



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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1. SPECIFICATIONS

1.1. Electrical Specifications

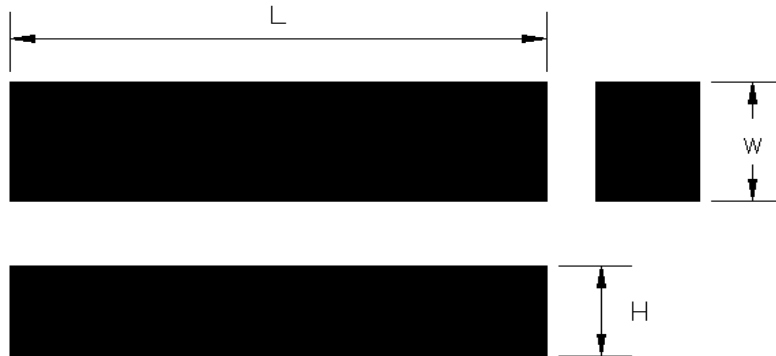
ITEM	GSM850	GSM 900	DCS	PCS	UMTS
Frequency [MHz]	824~894	880~960	1710~1880	1850~1990	1920~2170
Peak Gain [dBi]	0.67	1.56	5.25	5.00	5.52
Eff.[%] @Min	53%	60%	81%	76%	77%
VSWR	3.0 : 1 max				
Polarization	Linear				
Azimuth Beam Pattern	Omni-directional				
Impedance	50 Ω				

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 ~ +85	

1.3 . Appearance and Dimensions

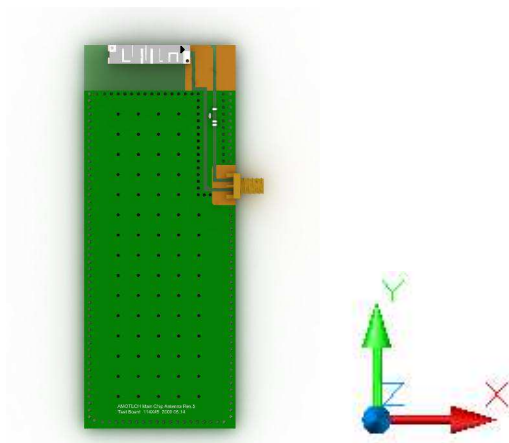


Unit : mm
Tolerance : ±0.15

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

2. MEASUREMENT

2.1 . SET for Measurement



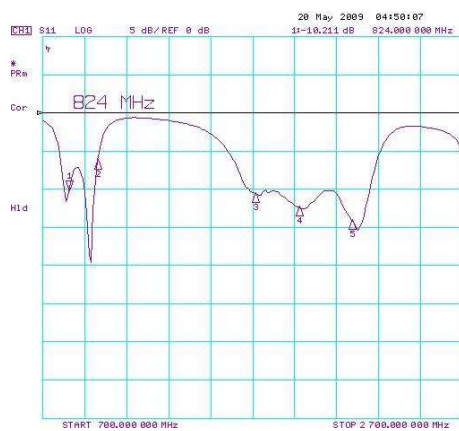
Board size: 114x45mm
Antenna Radiation the coordinate system
[X axis: the axis of rotation]

2. 2. Electrical Characteristic

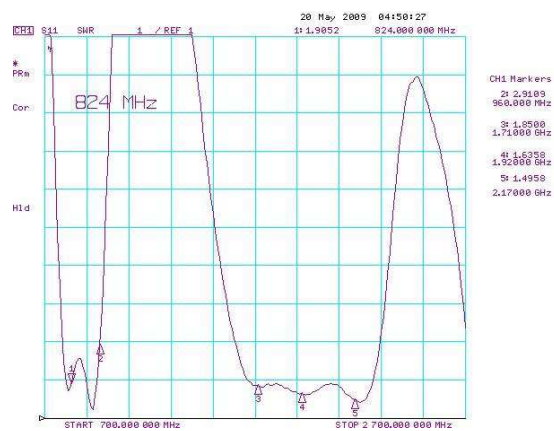
- Antenna matching on the reference test board

☒ S_{11} (Return loss & VSWR)

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



- Return loss -



- SWR -

2.3. Radiation Characteristic

- Measurement Setup

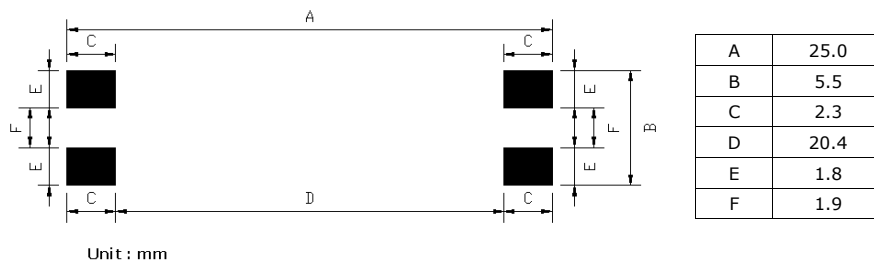
- 6mx3mx3m Anechoic Chamber
- Matching on the standard test board (114 x 45mm)
- Temp. : 25 / Humidity : 50~55%

- Measurement Result

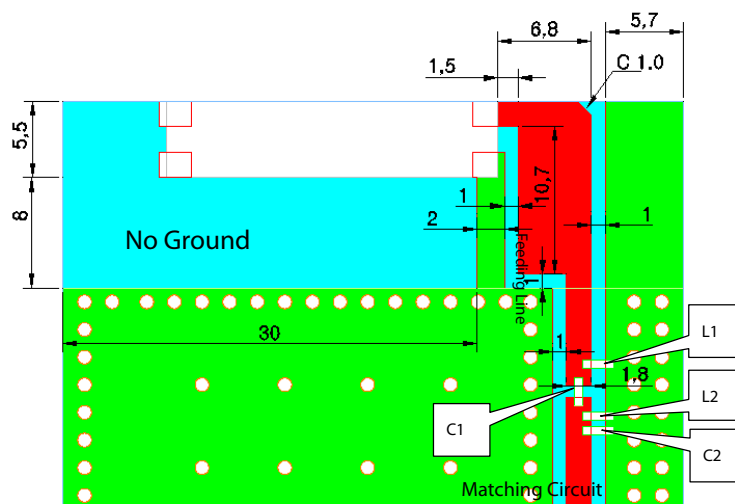
Band	Frequency MHz]	Ave. gain (dBi)	Peak. Gain (dBi)	Eff.(%)
GSM850	824	-2.73	-0.21	53.36
	849	-2.77	-0.51	54.37
	869	-2.74	-0.74	53.26
	894	-1.22	0.67	75.50
GSM900	880	-2.00	-0.11	63.06
	915	-0.50	1.42	89.16
	925	-0.49	1.56	89.37
	960	-2.22	0.58	60.03
DCS	1710	-0.12	4.98	97.24
	1785	-0.13	5.03	97.35
	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 RECOMMENDATIO NS

3.1 . Soldering Land Pattern



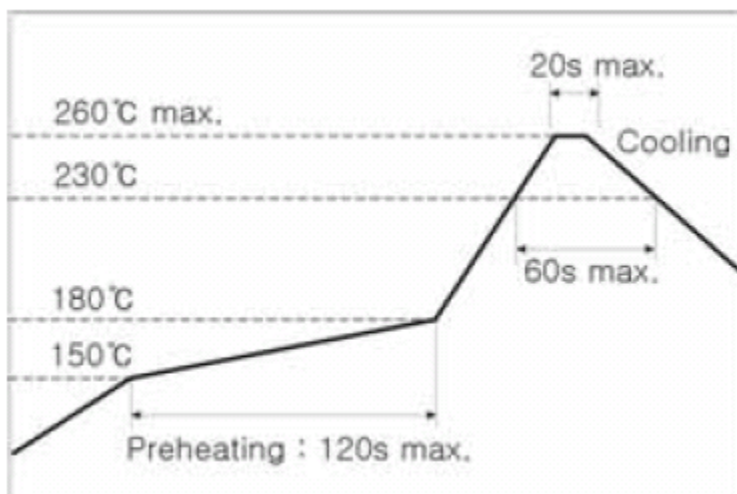
3.2. Free Space Size



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

3.2. Soldering Profile

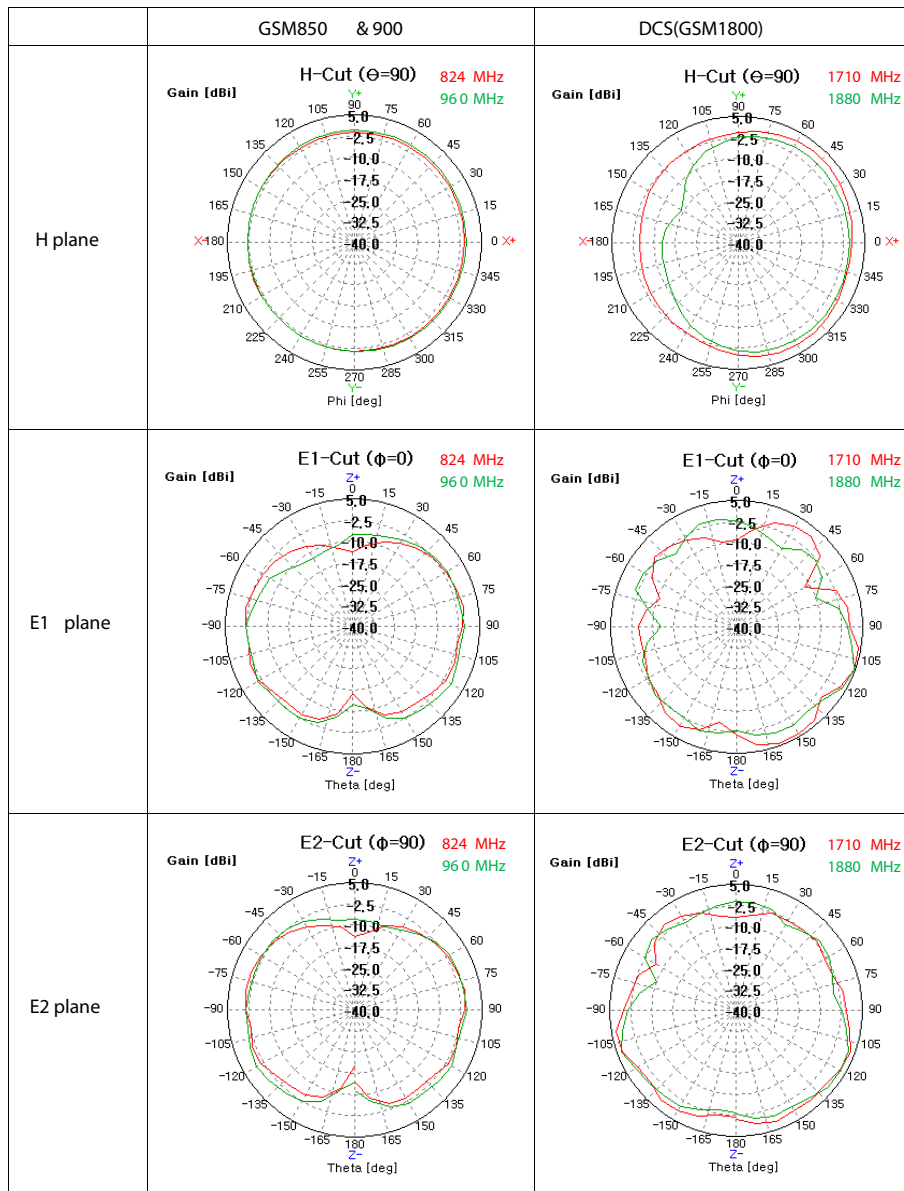
Solder paste : Sn/Ag/Cu:96.5/3.0/0.5

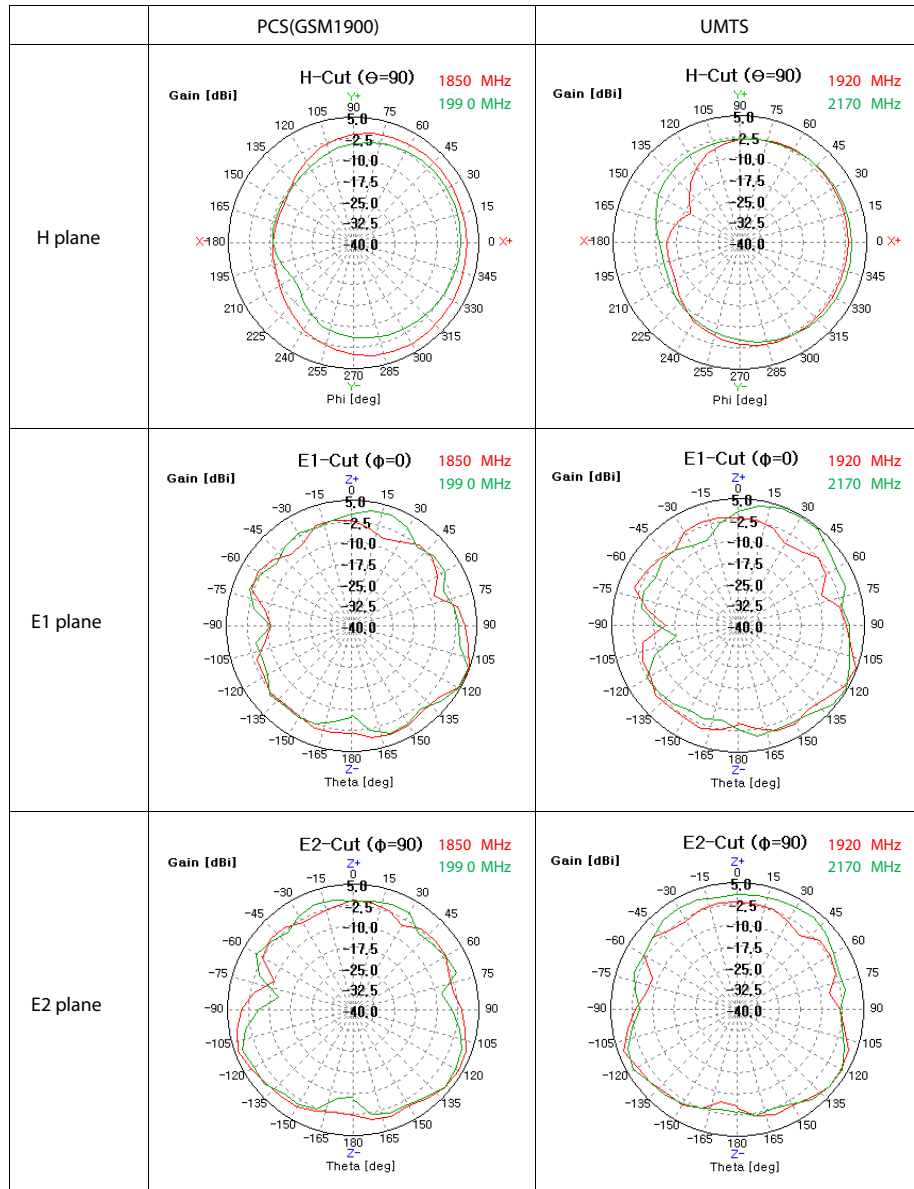


This product is designed for reflow soldering only. Do not use flow (wave) soldering.

- 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. A TTACHMENT

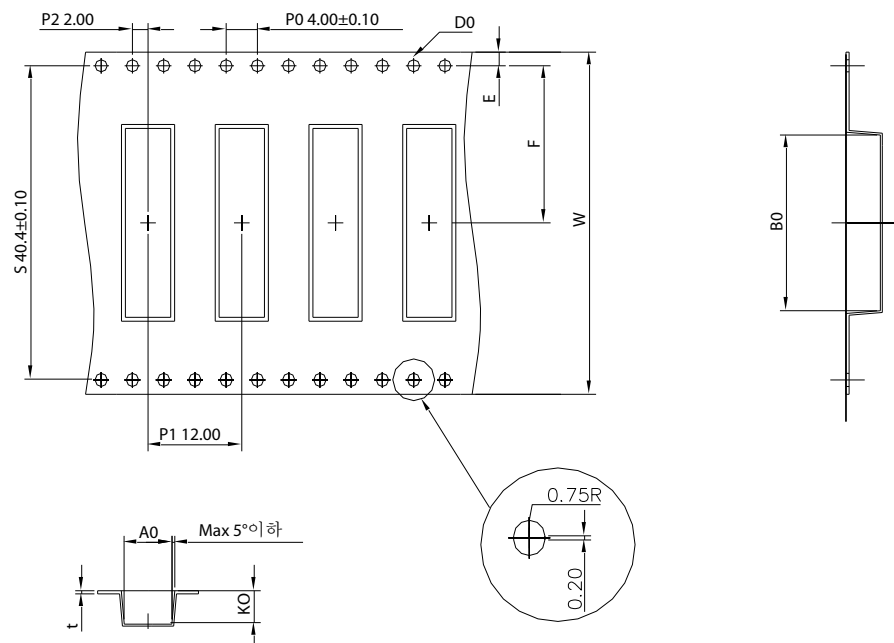




5. PACKING

5.1 Tape Dimension (unit : mm)

5.1.1 Size



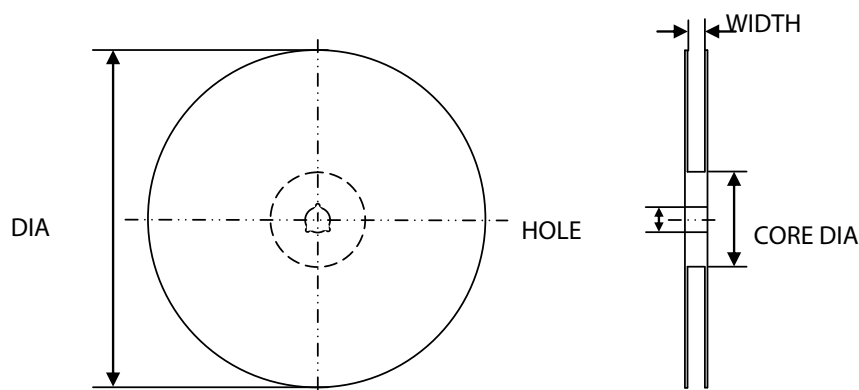
A0	5.80 ± 0.20	E	1.75 ± 0.10
B0	24.30 ± 0.20	F	20.20 ± 0.20
K0	4.60 ± 0.20	W	44.00 ± 0.30
D0	1.55 ± 0.05	t	0.40 ± 0.05

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 Poly Styrene) resin

5.3 Description of Packing Box

5.3.1 Reel

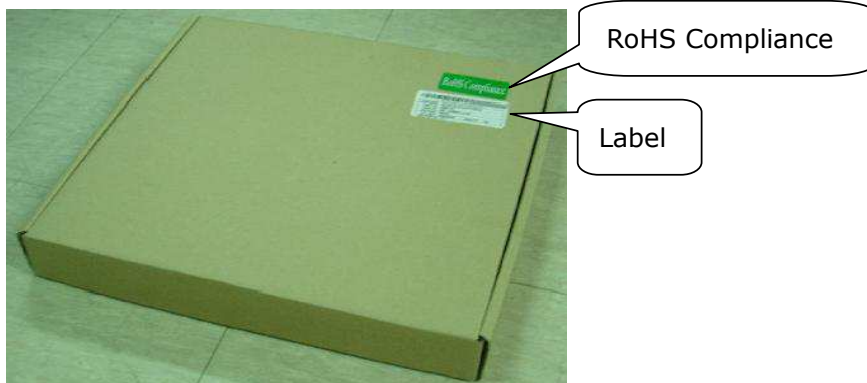
Size : 44 (W), Dia.Φ330 (mm)

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)