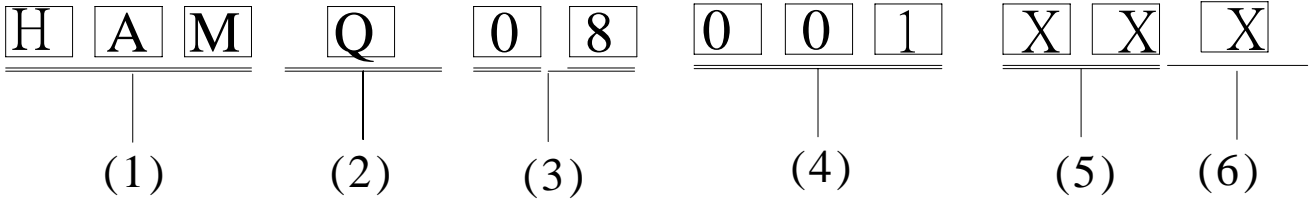


GSM External Antenna for HAMQ08001XXX

1. Explanation of Part Number



- (1) Product type : Helical Antenna Module
- (2) System code :Q for Quarter-band
- (3) Customer code :
- (4) Series code :
- (5) Appearance :
- (6) Suffix

2. Electrical properties:

Item	Property
Frequency Range	824~960 MHz and 1710~1990 MHz
Impedance	50 Ω (Typ.)
VSWR <small>(see Fig 1)</small>	≤3.5
Gain	0dBi (Max.)
Polarization	Vertical
Radiation pattern	Near omni-directional in the horizontal plane

Checking Point	Frequency (MHz)				
VSWR	880MHz	960MHz	1710MHz	1880MHz	1990MHz
	≤3.5	≤3.5	≤3.5	≤3.5	≤3.5

UNLESS OTHER SPECIFIED TOLERANCES ON :
X= ± 2 X.X= ± 0.5 X.XX = ± 0.05
ANGLES=± HOLEDIA=±

SCALE :
UNIT : mm

DRAWN BY : 呂友雄 *lwy* **CHECKED BY:** 陳秉宏 *ben hon*
DESIGNED BY 張明貴 *George* **APPROVED BY :** 白世璽 *wh sin*

TITLE : GSM External Antenna for HAMQ08001XXX



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Figure 1. VSWR

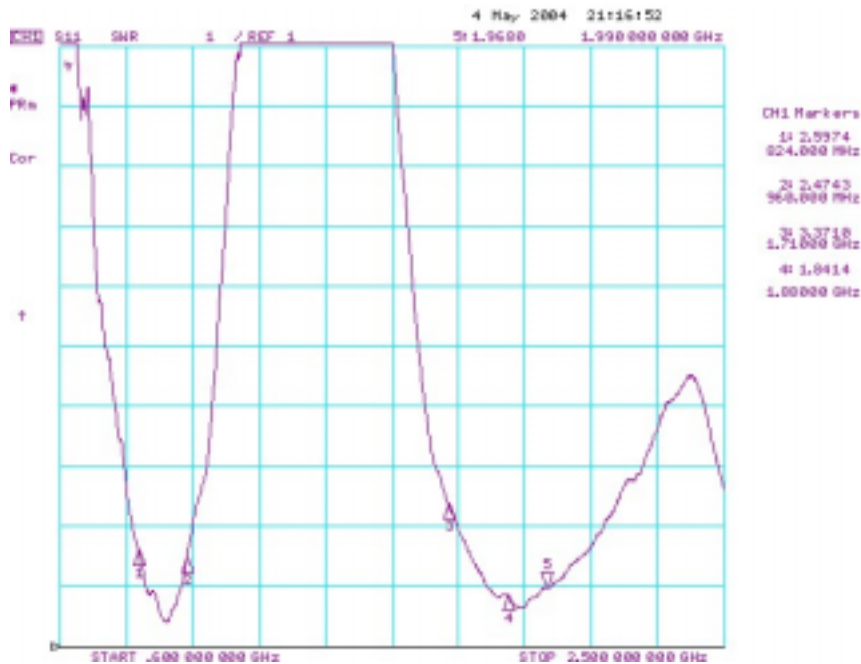
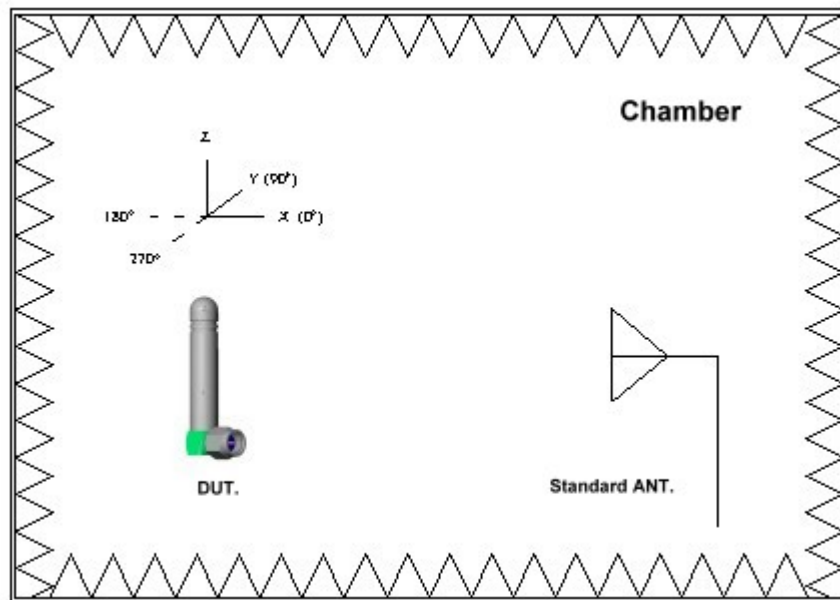



Figure 2. Gain

The Gain pattern was measuring in INPAQ's FAR-field chamber . DUT will be placed on the table of rotator , a standard horn antenna and Vector Network Analyzer was using to collected data. (Please contact to INPAQ

for more detail)

● **Measuring factors definition**

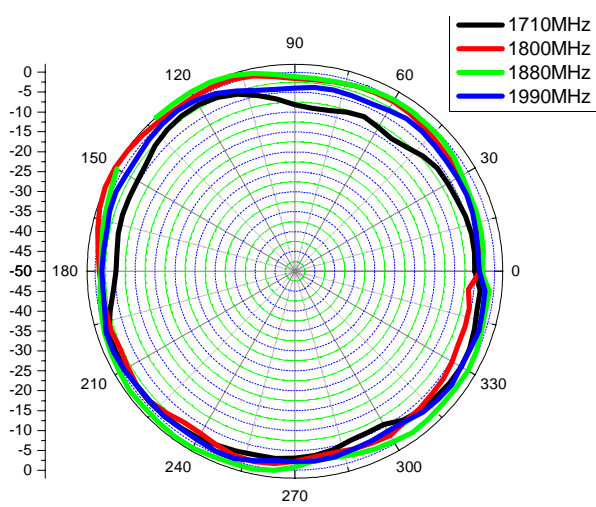
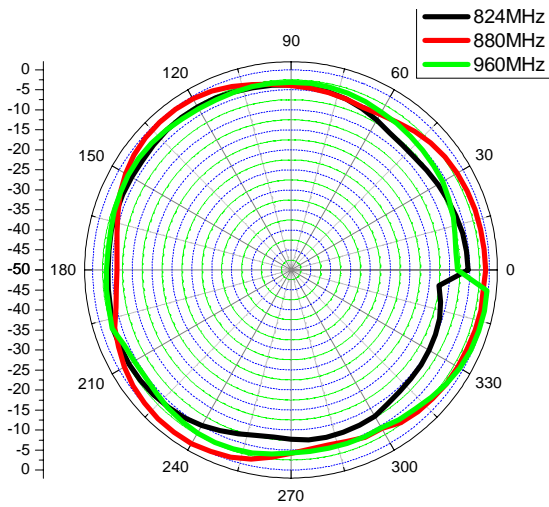


UNLESS OTHER SPECIFIED TOLERANCES ON : X = ± 2 X.X = ± 0.5 X.XX = ± 0.05 ANGLES = ± HOLEDIA = ±		 佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
SCALE :	UNIT : mm	
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DESIGNED BY 張明貴 <i>George</i>	APPROVED BY : 白世璽 <i>ok</i>	
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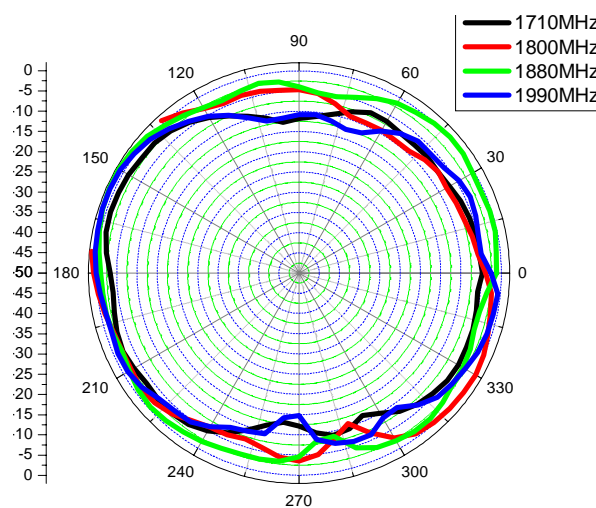
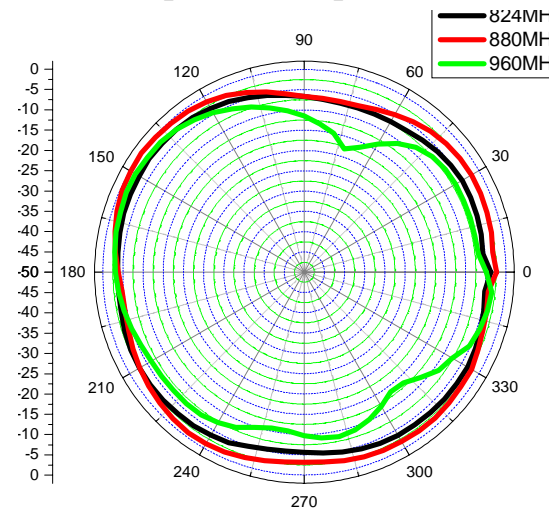
Unit dBi	H-plane		E-plane	
	Max	Average	Max	Average
824	-2.78	-5.30	-2.45	-4.23
880	0.15	-2.24	-0.05	-2.62
960	-0.21	-3.35	-1.64	-6.02
1710	-0.85	-3.63	-1.11	-5.18
1800	1.98	-1.45	3.34	-2.04
1880	2.08	-0.09	1.31	-1.72
1990	-0.11	-2.00	1.08	-3.47

Gain and Radiation Pattern

Radiation patterns H_plan



Radiation patterns E_plan



UNLESS OTHER SPECIFIED TOLERANCES ON :

X = ± 2 X.X = ± 0.5 X.XX = ± 0.05

ANGLES = ± HOLEDIA = ±

SCALE :

UNIT : mm

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3. Mechanical properties:

Item	Property
Color	Black (Typ.)
Plastic Cover	TPU or TPE
Antenna Base	SMA R/A improved type
Coil	Phosphor Bronze

Operating Temperature : -20~+65°C

Storage Temperature : -40~+80°C

4. Environmental Characteristics:

No	Item	Test Condition	Specification
4-1	High Temperature/Humidity Operating test	1.Temperature : +60±2°C. 2.Humidity : 90~95% RH 3.Time : 24hrs	1. Normal functional test must be satisfied after the test. 2. No material deformation is allowed.
4-2	Low Temperature/Humidity Operating test	1.Temperature : -20±2°C. 2.Humidity : 0% RH 3.Time : 24hrs	
4-3	High Temperature/Humidity Storage	1.Temperature : +80±2°C. 2.Humidity : 90~95% RH 3.Time : 88hrs	
4-4	Low Temperature/Humidity Storage	1.Temperature : -40±2°C. 2.Humidity : 0% RH 3.Time : 28hr	
4-5	Temperature Cycle Operating Test	1.Temperature : -40~+75°C 2.Duration : ● 88 Hours, ● 45min/dwelling@ -40°C, ● 10°C per min./transition from -40°C to 75°C, ● 45min/dwelling@75°C,	
4-6	Temperature Shock Test	1.Temperature : -40±2°C~+85°C. 2.Time : 30 minutes/dwelling, 5 minutes/ transition, 24 cycles	

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ANGLES = ± HOLEDIA = ±



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SCALE :

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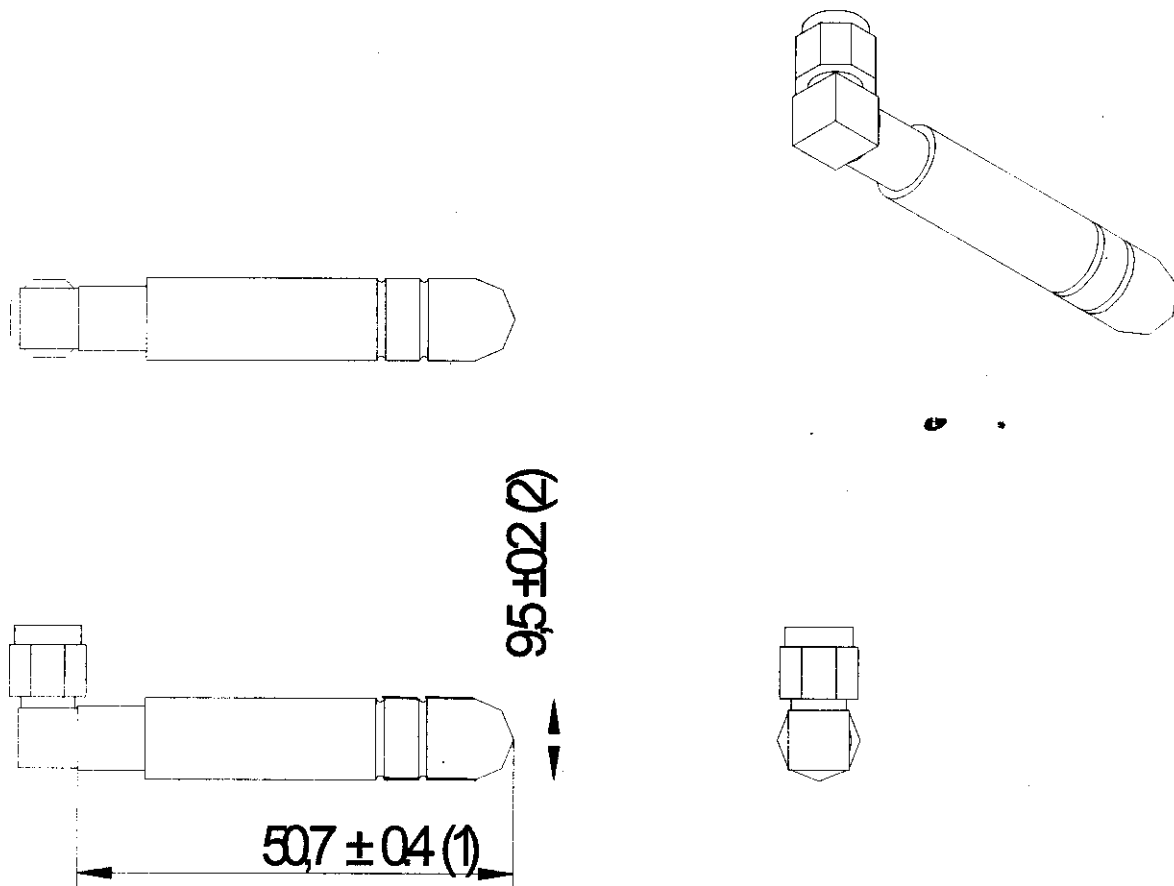
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5. Physical Dimension :



Unit : mm

Parts List			
No	Description	Q'ty	Unit
01	Plastic Antenna Cover (TPU or TPE ,Black)	1	PC
02	SMA R/A improved type (BSBM + Au plating)	1	PC
03	Metal Cap (BSBM + Au plating)	1	PC

UNLESS OTHER SPECIFIED TOLERANCES ON :

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ANGLES = ± HOLEDIA = ±



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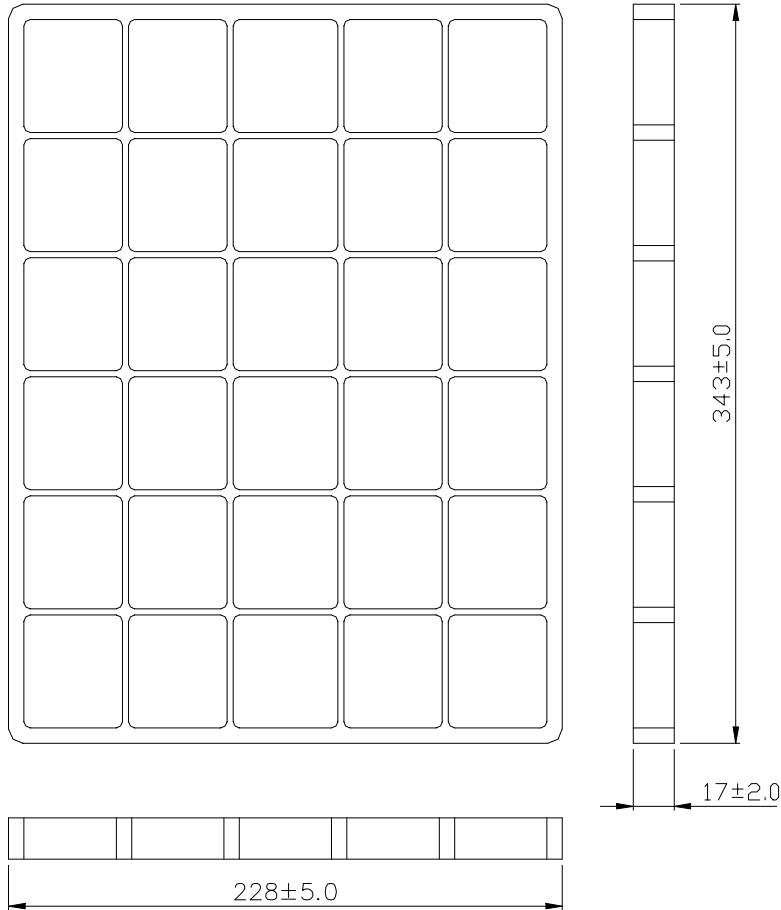
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6. PACKING

Antenna to be packed in compartmentalized blisters tray (each 30 pcs per tray).

Material : PET Thickness : 0.085mm



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