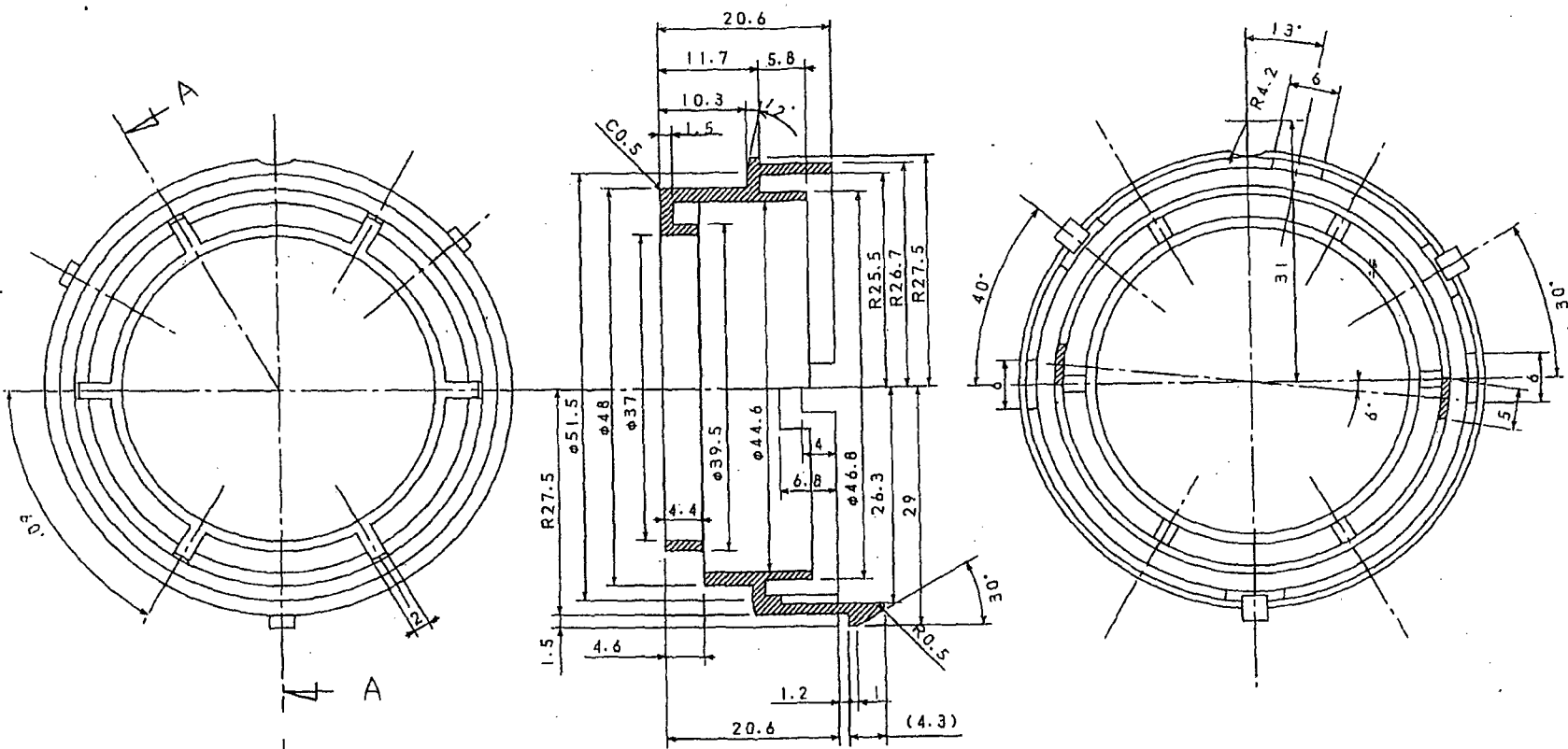
No.	DATE	DESCRIPTION	REV.	CHK.	APP.	TITLE;
						IONIZATION SMOKE DETECTOR
UNLESS OTHERWISE SPECIFIED TOLERANCE:		UNIT: mm	SCALE: 1 / 1			7051 DETECTOR ASSEMBLY
		DATE: SEP. 25 2002				DWG. NO. AF30404000
> 10.....	30±0.7	ANGLE ± 3°	DESIGNED BY	TRACED BY		
> 30.....	70±1.0		<i>A. Okada</i>			
> 70.....	150±1.2		CHECKED BY	APPROVED BY		
> 150.....	300±1.5		<i>J. Ishikawa</i>	<i>J. Ishikawa</i>		
> 300.....	500±2.0	(UNIT:mm)				NOHMI BOSAI LTD.



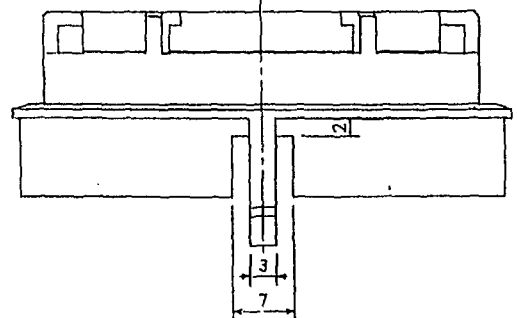
- 4. SUPPORT PLATE
- 5. OUTER CHAMBER
- 6. INTERMEDIATE ELECTRODE
- 7. SCREW
- 8. SOURCE
- 9. INSECT SCREEN
- 10. SHIELD CASE
- 11. SPRING
- 12. INDICATING LED
- 13. FET
- 14. CHECK TERMINAL
- 15. PRINTED WIRING BOARD

						TITLE: IONIZATION SMOKE DETECTOR	
NO.	DATE	DESCRIPTION	REV.	CHK.	APP.	CHAMBER ASSEMBLY	
UNLESS OTHERWISE SPECIFIED TOLERANCE:		UNIT: mm	SCALE: 2 / 1			DWG. NO. AF30404098	
		DATE: SEP. 25 2002					NOHMI BOSAI LTD.
> 10.....	30±0.7	ANGLE	DESIGNED BY	TRACED BY			
> 30.....	70±1.0	± 3'	A. Okada				
> 70.....	150±1.2		CHECKED BY		APPROVED BY		
> 150.....	300±1.5		J. Ishikawa		S. Ishikawa		
> 300.....	500±2.0	(UNIT: mm)					

MATERIAL: COMPONENT RECOGNIZED PLASTIC (DMF22) BY UL.
 ACRYLONITRILE-CHLORINATED, POLYETHYLENE-STYRENE (ACS).
 NO. NF-920, RATED 94V-0.

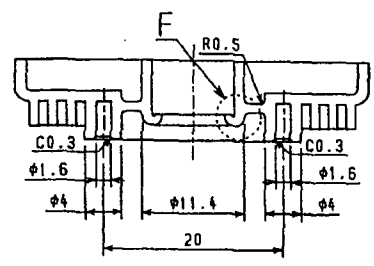


SECTION A-A

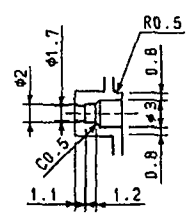


NO.	DATE	DESCRIPTION	REV.	APP.	IONIZAT ON SMOKE DETECTOR	
UNLESS OTHERWISE SPECIFIED TOLERANCES: UNIT: IN () SCALE: 2/1					TITLE: WIND SCREEN	
>10.....	±0.5	ANGLE	DATE: OCT. 18, '90		DWG. NO.	CF30401003
>30.....	±0.7		DESIGNED BY	TRACED BY		
>70.....	±1.0		<i>J. Kobayashi</i>			
>150.....	±1.2		CHECKED BY	APPROVED BY		
>300.....	±1.5		<i>S. Sasaki</i>	<i>Y. Tomita</i>		
>500.....	±2.0		(LIMIT: mm)			
					NOHMI BOSAI LTD.	

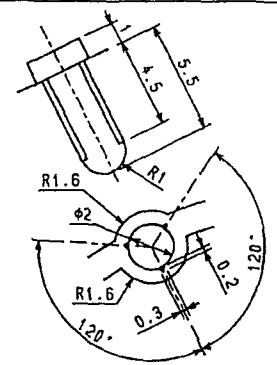
22002/1



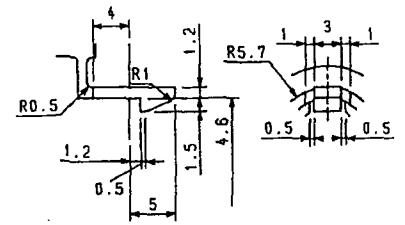
SECTION B-B



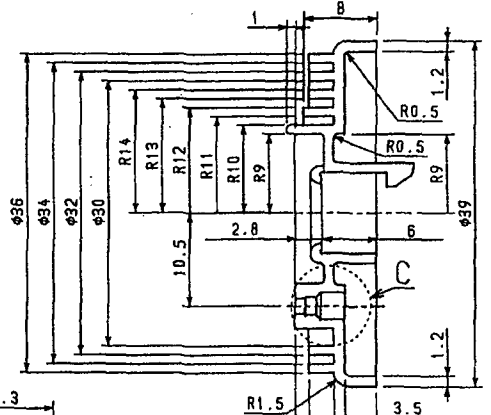
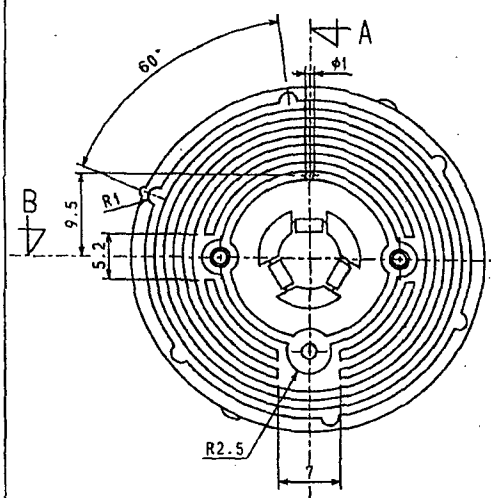
DETAIL "C" (5/1)



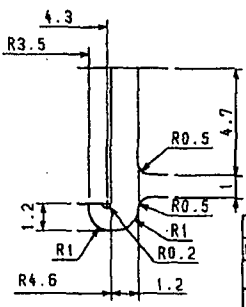
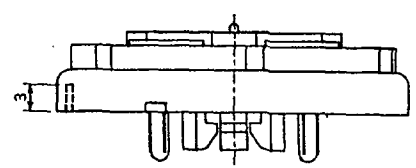
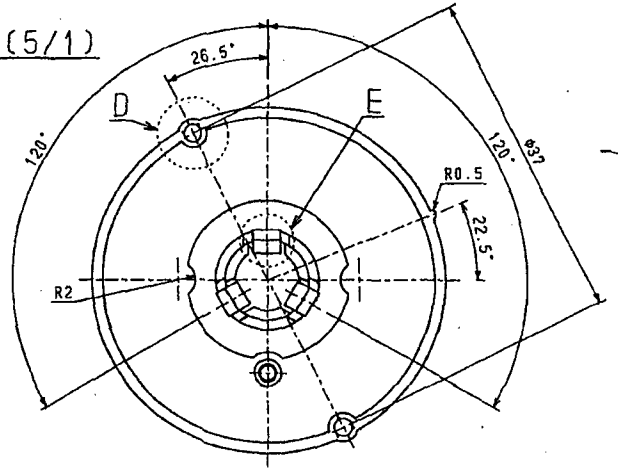
DETAIL "D" (5/1)



DETAIL "E"



SECTION A-A



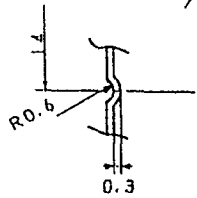
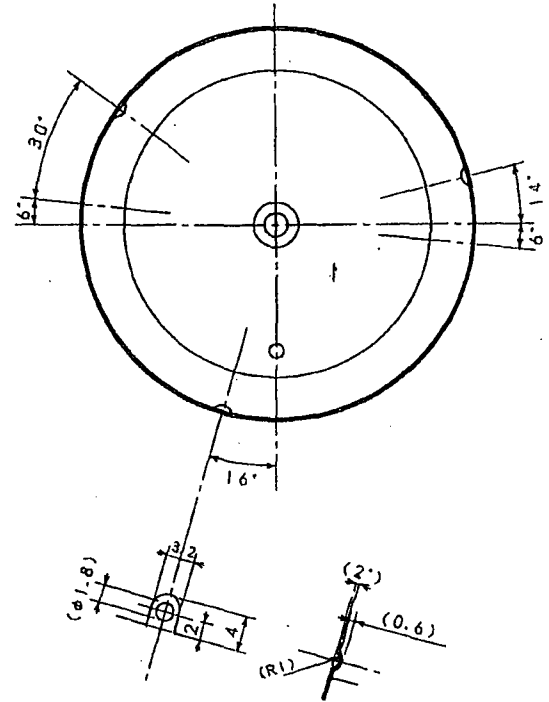
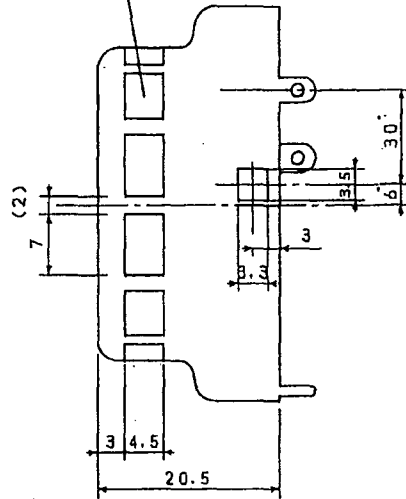
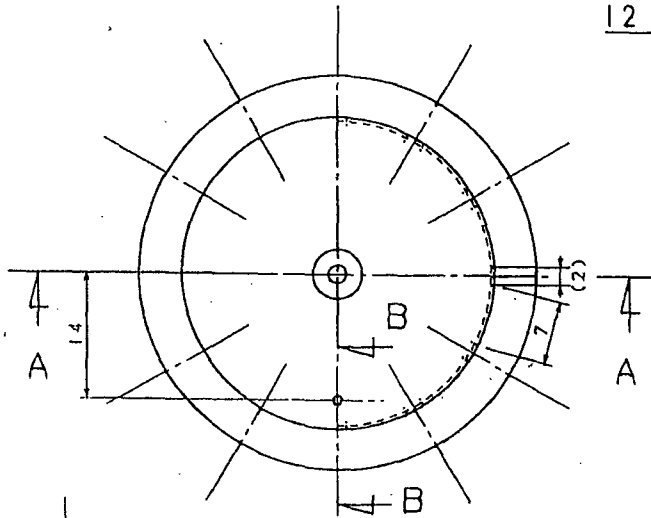
DETAIL "F" (5/1)

MATERIAL: COMPONENT RECOGNIZED PLASTIC (GMFZ2) BY UL.
PC/ABS POLYMER ALLOY DESIGNATED "Lupilon".
NO. PM2220. RATED 94V-0.

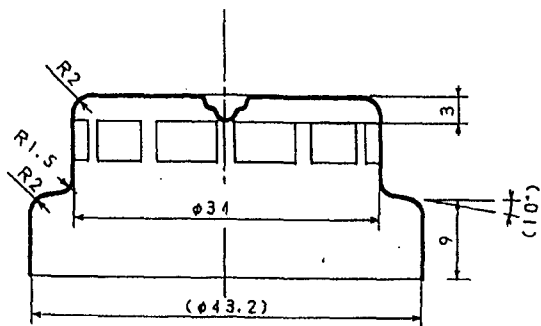
No.	DATE	DESCRIPTION	REV.	CHK.	APP.	TITLE:
						SUPPORT PLATE
UNLESS OTHERWISE SPECIFIED TOLERANCE:						IONIZATION SMOKE DETECTOR
> 10	±0.5	ANGLE	UNIT: mm	SCALE: 2 / 1	DATE: SEP 25 2002	DWG. NO. AF30404001
> 30	±0.7	± 3°	DESIGNED BY	TRACED BY		
> 70	±1.0		A. Akada			
> 150	±1.2		CHECKED BY	APPROVED BY		
> 300	±1.5		f. Ishikawa			
> 500	±2.0					
(UNIT: mm)						NOHMI BOSAI LTD.

MATERIAL: STAINLESS STEEL PLATE
SUS 304, NOMINALLY 0.3 mm THICK

12 OPENINGS



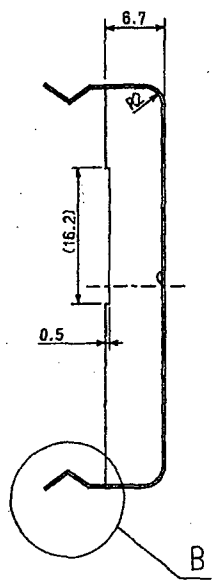
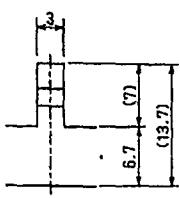
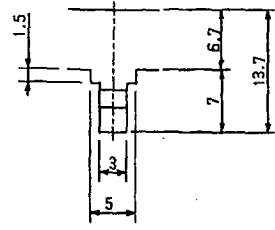
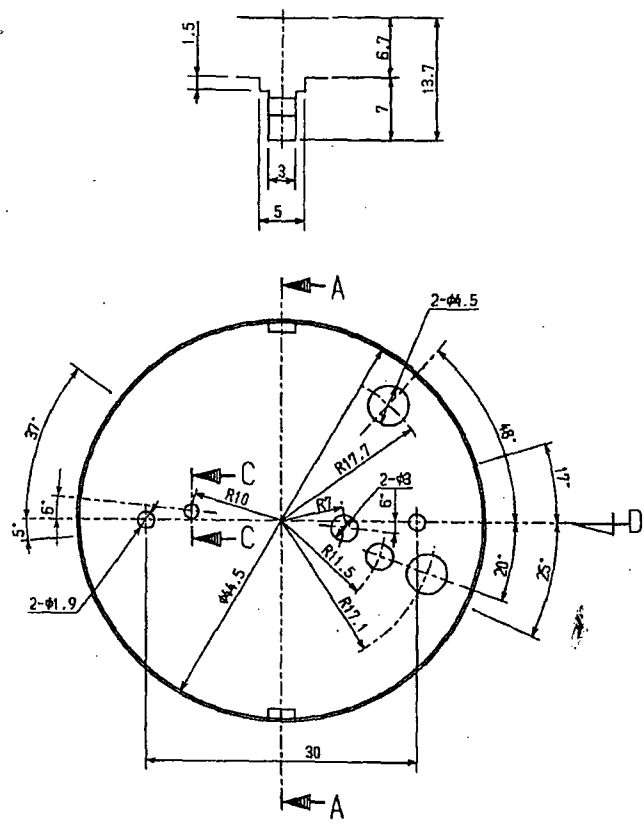
SECTION B-B (5/1)



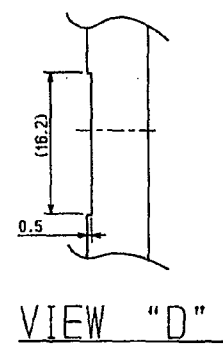
SECTION A-A

NO.	DATE	DESCRIPTION	REV.	APP.	IONIZATION SMOKE DETECTOR	
UNLESS OTHERWISE SPECIFIED TOLERANCES:					TITLE: OUTER CHAMBER	
<10	±0.5	ANGLE	UNIT: mm	SCALE: 2/1	DWG. NO. CF30401005	
>10.....30	±0.7	±3°	DATE: OCT. 18, '90		NOHMI BOSAI LTD.	
>30.....70	±1.0		DESIGNED BY	TRACED BY		
>70.....150	±1.2		I. Kobayashi			
>150.....300	±1.5		CHECKED BY	APPROVED BY		
>300.....500	±2.0	T. Takahashi				
(UNIT: mm)						

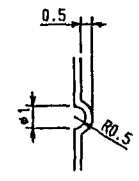
MATERIAL: STAINLESS STEEL PLATE
SUS 304, NOMINALLY 0.3mm THICK



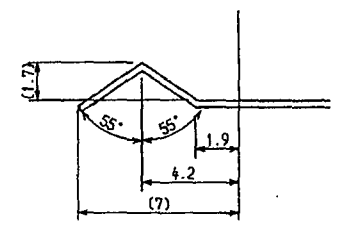
SECTION A-A



VIEW "D"



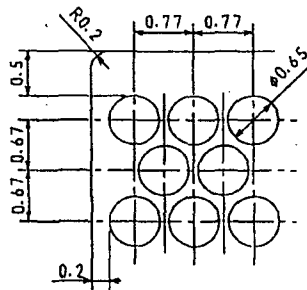
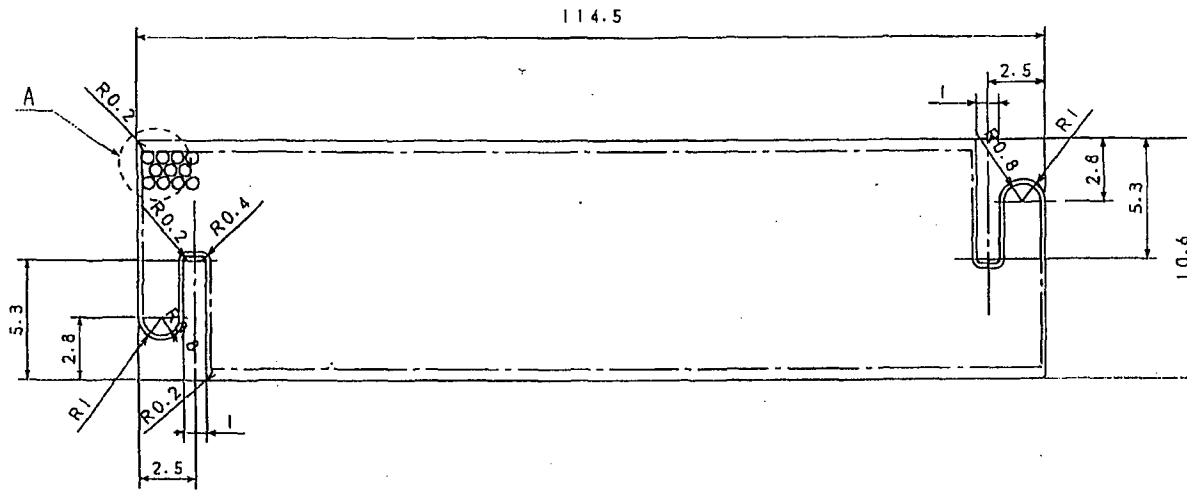
SECTION C-C (5/1)



DETAIL "B" (5/1)

SEP. 25 '02	Addition of phi 3 hole	<i>A. Blada</i>	<i>I. Kobayashi</i>	<i>Y. Tomita</i>	TITLE:
No.	DATE	DESCRIPTION	REV.	CHK.	APP.
UNLESS OTHERWISE SPECIFIED TOLERANCE:		UNIT: mm	SCALE: 2 / 1	TITLE: IONIZATION SMOKE DETECTOR	
> 10.....	±0.5	DATE: OCT. 18 '90	TRACED BY		DWG. NO.
> 30.....	±0.7	DESIGNED BY	I. KOBAYASHI		AF30401006a
> 50.....	±1.0	CHECKED BY	T. SASAKI		APPROVED BY
> 70.....	±1.2	ANGLE ± 3'	Y. TOMITA		NOHMI BOSAI LTD.
> 150.....	±1.5				
> 300.....	±2.0				
	(UNIT: mm)				

MATERIAL: STAINLESS STEEL PLATE
SUS 304 NOMINALLY 0.1mm THICK

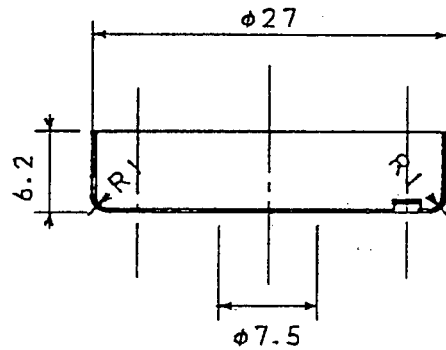
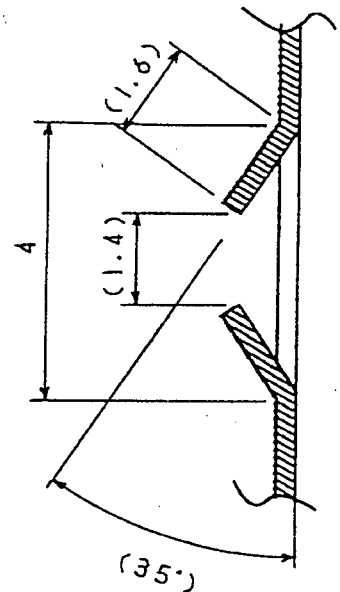
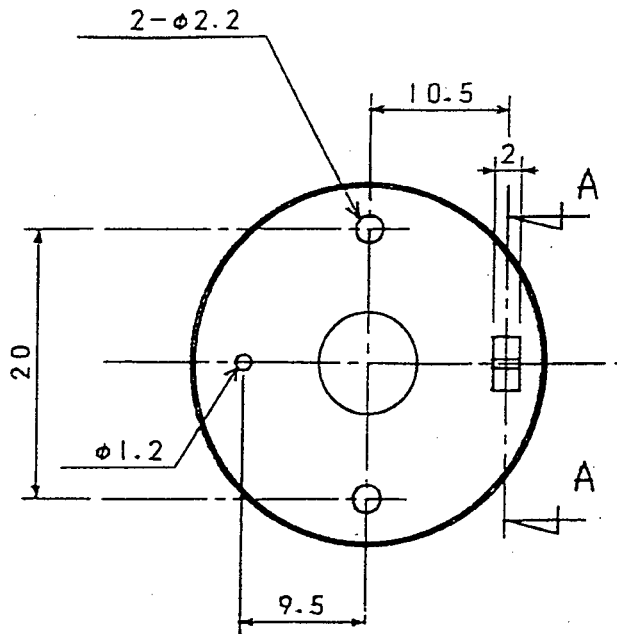


DETAIL "A" (10/1)

NO.	DATE	DESCRIPTION	REV.	APP.	IONIZATION SMOKE DETECTOR	
UNLESS OTHERWISE SPECIFIED TOLERANCE: UNIT: mm SCALE: 5/1					TITLE: INSECT SCREEN	
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>30.....	70±1.0		I. Kobayashi			
>70.....	150±1.2		CHECKED BY	APPROVED BY		
>150.....	300±1.5		T. Sasaki		Y. Tomita	
>300.....	600±2.0		(UNIT: mm)			
					NOHMI BOSAI LTD.	

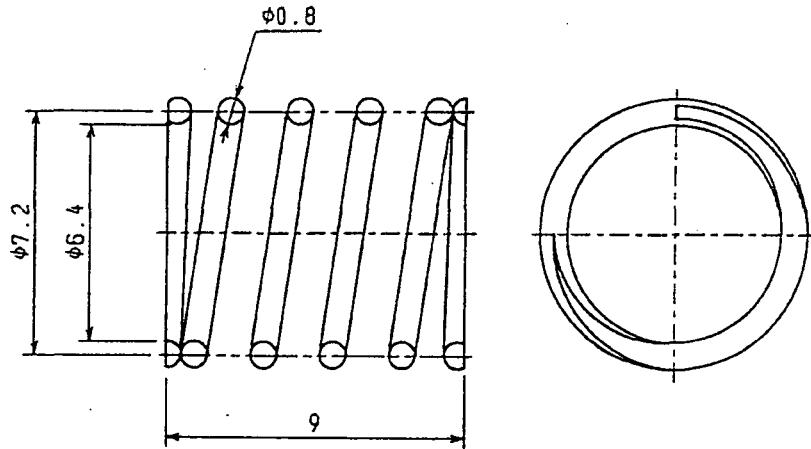
MATERIAL: STAINLESS STEEL PLATE

SUS 304. NOMINALLY 0.3 mm THICK



SECTION A-A
(10/1)

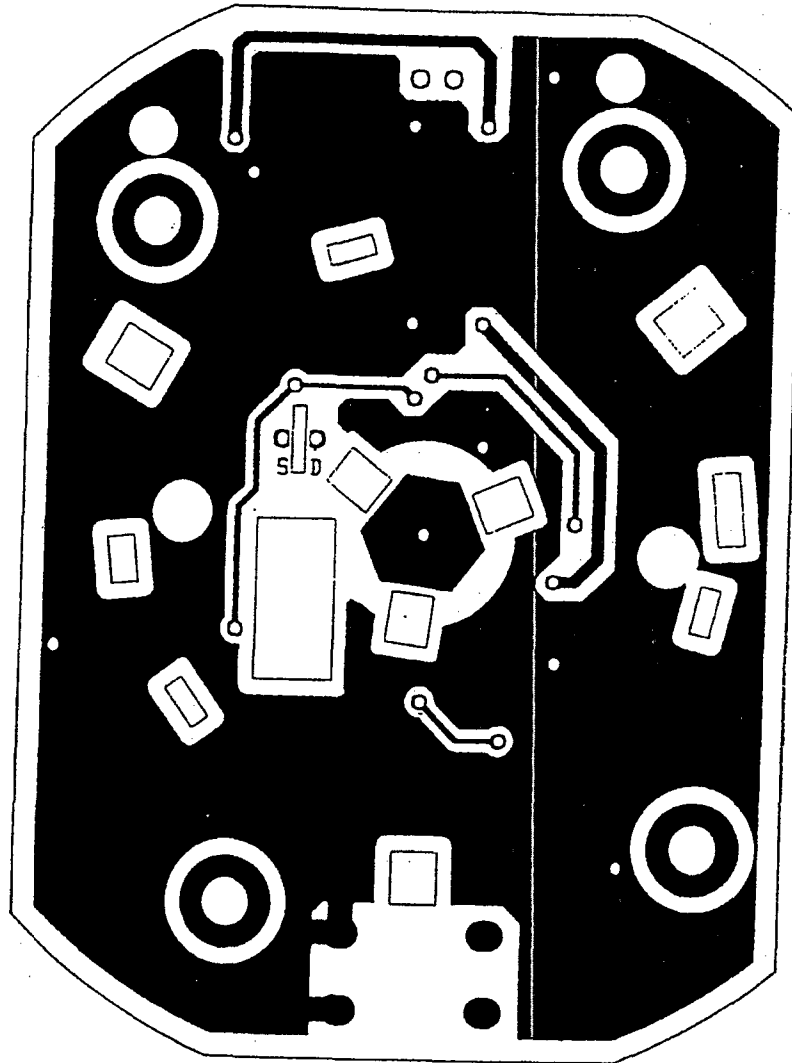
NO.	DATE	DESCRIPTION	REV.	APP.	IONIZATION SMOKE DETECTOR		
UNLESS OTHERWISE SPECIFIED TOLERANCE:					UNIT: mm	SCALE: 2/1	TITLE:
≤10.....	±0.5	ANGLE ±3°	DATE: Oct. 27 '91		INTERMEDIATE ELECTRODE		
>10.....	±0.7		DESIGNED BY	TRACED BY	DWG. NO.		
>30.....	±1.0		<i>J. Kobayashi</i>		CF40401010		
>70.....	±1.2		CHECKED BY	APPROVED BY	NOHMI BOSAI LTD.		
>150.....	±1.5		<i>T. Sasaki Y. Tomita</i>				
>300.....	±2.0	(UNIT: mm)					



MATERIAL	SUS304-WPA	
DIAMETER OF SPRING MATERIAL(mm)	0.8	
AVERAGE DIAMETER OF COIL (mm)	7.2	
INSIDE DIAMETER OF COIL (mm)	6.4	
EFFECTIVE NUMBER OF COILS	4.5	
TOTAL NUMBER OF SPRING COILS	6.5	
THE DIRECTION OF A VOLUME	RIGHT	
FREE HEIGHT (mm)	9	
FOR ASSEMBLY	HEIGHT (mm)	5.5
	OVERWEIGHT (N)	7.7N \pm 10%
SPRING CONSTANT	0.22	

DATE	DESCRIPTION	REV.	CHK.	APP.	TITLE; IONIZATION SMOKE DETECTOR
UNLESS OTHERWISE SPECIFIED TOLERANCE; $\leq 10 = \pm 0.5$ > 10..... 30 = ± 0.7 > 30..... 70 = ± 1.0 > 70..... 150 = ± 1.2 > 150..... 300 = ± 1.5 > 300..... 500 = ± 2.0 (UNIT;mm)					SCALE; 5 / 1 DATE; SEP. 25 2002 DESIGNED BY <i>A. Okada</i> CHECKED BY <i>J. Ishikawa</i>
ANGLE $\pm 3^\circ$					TRACED BY APPROVED BY <i>J. Ishikawa</i>
SPRING DWG. NO. AF40404003 NOHMI BOSAI LTD.					

CIRCUIT PATTERN



COMPONENT RECOGNIZED (ZPMV2), NO. YS-114,
RATED 94V-0, NOMINALLY 1.2MM THICK

				TITLE:	
DATE	DESCRIPTION	REV.	CHK.	APP.	IONIZATION SMOKE DETECTOR
UNLESS OTHERWISE SPECIFIED TOLERANCE:		UNIT: mm	SCALE: 2 / 1		CIRCUIT PATTERNS(SIDE B)
$10 \dots 30 = 0.5$	ANGLE = 3°	DATE:	SEP. 25	2002	DWG. NO.
$30 \dots 70 = 0.7$		DESIGNED BY:	S. Tomimoto		SF40404005
$70 \dots 150 = 1.0$		CHECKED BY:	T. Okada		NOHMI BOSAI LTD.
$150 \dots 300 = 1.2$		APPROVED BY:	[Signature]		
$300 \dots 500 = 1.5$					
$500 \dots 1000 = 2.0$					
(UNIT: mm)					