



Antenna Sample Confirmation From

深圳健海通天线技术有限公司

广东健博通

证券代码: 831958

天线规格书

Antenna Sample Confirmation From

供应商名称 Vendor Name	深圳健海通天线技术有限公司 Shenzhen kenhaitong antenna technology co, ltd				
客户名称 Customer Name					
样品名称 Sample Name					
产品型号 Part Number	2BNSM-S70				
样品规格 Specification					
检验项目 Inspection Item	性能测试 Performance	外观检查 Total Appearance	结构 structure	其它 Others	检验结果 Inspection Result
备注 Remark					
品质审核 QA Audit		工程审核 Engineer Audit		业务确认 Sales Confirm	
以下由客户填写 The following are filled by Customer					
客户意见 Customer Evaluation					
客户签字/盖章 Signation/ Chapter by Customer	日期/date:				

地址: 深圳市宝安区航城街道鹤洲中科诺工业园一号楼西面 3 楼

ddress: 3rd floor, west of No.1 Building, Hezhou Zhongnuo Industrial Park, Hangcheng Street, Bao'an District, Shenzhen

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2.4GHz 3216 Chip Antenna: RAN3216F0P2G45

Application:

WLAN, 802.11b/g, Bluetooth, etc...

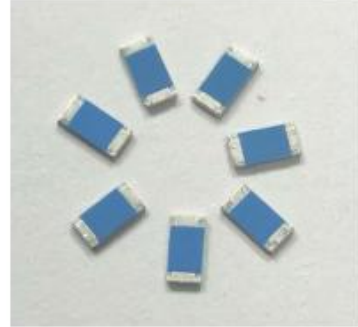
Features

SMD, high reliability, ultra Impact, Omni-directional...

Part number

RAN 3216 - F0 P 2G45
(1) (2) (3) (4) (5)

(1)Product Type	Chip Antenna
(2)Size Code	3.2x1.6mm
(3)Type Code	F0
(4)Packing	Paper Tape
(5)Frequency	2.45GHz

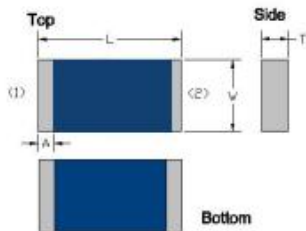


Electrical Specification

Working Frequency Range	2400 ~2484 MHz
Peak Gain	2.58 dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(°C)	-40 ~85°C

The specification is defined on EVB.

Dimension and Terminal Configuration



Dimension (mm)	
L	3.15+0.15
W	1.55+0.15
T	0.50+0.10
A	0.35+0.10

No.	Terminal Name
1	Feeding point
2	GND



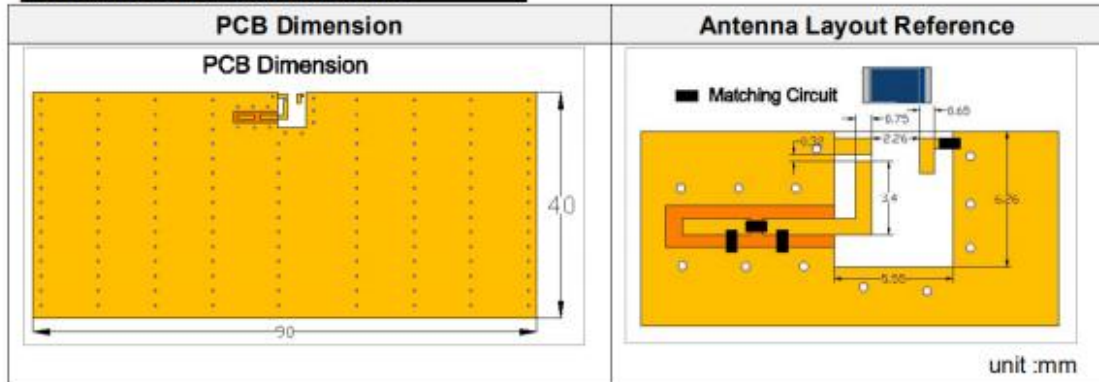
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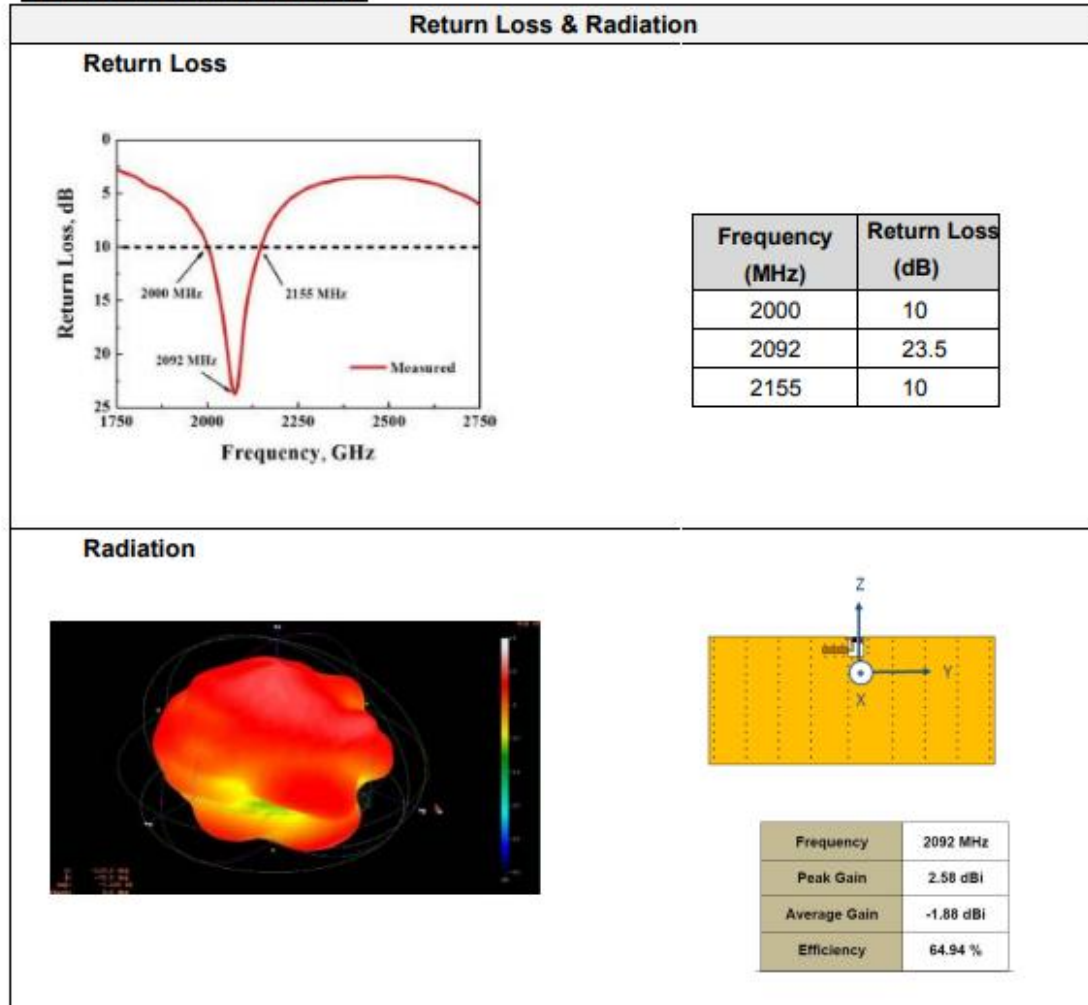
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Evaluation Board Reference



Electrical Characteristics



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Taping Specifications

Reel and Taping Specification

Reel Specification

The diagram shows a top view and a side view of a reel. The top view is a circle with a central hub and four spokes. Dimensions are labeled: A (radius from center to outer edge), B (outer diameter), C (inner diameter of the hub), D (hole diameter in the hub), W (width of the reel), and M (mounting hole diameter in the hub).

TYPE	SIZE		A	ϕB	ϕC	ϕD	W	ϕM
3216	7"	5K/Reel	2.0 $\pm$ 0.5	13.5 $\pm$ 1.0	21 $\pm$ 1.0	60 $\pm$ 1.0	11.5 $\pm$ 2.0	178 $\pm$ 2.0

Tapping Specification

The diagram shows a side view of a chip antenna on a paper carrier. Dimensions are labeled: A (length of the antenna), B (width of the antenna), P (pitch of the antenna), D (hole diameter in the carrier), H (height of the carrier), G (width of the carrier), E (width of the carrier), F (width of the carrier), W (width of the carrier), T (height of the carrier), and I (height of the carrier).

Packaging	Type	A	B	W	E	F	G	H	T	ϕD	P
Paper Type	3216	1.90 $\pm$ 0.20	3.50 $\pm$ 0.20	8.0 $\pm$ 0.20	1.75 $\pm$ 0.10	3.5 $\pm$ 0.05	4.0 $\pm$ 0.10	2.0 $\pm$ 0.05	0.75 $\pm$ 0.10	1.50 +0.10 -0	4.0 $\pm$ 0.1



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Reliability Table

Test Item	Procedure	Requirements Ceramic Type	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification	User Spec.
Thermal Shock	1. Preconditioning: 50 ± 10 °C / 1 hr , then keep for 24 ± 1 hrs at room temp. 2. Initial measure: Spec: refer Initial spec. 3. Rapid change of temperature test: -30 °C to +85 °C; 100 cycles; 15 minutes at Lower category temperature; 15 minutes at Upper category temperature.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 107
Temperature Cycling	1. Initial measure: Spec: refer Initial spec. 2. 100 Cycles (-30 °C to +85 °C), Soak Mode=1 (2 Cycle/hours). 3. Measurement at 24 ± 2Hours after test condition.	No Visible Damage. Fulfill the electrical specification.	JESD22 JA104
High Temperature Exposure	1. Initial measure: Spec: refer Initial spec. 2. Unpowered; 500hours @ T=+85 °C. 3. Measurement at 24 ± 2 hours after test.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 108
Low Temperature Storage	1. Initial measure: Spec: refer Initial spec. 2. Unpowered; 500hours @ T= -30 °C. 3. Measurement at 24 ± 2 hours after test.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 108
Solderability (SMD Bottom Side)	Dipping method: a. Temperature: 235 ± 5 °C b. Dipping time: 3 ± 0.5s	The solder should cover over 95% of the critical area of bottom side.	IEC 60384-21/22 4.10
Soldering Heat Resistance (RSH)	Preheating temperature: 150 ± 10 °C. Preheating time: 1~2 min. Solder temperature: 260 ± 5 °C. Dipping time: 5 ± 0.5s	No Visible Damage.	IEC 60384-21/22 4.10
Vibration	5g's for 20 min., 12 cycles each of 3 orientations Note: Use 8"X5" PCB .031" thick 7 secure points on, one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz	No Visible Damage.	MIL-STD-202 Method 204
Mechanical Shock	Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks) Peak value: 1,500g's Duration: 0.5ms Velocity change: 15.4 ft/s Waveform: Half-sine	No Visible Damage.	MIL-STD-202 Method 213
Humidity Bias	1. Humidity: 85% R.H., Temperature: 85 ± 2 °C. 2. Time: 500 ± 24 hours. 3. Measurement at 24 ± 2hrs after test condition.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 Method 106

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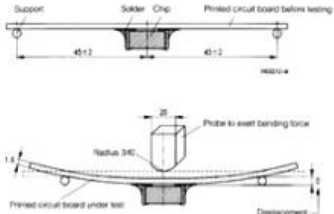
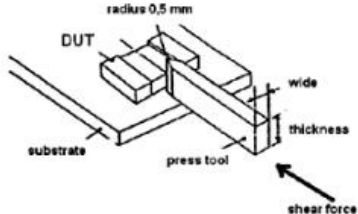
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Board Flex (SMD)	1. Mounting method: IR-Reflow. PCB Size (L:100 × W:40 × T:1.6mm) 2. Apply the load in direction of the arrow until bending reaches 2 mm. 	No Visible Damage.	AEC-Q200 005
Adhesion	Force of 1.8Kg for 60 seconds. 	No Visible Damage Magnification of 20X or greater may be employed for inspection of the mechanical integrity of the device body terminals and body/terminal junction.	AEC-Q200 006
Physical Dimension	Any applicable method using x10 magnification, micrometers, calipers, gauges, contour projectors, or other measuring equipment, capable of determining the actual specimen dimensions.	In accordance with specification.	JESD22 JB100

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