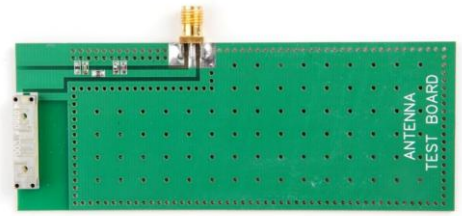
AMC-ANTGSMPA24-01

Internal Hexa-Band Cellular/GSM surface mount antenna (24 x 5.5 x 4.4mm)



Release Information		
Originator	Date	Issue
Engineering	10 July 2010	1.00
Engineering	14 August 2013	2.00

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1. SPECIFICATIONS

1.1. Electrical Specifications

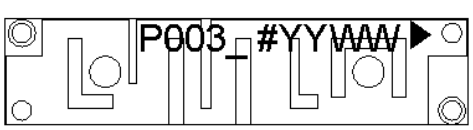
ITEM	GSM850	GSM 900	DCS	PCS	UMTS
Frequency [MHz]	824~894	880~960	1710~1880	1850~1990	1920~2170
Peak Gain [dBi]	0.67	1.56	5.25	5.00	5.52
Eff.[%] @Min	53%	60%	81%	76%	77%
VSWR	3.0 : 1 max				
Polarization	Linear				
Azimuth Beam Pattern	Omni-directional				
Impedance	50 Ω				

These values are measured on the matched reference test board.

1.2 . Mechanical Specifications

Electrode	Silver	-
Dimensions (L x W x H)	24.0 x 5.5 x 4.4	mm
Operating Temperature	-35°C ~ +85°C	

1.3 . Appearance and Dimensions



Unit : mm
Tolerance : ±0.15

P003 : Model No.

YY : Year (ex: 2010 → 10)

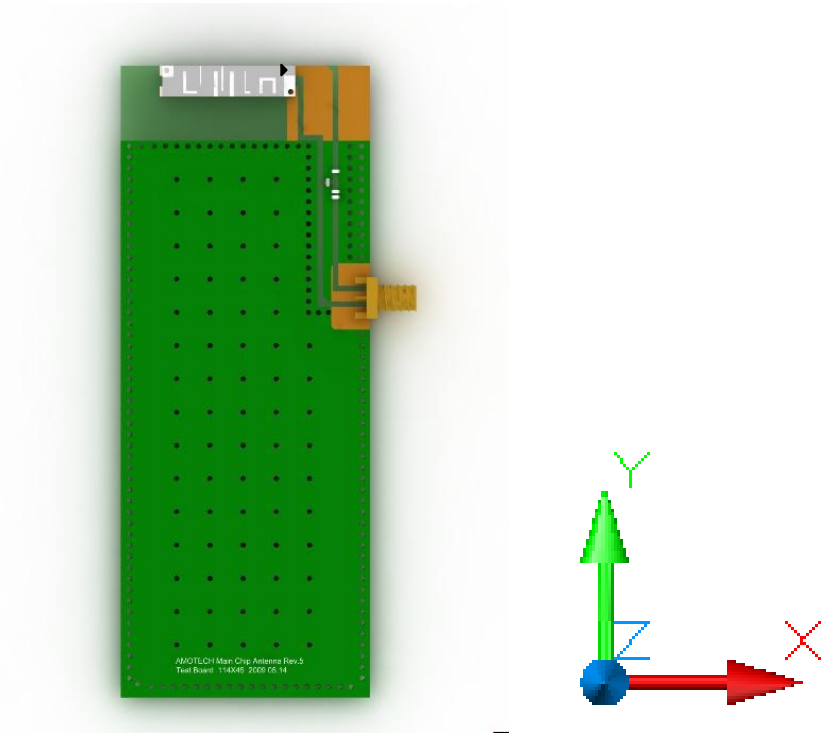
WW : Week (ex: 1st week→01, 7th week→07)

▶ : Feeding point

L(Length)	24.0
W(Width)	5.5
H(Height)	4.4

2. MEASUREMENT

2.1 . SET for Measurement



Board size: 114x45mm

Antenna Radiation the coordinate system

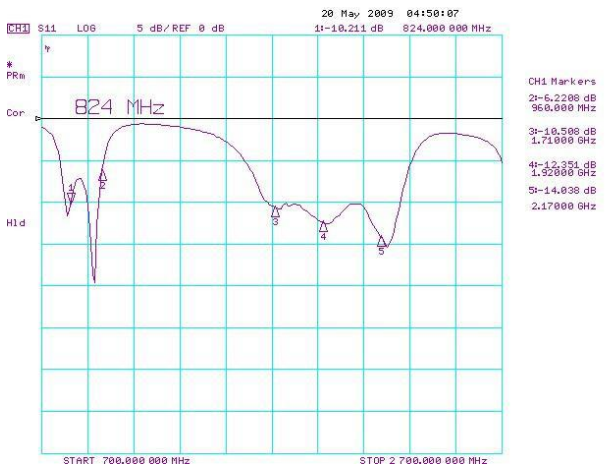
[X axis: the axis of rotation]

2. 2 . Electrical Characteristic

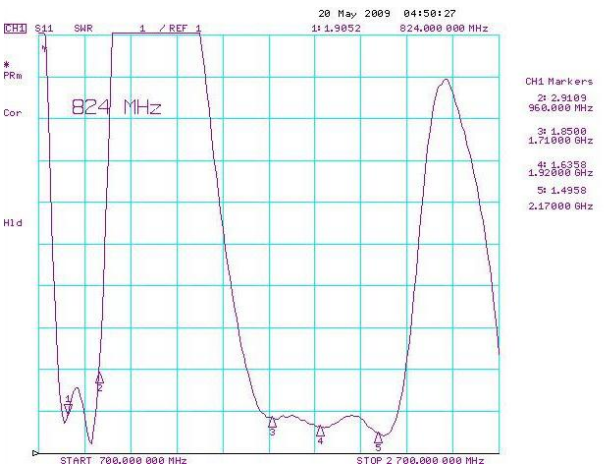
- Antenna matching on the reference test board

☒ ***S 11 (Return loss & VSWR)***

Penta Band (GSM 850 &900 , DCS, PCS, UMTS)



- Return loss -



- SWR -

2. 3. Radiation Characteristic

- Measurement Setup

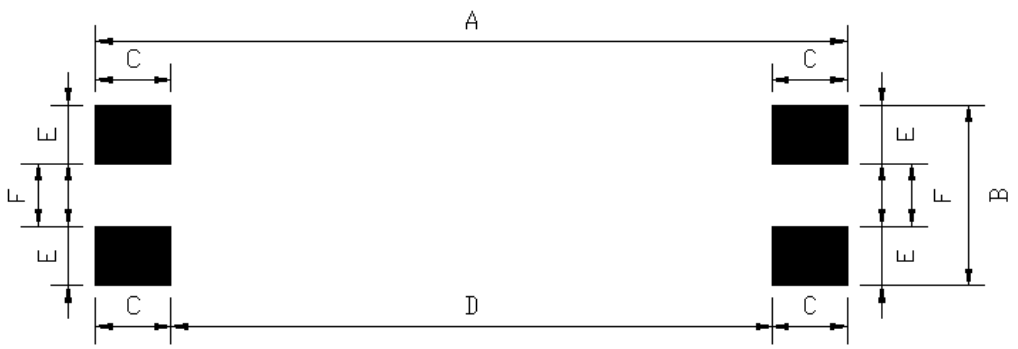
  - 6mx3mx3m Anechoic Chamber
  - Matching on the standard test board (114 x 45mm)
  - Temp. : 25 / Humidity : 50~55%

- Measurement Result

Band	Frequency MHz]	Ave. gain (dBi)	Peak. Gain (dBi)	Eff.(%)
GSM850	824	-2.73	-0.21	53.36
	849	-2.77	-0.51	54.37
	869	-2.74	-0.74	53.26
	894	-1.22	0.67	75.50
GSM900	880	-2.00	-0.11	63.06
	915	-0.50	1.42	89.16
	925	-0.49	1.56	89.37
	960	-2.22	0.58	60.03
DCS	1710	-0.12	4.98	97.24
	1785	-0.13	5.03	97.35
	1805	-0.28	5.25	93.84
	1880	-0.90	4.97	81.34
PCS	1850	-0.39	5.52	91.39
	1910	-1.03	4.97	78.90
	1930	-1.16	4.94	76.50
	1990	-0.80	4.98	83.12
UMTS	1920	-1.11	4.94	77.41
	1980	-0.94	5.00	80.51
	2110	-1.11	4.01	77.45
	2170	-0.12	4.71	97.24

3 . SOLDERING RECOMMENDATIONS

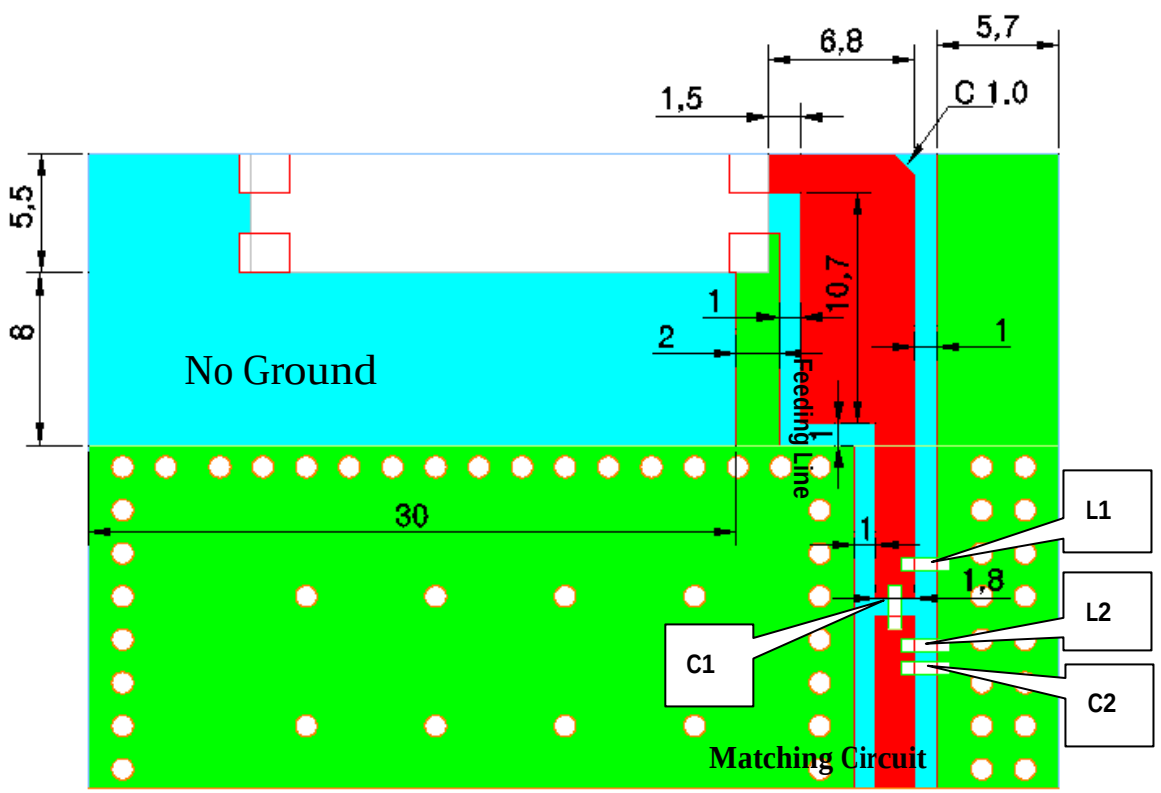
3.1 . Soldering Land Pattern



Unit : mm

A	25.0
B	5.5
C	2.3
D	20.4
E	1.8
F	1.9

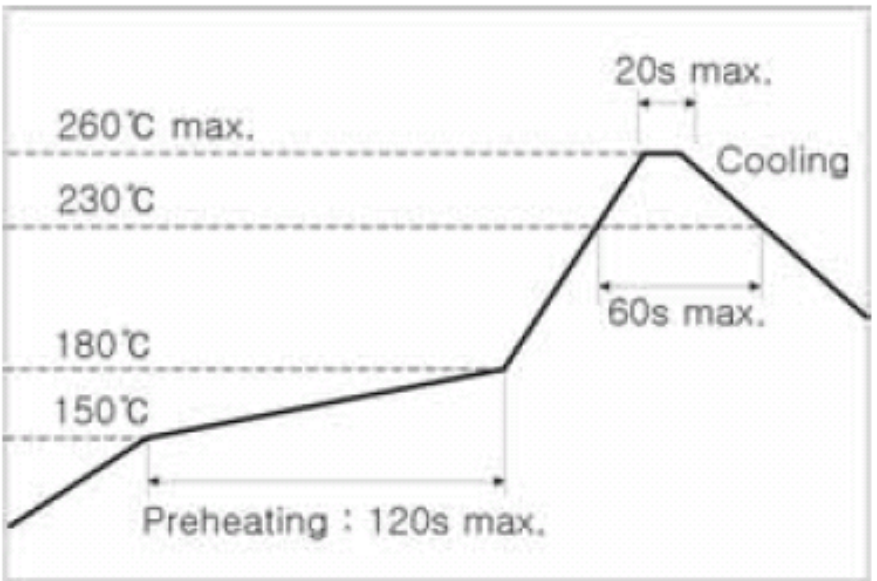
3.2. Free Space Size



C1 (Series)	3.9pF
C2 (Shunt)	1.8pF
L1 (Shunt)	3.9nH
L2 (Shunt)	2.7nH

3.2. Soldering Profile

Solder paste : Sn/Ag/Cu:96.5/3.0/0.5



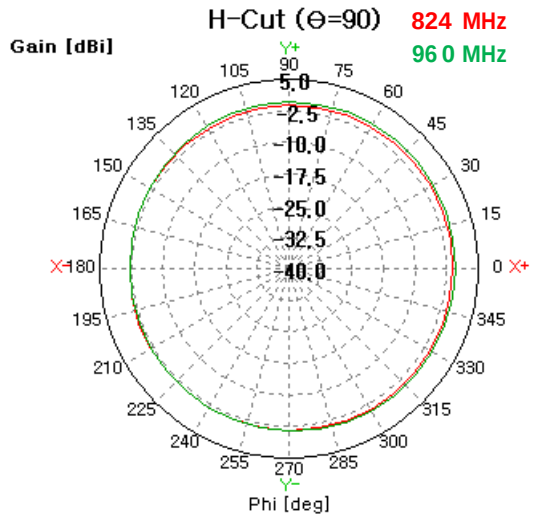
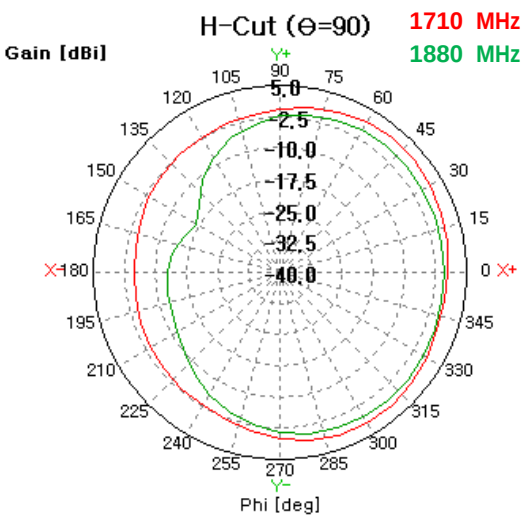
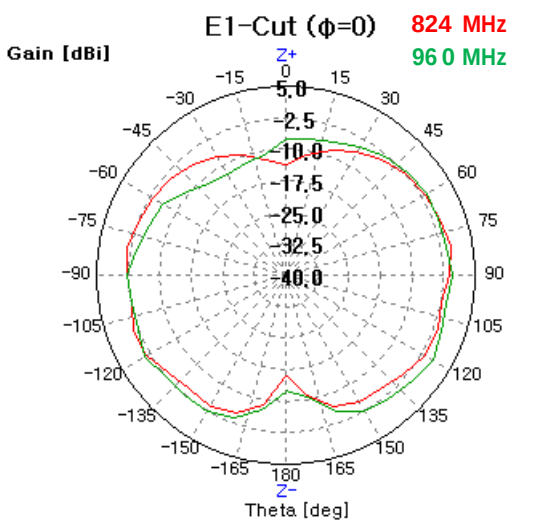
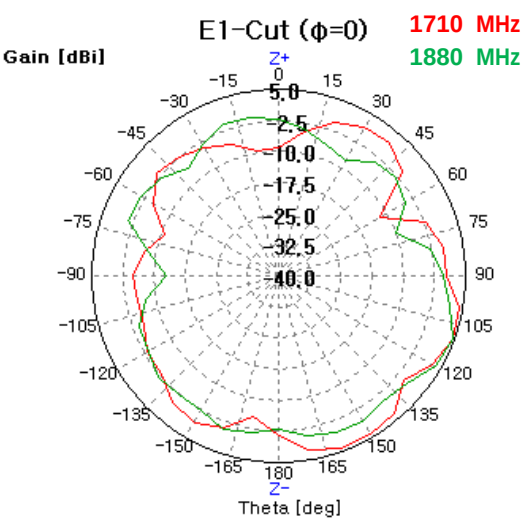
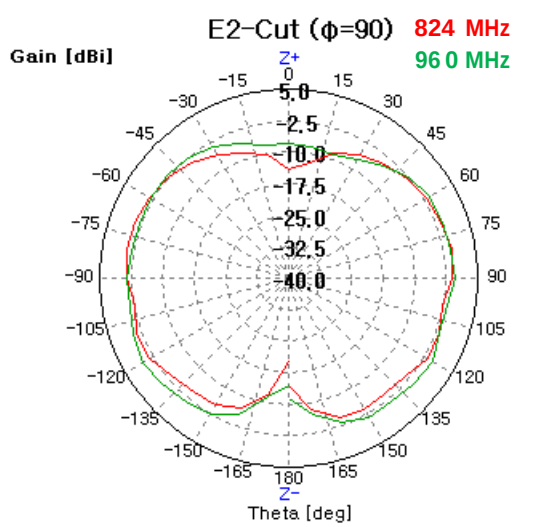
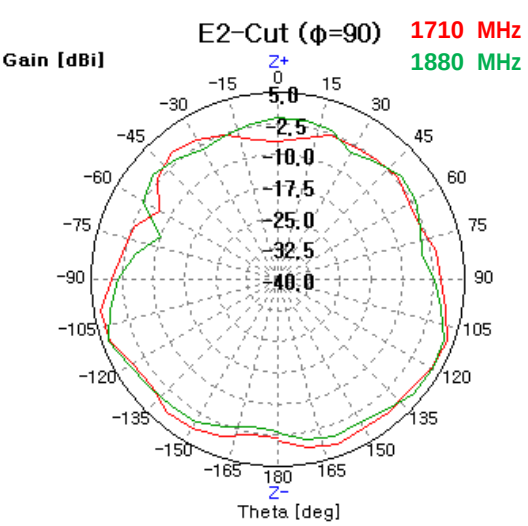
This product is designed for reflow soldering only. Do not use flow (wave) soldering.

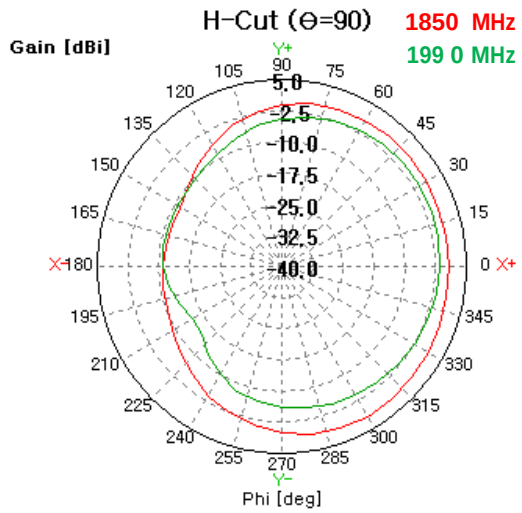
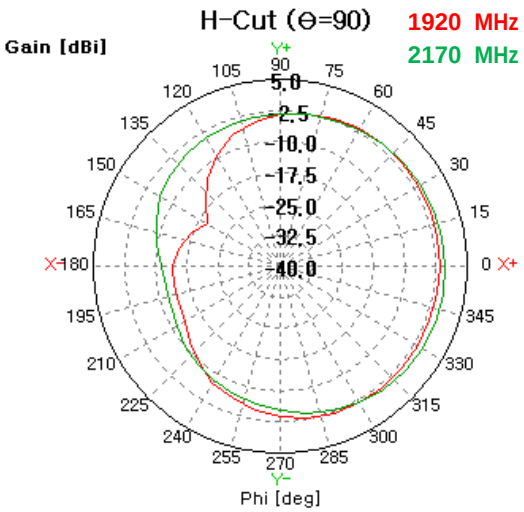
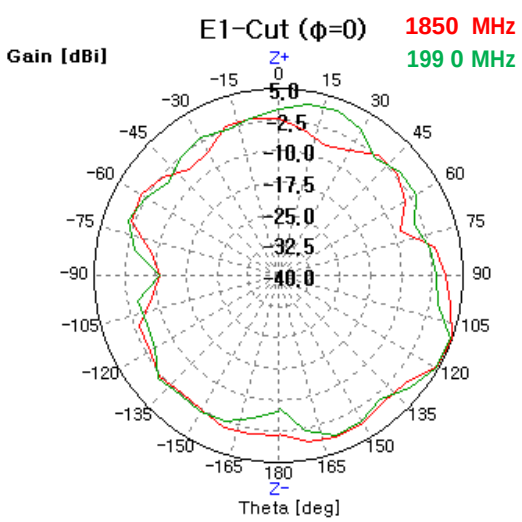
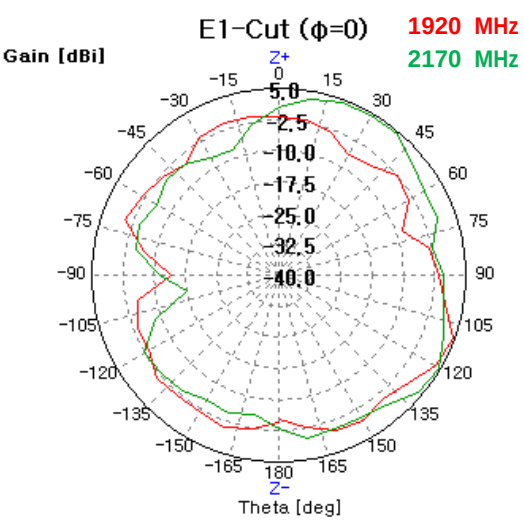
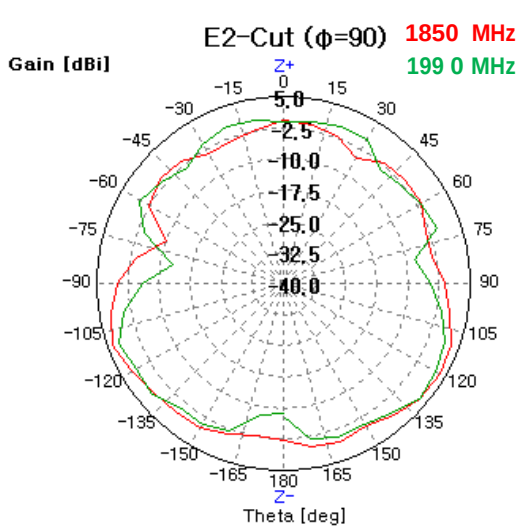
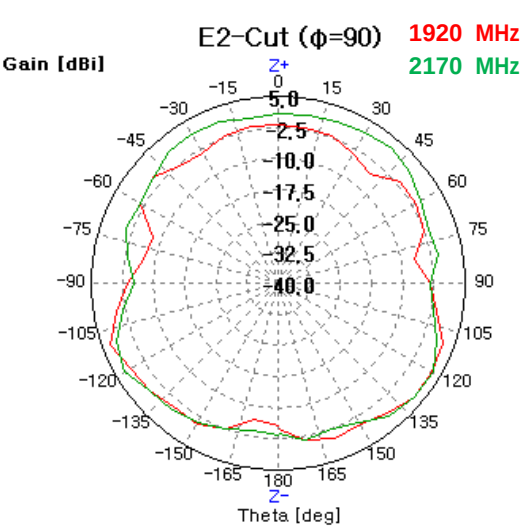
① Use non-activated flux (Cl content 0.2% max.)

② Follow the recommended soldering conditions to avoid damage.

③ Reflow-cycle is max. 3 times.

4 . ATTACHMENT

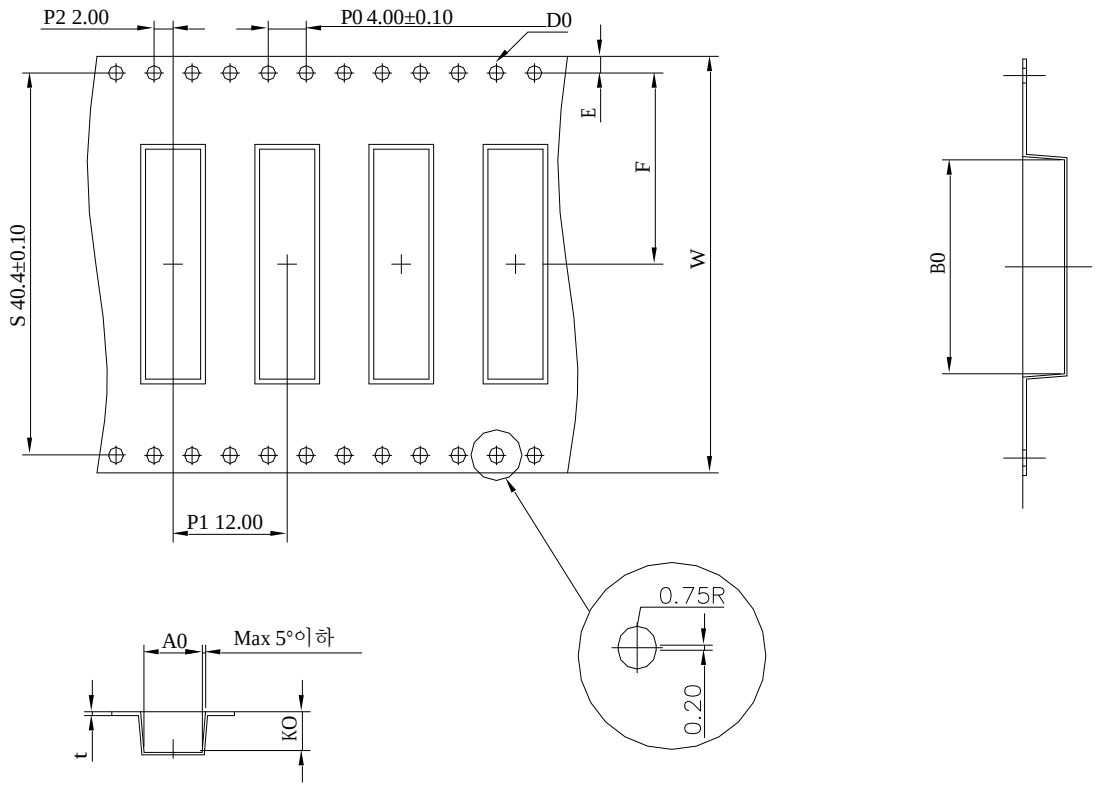
	GSM850 & 900	DCS(GSM1800)
H plane		
E1 plane		
E2 plane		

	PCS(GSM1900)	UMTS
H plane		
E1 plane		
E2 plane		

5. PACKING

5.1 Tape Dimension (unit : mm)

5.1.1 Size



A0	5.80±0.20	E	1.75±0.10
B0	24.30±0.20	F	20.20±0.20
K0	4.60±0.20	W	44.00±0.30
D0	1.55±0.05	t	0.40±0.05

5.1.2 Surface resistance

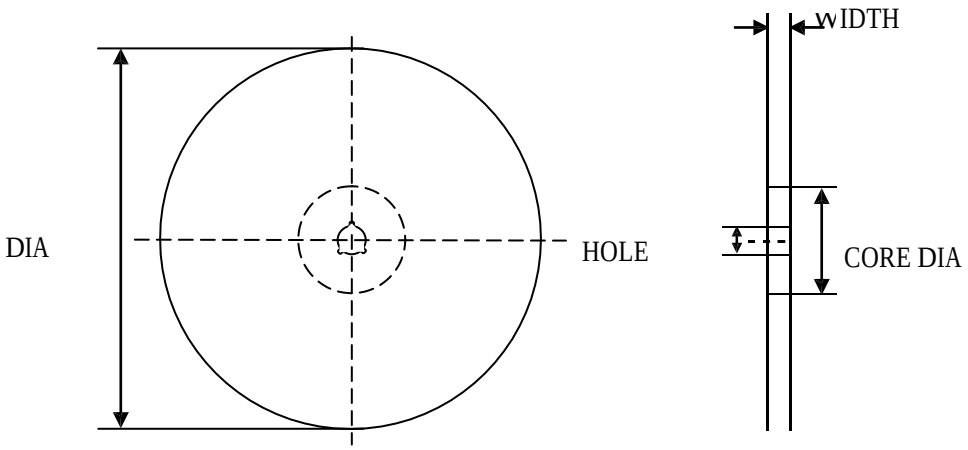
1) Carrier tape : Max $10^{11}\Omega$

2) Cover tape : Max $10^{11}\Omega$

3) Reel : Max $10^{11}\Omega$

5 .2 Description of Reel

5.2.1 Size



ITEM	DIA	WIDTH	CORE DIA	HOLE
Size(mm)	330.0 +0,-3	45.5 ± 0.3	100.0 ± 1	13.2 ± 0.5

5.2.2 Material

1) Plastic reel : GPPS (General Purpose Polystyrene) resin

5 .3 Description of Packing Box

5.3.1 Reel

Size : 44 (W), Dia.Φ330 (mm)

Quantity : 1,000 ea/reel

5.3.1 Inner Box

Size : 350 (W) x 345 (D) x 55 (T) (mm)

Quantity : 1 reel (1,000 ea/reel × 1 reel = 1,000 ea)

5.3.2 Outer Box

Size : 405 (W) x 360 (D) x 300 (T) (mm)

Quantity : 5 Inner Box (1,000 ea/Inner Box × 5 Inner Box=5,000 ea)