Operational Description

FCC ID:AEZSCP-5K

Model:SCP-5000

SANYO SCP-5000 is a Dual-Band Mode digital CDMA/AMPS phone. It is designed to comply with Part 15, Part 22 and Part 24 of the CFR.

PCS Band (CDMA):

TX Frequencies:	1851.25MHz	-	1908.75MHz
RX Frequencies:	1931.25MHz	-	1988.75MHz
LO Frequencies:	1720.87MHz	-	1778.37MHz
TCXO Frequency:	19.68MHz		

Cellular Band (AMPS)

TX Frequencies:	824.040MHz	-	848.970MHz
RX Frequencies:	869.040MHz	-	893.970MHz
LO Frequencies:	954.42MHz	-	979.35MHz
TCXO Frequency:	19.68MHz		

CDMA Max. Conducted Output Power : +25.2dBm (0.33W)
AMPS Max. Conducted Output Power: +24.9dBm (0.31W)

Battery voltage: 3.7V Nominal, 3.4 Min., V Li-ion (Supplied with phone)

Frequency Stabilization

A voltage controlled temperature compensated crystal oscillator (VCTCXO) is utilized as a frequency reference for all of the transceiver local oscillators. This crystal oscillator is specified to a frequency stability of +/- 2.5ppm over temperature and voltage variations. The synthesizer lock status is constantly monitored by the microprocessor and transmission is disabled whenever an out of lock condition is detected. The mobile is locked to the base station during operation. The mobile receiver constantly monitors the received signal from the base station and makes necessary frequency adjustments on the VCTCXO to correct any frequency errors between the mobile and he base station.

Suppression of Spurious Radiation

Spurious and harmonic suppression is achieved by proper design with various filters and sufficient use of EMI shields. Rigorous testing at the factory ensures continuous compliance.

Limiting Power

Each mobile is individually calibrated at the factory to ensure Max. power of no more than +25.2dBm for PCS CDMA and +24.9dBm for AMPS by employing a proper frequency and temperature compensation schemes for both the TX and RX automatic gain control (AGC) amplifiers. There are also hardware circuitries to monitor TX power and software reset limits to limit maximum TX power.

Limiting Modulation

The audio input is sampled, digitally limited, and then filtered to amplitude and frequency limit the signal applied to the modulator. The device supports AMPS standards and ANSI J-STD-008 for CDMA operation. The device has an operating temperature range of –30 to +60C. The functions include Compandor, PLL lock detector for received SAT, filtering of received data, and audio signal filtering for signals.

Retractable Antenna Performance

1. Description : Retractable whip type hand portable Cellular antenna

2. Your Part Number :

3. Model Name : SCP-5000

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

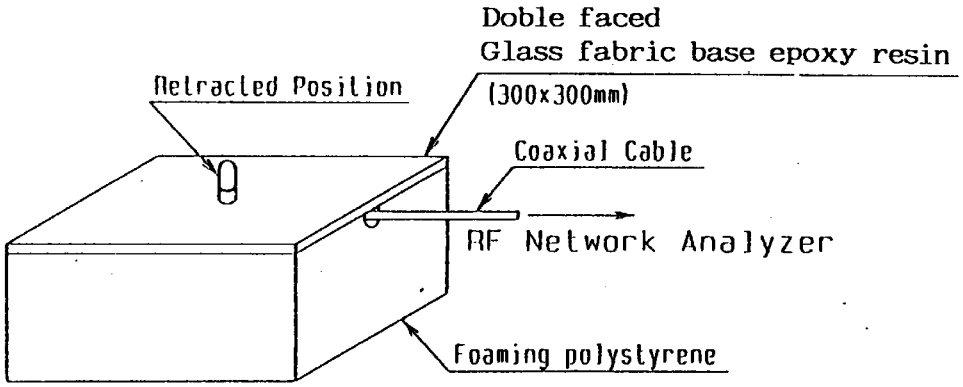
5. Electrical Characteristics

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

5-2. Operating Frequency Range : 825 - 894 MHz (Fre. 1)
1850 - 1989 MHz (Fre. 2)

5-3. VSWR : Within operating frequency, fixed to requested body.
Within Fre. 1
Extended position MAX. 2.2
Retracted position MAX. 3.6
Within Fre. 2
Extended position MAX. 3.3
Retracted position MAX. 4.5

Dispatch inspection will be as following.
Resonant frequency to be within 1 675±20 MHz and return loss should be MAX. -3dB in resonant frequency when the antenna is retracted and mounted to 300×300 mm earth plate.



MS0007A-M00E

APPROVED	INSPECTED	DESIGN
3/8/'00	K. SEKI 3/8/'00	3. Aug. '00

NIPPON ANTENNA

6. Mechanical Characteristics

6-1. Extension and Retraction Initial Force :

Holder-Top plug: 1.96-6.08 N (200-620 gf) (Nippon Antenna insection: 1.96-5.88 N (200-600 gf)

Holder-Stopper : 1.96-6.08 N (200-620 gf) (Nippon Antenna insection: 1.96-5.88 N (200-600 gf)

After initialinspection to be 0.98-6.08 N(100~620 gf.)

6-2. Extension and Retraction Force (Endurance)

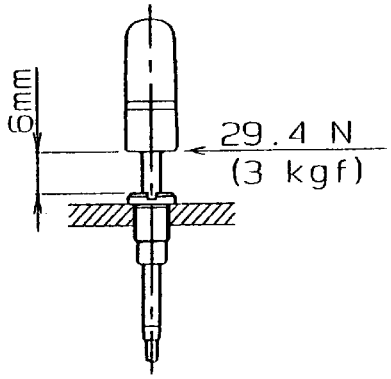
To be MIN. 0.98N(100gf) after 10,000 cycles at 30 times/Minute

6-3. Pulling Force :

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

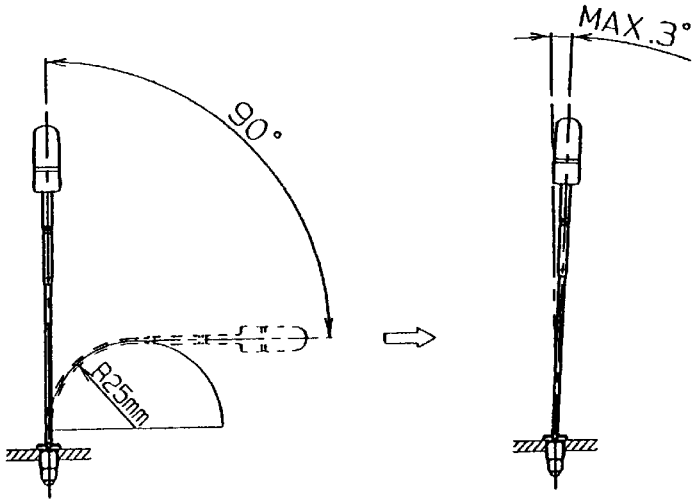
6-4. Break Strength :

Top part and Top plug not to break after 29.4 N(3 Kgf) for 5 seconds to the Top bottom part at direction of 90° against element axial, under condition of the holder fixed and Top part extended 6 mm from the holder surface. Bend to be allowed.



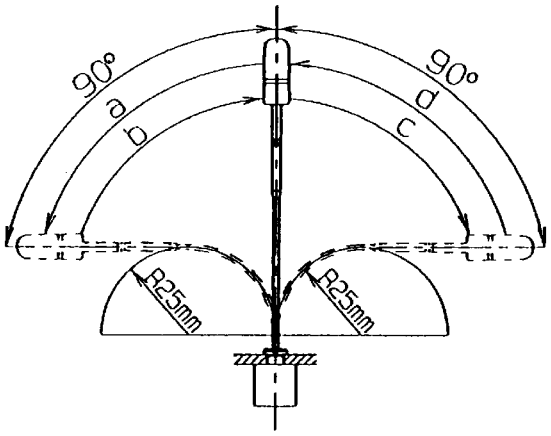
6-5. Bending Force:

Bend to be MAX. 3° after returned by itself, under condition of force the Top and give a 90° bend against a R25 mm cylinder, element extended and holder fixed.



6-6. Anti-Cleep Age Performance :

To be no break after following condition.
Bend 90° left and by hand to R25 cylinder, holder fixed.
1,000 cycles, 1 cycie to be (a-b-c-d)at speed of 20 cycle/Minute.
Bending deformation of element allowed.



6-7. Shock Resistance :

5-3 and 6-1 to be satisfied after spontaneous drop 6 times from 180 cm height to concrete floor, drop antenna downwards under the condition of element fully retracted to specified phone body. The phone body's weight is 160g. But Top part Scratch, Whiting, dent and Top plug bent to be allowd.

6-8. Holder Strength :

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

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 2 hours 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 -30℃ and +60℃ for Working temperatuure.
(Heat resistance/Cold resistance woking.)

7-5. Storge Temperature :
No 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 permanent abnormality or deformation.

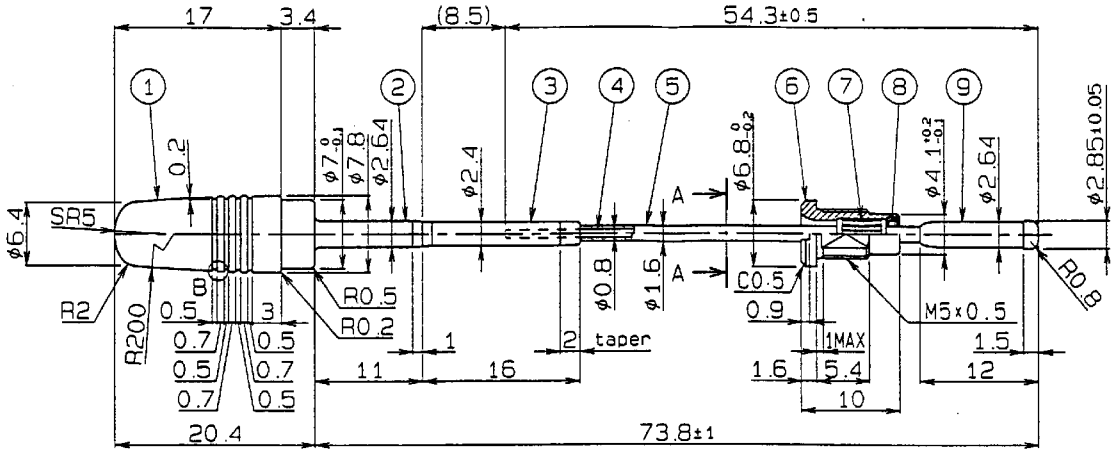
7-7. Low temperature withstand :
5-3 and 6-1 to be satisfied after left at -40℃ for 96 hours, than 2 hours in room temperature.
To be permanent abnormality or deformation.

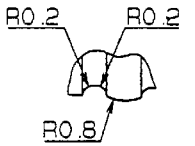
7-8. Temperature cycle :
5-3 and 6-1 to be satisfied after 20 cycles at 1 cycle condidion of -40℃/30 minutes at +85℃/30 minutes, than left 2 hours in room temperature.
To be no permanent abnormality or dformation.

図面を実測しない事

DO NOT SCALE DRAWING

形式 SCP-5000





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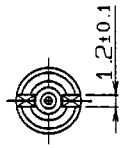

A-A

1. Tolerance, not stated to be ±0.2
2. Nut part to clear Screw thread (grade 2)

ITEM	DESCRIPTION	QUANTITY	MATERIAL · TREATMENT	PART DRAWING NO.	NOTE
9	STOPPER	1	BRASS · MBCr		
8	HOLDER LING	1	BRASS · MBNi		
7	SPRING	1	C1720R		
6	HOLDER	1	ZDC · MZNi		
5	TUBE	1	PBT		
4	ELEMENT	1	Ni-Ti		
3	JOINT	1	NYLON		
2	TOP PLUG	1	BRASS · MBCr		
1	TOP	1	ABS		

RANGE	COMMON TOLERANCE			
≤ 10	±0.1	±0.2	±0.4	±
≤ 25	±0.15	±0.3	±0.6	±
≤ 80	±0.25	±0.5	±1.0	±
≤ 250	±0.4	±0.8	±1.5	±
≤1000	±1.0	±2.0	±4.0	±

SYM	DATE	REVISION RECORD	DESIGNED	APPROVED
△				
△				
△				
△				
△				
△				

SCALE	DESIGNED	DRAWN	INSPECTED	APPROVED	DESCRIPTION
2:1	a. Mamura 3. Aug. '00	m. ogawa 3. Aug. '00	K. Seki 3/8/'00	3/8/'00	OUTSIDE APPEARANCE DRAWING

DIM m·m | MASS

日本アンテナ株式会社
NIPPON ANTENNA CO., LTD.

DRAWING NO. 2M000727-1E

2M

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