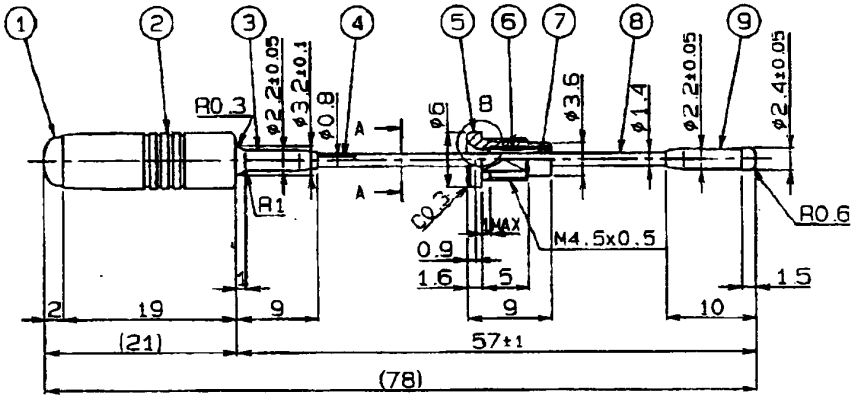
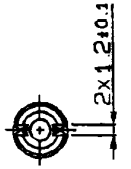
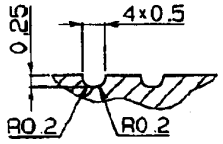
DO NOT SCALE DRAWING

SA4357

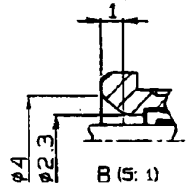




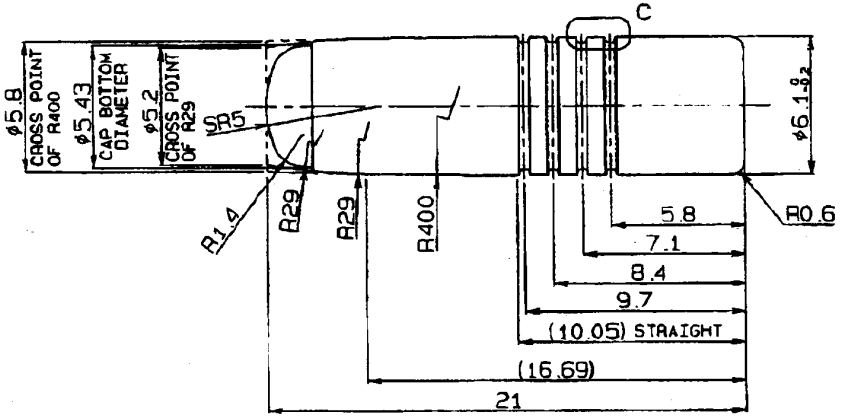
A-A



C (10: 1)



B (5: 1)



DETAIL TOP (S5: 1)

1. Tolerance, not stated to be ±0.2
2. Nut part to clear Screw thread (grade 2)
3. Cap not to rotate and not to have gap.
   Cap rotate as to havndary sample.

ITEM	DESCRIPTION	QUANTITY	MATERIAL TREATMENT	PART DRAWING NO.	NOTE
9	STOPPER	1	ALUMINIUM·MACr		
8	TUBE	1	PBT		GRAY
7	HOLDER LING	1	BRASS · NBNi		
6	SPRING	1	C1720R		
5	HOLDER	1	ZDC · MZNi		
4	ELEMENT	1	Ni-Ti		
3	TOP PLUG	1	ALUMINIUM·MACr		
2	TOP	1	ABS		OC-P045 (GRAY)
1	CAP	1	ABS · MLCr		

SCALE	DESIGNED	DRAWN	INSPECTED	APPROVED	DESCRIPTION
2:1	T. Ishiyama 2.APR.'01	M. ogawa 2.APR.'01			OUTSIDE APPEARANCE DRAWING (PROPOSAL)

UNIT	MASS
mm	

日本アンテナ株式会社
NIPPON ANTENNA CO., LTD.

DRAWING NO. 2L13-0403-1E

SYM	DATE	REVISION RECORD	APPD.	APPR.

MARK	DIMENSION	TOLERANCE
1	φ20	±0.2
2	20.1	±0.3
3	20.6	±0.3
4	21.0	±0.3
5	21.5	±0.3
6	21.0	±0.3
7	21.5	±0.3
8	21.0	±0.3
9	21.5	±0.3
10	21.0	±0.3
11	21.5	±0.3
12	21.0	±0.3
13	21.5	±0.3
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92	21.0	±0.3
93	21.5	±0.3
94	21.0	±0.3
95	21.5	±0.3
96	21.0	±0.3
97	21.5	±0.3
98	21.0	±0.3
99	21.5	±0.3
100	21.0	±0.3

A3

NO.

7. Environmental Resistance

7-1. Vibration Resistane :
5-3 and 6-1 to be satisfied after 5-150 Hz of vibration test to 3 directions under the condition
Antenna fully retracted
Acceleration : 3G constant.
Sweep : 20 minutes.

7-2. Humidity Resistance :
5-3 and 6-1 to be satisfied after humidity test Antenna fully retracted and under following condition.
Leave for 96 hours under condition of 40±2℃, 90-95% then leave for 2hours at room temperature after removing moisture.

7-3. Humidity resistance operation.
5-3 and 6-1 to be satisfied after left in test chamber of 40±2℃, relative humidity 90-95% for 1-2 hours.

7-4. Working Temperature :
5-3 and 6-1 to be satisfied after left for 1-2 hours at -40℃ and +85℃ for Working temperatuure.
(Heat resistance/Cold resistance woking.)

7-5. Storge Temperature :
To be no parmanent abnormality or deformation at -40 - +85℃.
But Bending of element on condition of Antenna fully retracted, fixed to your specified body to be allowed.

7-6. High temperature withstand :
5-3 and 6-1 to be satisfied after left at +85℃ for 96 hours, than 2 hours in room temperature.
To be no permanent abnormality or deformation.

7-7. Low temperature withstand :
5-3 and 6-1 to be satisfied after left at -40℃ for 96 hours, than 2 hours in room temperature.
To be no permanent abnormality or deformation.

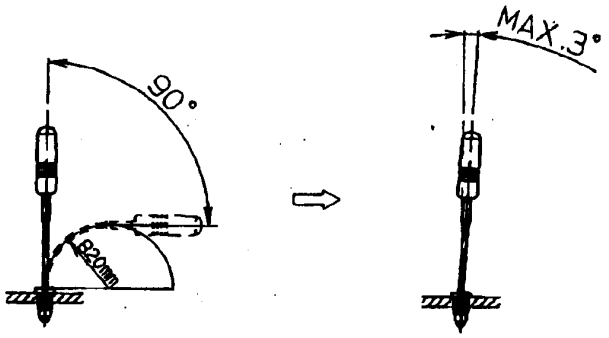
7-8. Temperature cycle :
5-3 and 6-1 to be satisfied after 20 cycles at 1 cycle condidion of -40℃/30 minutes at +85℃/30 minutes, than left 2 hours in room temperature.
To be no permanent abnormality or dformation.

NIPPON ANTENNA

NO.

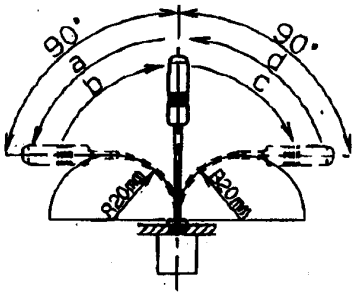
6-6. Bending Force:

Bend to be MAX.3° after returned by itself ,under condition of force the Top and give a 90° bend against a R10 mm cylinder, element extended and holder fixed. Howver, part



6-7. Anti-Cleep Age Performance :

To be no break after following condition.
Bend 90° left and by hand to R10 mm cylinder, holder fixed.
1000 cycles, 1 cycie to be (a-b-c-d)at speed of 20 cycle/Minute.
Bending deformation of element allowed.



6-8. Shock Resistance :

5-3 and 6-1 to be satisfied after spontaneous drop 6 times from 150 cm height to concrete floor, drop antenna downwards under the condition of element fully retracted to specified phone body. Weight of the phone body is 75g. But Top part Scratch, Whiting, dent and Top plug bent to be allowd.

6-9. Holder Strength :

Not to break after putting 78.4 N・cm(8 kgf・cm) of fixing torque to your specified phone body.

NIPPON ANTENNA

NO.

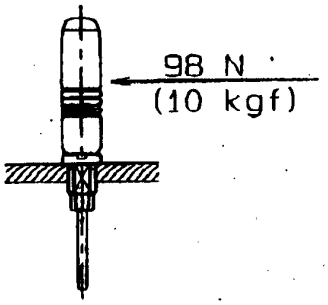
6. Mechanical Characteristics

6-1. Extension and Retraction Initial Force :
Holder-Top plug: 1.96- 4.9 N (200-500 gf) (Nippon Antenna insection: 2 -4.8 N (204-490 gf)
Holder-Stopper : 1.96- 4.9 N (200-500 gf) (Nippon Antenna insection: 2 -4.8 N (204-490 gf)
After initialinspection to be 0.98- 4.9 N(100~500 gf.)

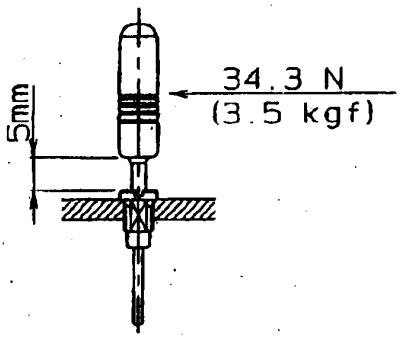
6-2. Extension and Retraction Force (Endurance)
To be MIN. 0.98N(100gf) after 10,000 cycles at 30 times/Minute

6-3. Pulling Force :
Element not to come off after adding 98 N(10 kgf) for 60 seconds to direction of axial, under condition of the element To satisfy 5-3 and 6-1.

6-4. Break Strengthl :
Top part and Top plug not to break after 98 N(10kgf) for 30 seconds to the Top bottom part at direction of 90° center element axial, under condition of the holder fixed and Top part retracted. Bend to be allowed.



6-5. Break Strength2 :
Top part and Top plug not to break after34.3N(3.5kgf) for 30seconds to the Top bottom part at direction of 90° center element axial, under condition of the holder fixed and Top part extended 5 mm from the holder surface. Bend to be allowed.



NIPPON ANTENNA

NO.

Retractable Antenna Performance

1. Description : Retractable whip type hand portable Cellular antenna

2. Your Part Number : 1AD4L90A04357

3. Model Name : SA4357

4. Appearance and Architecture : As on drawing.
There should be no damage on outside appearance such as scratch, dirt or plating at the beginning.

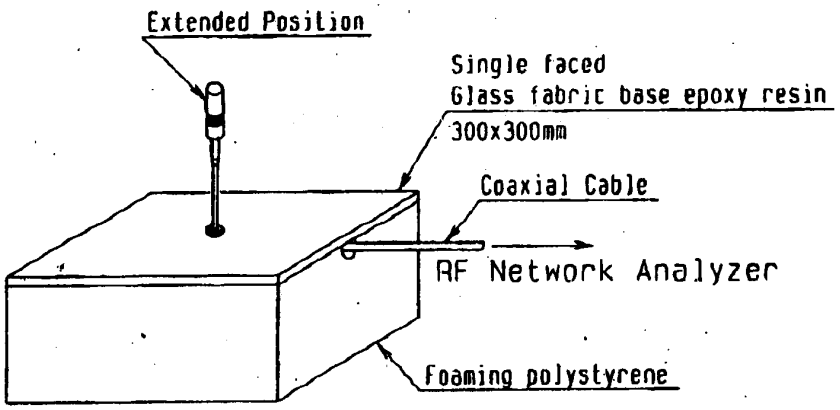
5. Electrical Characteristics

5-1. Contact Resistance :
Extended position, Holder-Stopper : MAX. 1Ω
Retracted position, Holder-Top plug: MAX. 1Ω

5-2. Operating Frequency Range : ** MHz

5-3. VSWR : Within operating frequency, fixed to requested body, flip opened.
Extended position MAX. **
Retracted position MAX. **

Dispatch inspection will be as following.
Resonant frequency to be within ** ± ** MHz and return loss should be MAX. ** dB in resonant frequency when the antenna is extended and mounted to 300×300mm earth plate.



2L13-0403-M1E(1/4)

APPROVED	INSPECTED	DESIGN
3/4/'01		3. Apr. '01

NIPPON ANTENNA