




HBCA-3MM

(Hirose Bluetooth Chip Antenna)

Company Confidential


Preliminary

*Notice, this is not final specification
Some parametric factors are subject to change*

	Design	Check	Approval
Approval			

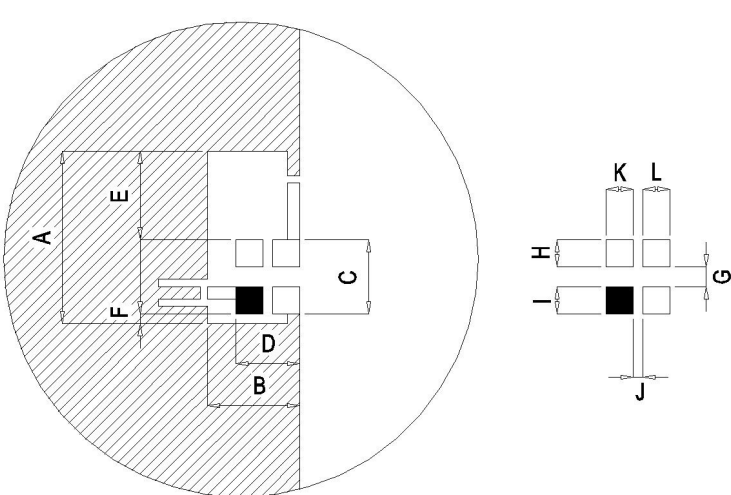
Antenna Business Team

R&D Part

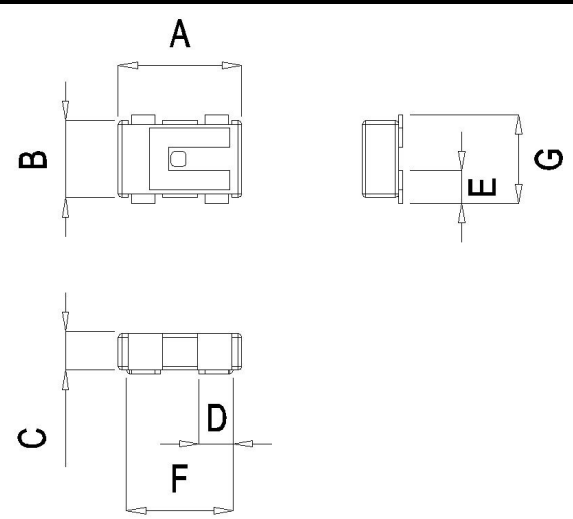
	Features <ul style="list-style-type: none"> ✓ Small, Slim and High Gain ✓ Available size : 3.2×2.4×1.0 mm ✓ Embodies properties in real device
	Applications <ul style="list-style-type: none"> ✓ Bluetooth, W-LAN, Wi-Fi
Description <ul style="list-style-type: none"> ✓ The chip antenna is intended for use with 2.4 GHz applications. 	

Chip Antenna properties	
ITEM	SPEC.
Product name	HBCA-3MM (Hirose Bluetooth Chip Antenna)
Frequency Range	2400 ~2500 MHz
VSWR	Max 3:1
Peak Gain [dBi]	typ. 1.4
Polarization	Linear
Operating Temperature [°C]	-35 ~ +85
Impedance [Ω]	50
Weight [g]	0.01

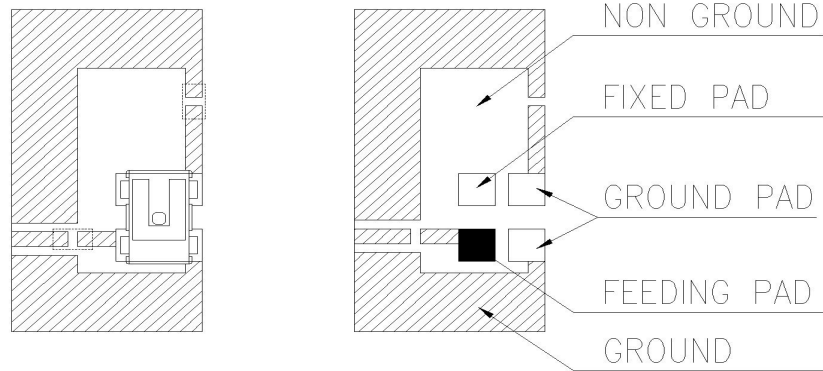
Test board characteristics

Description	Dimensions											
<p>The HBCA Test board designed for evaluation purpose for SMD.</p> <p>The board is fitted with the SMA connector.</p> <p>The size of board is 50 × 50 mm².</p>												
Comp.	A	B	C	D	E	F	G	H	I	J	K	L
Value	7.0	3.75	3.0	2.6	3.6	0.4	0.8	1.1	1.1	0.4	1.1	1.1
Tolerance	±0.1											

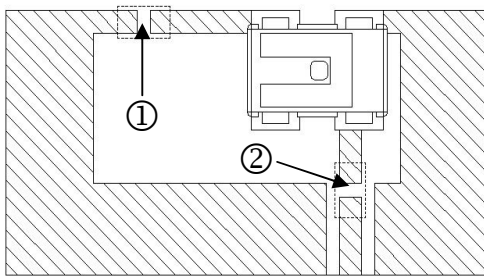
Antenna Dimensions

							
Part No	Length(mm)	Width(mm)	Height(mm)	Pad(mm)		Land(mm)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
Value	3.2	2.0	1.0	0.9	0.85	2.8	2.3
Tolerance	±0.1						

Antenna Lay-out

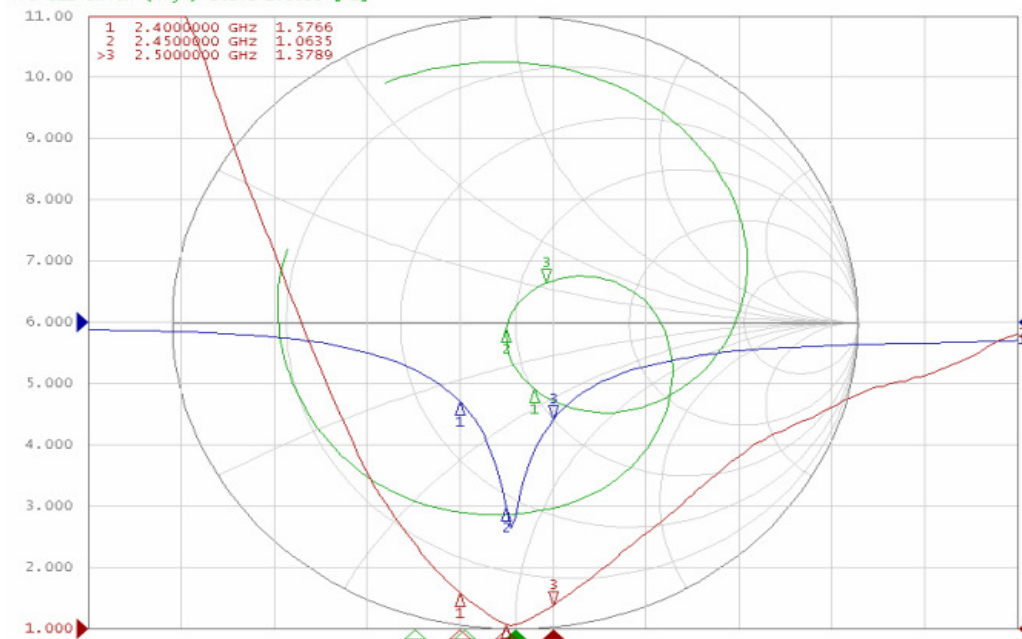


Electrical Characteristics(VSWR / Smith chart)



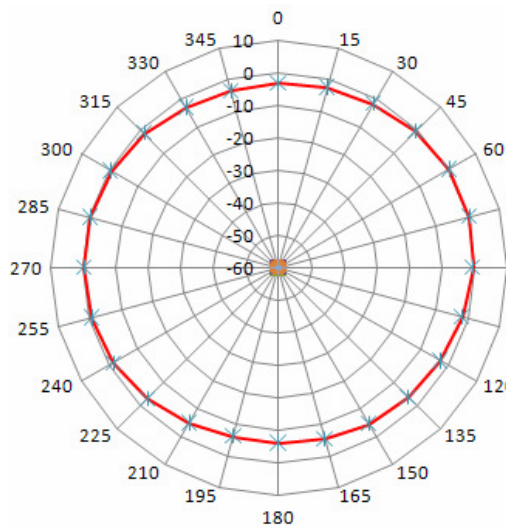
No.	Matching value
①	3pF
②	0.5pF

Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]
Tr2 S11 SWR 1.000/ Ref 1.000 [F1]
Tr3 S11 Smith (R+jX) Scale 1.0000 [F1]

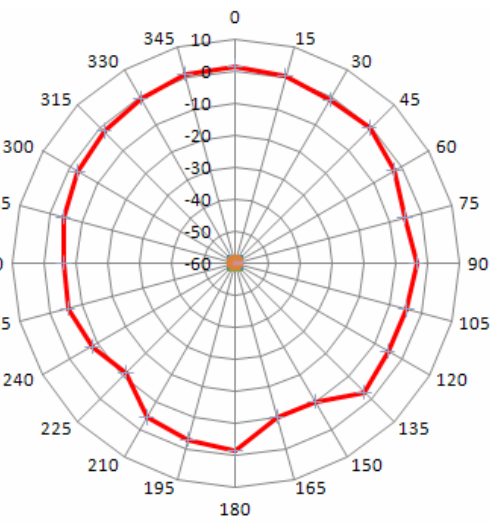


Electrical Characteristics(Gain / Radiation pattern)

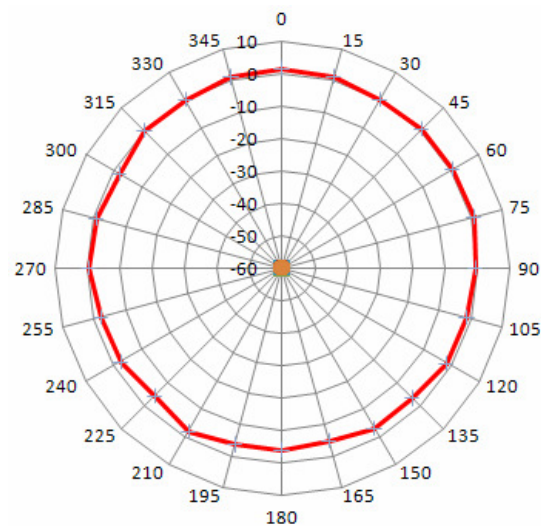
Plane	Avg. Gain (dBi)	Peak Gain (dBi)
H	-1.87	0.6
E1	-2.60	1.4
E2	-0.80	1.4



H Plane – 2.45 GHz



E1 Plane – 2.45 GHz



E2 Plane – 2.45 GHz

