

2 .4GHz 1608 Chip Antenna: HXDANT1608- DC-01**Application:**

WLAN, 802 . 11b/g , Bluetooth, WLAN, etc ...

Features

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

Part number Information

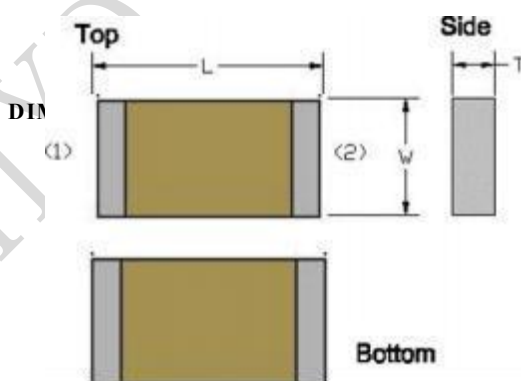
<u>RANT</u>	<u>1608</u>	<u>F</u>	<u>245</u>	<u>C</u>	<u>01</u>
(A)	(B)	(C)	(D)	(E)	(F)

(A) Product Type	Chip Antenna
(B) Size Code	1 6x0 8mm(: 0 1mm)
(C) Material	High K material
(D) Frequency	2 .4 ~ 2 .5GHz
(E) Feeding mode	PIFA & Single Feeding
(F) Antenna type	Type=01

Electrical Specification

Working Frequency Range	2400 ~2500 MHz
Bandwidth	100 MHz (Min.)
Peak Gain	3 .35 dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni- directional
Operation Temperature(°C)	-40 ~85°C
Resistance to Soldering Heats	10sec. (@ 280°C)
Termination	Ni / Au (Leadless)

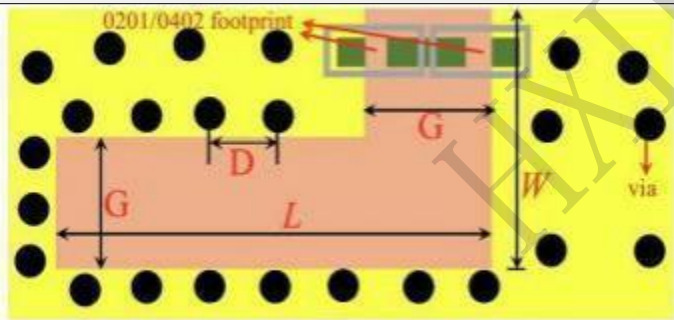
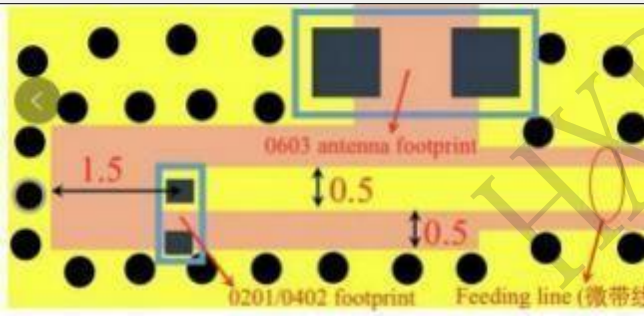
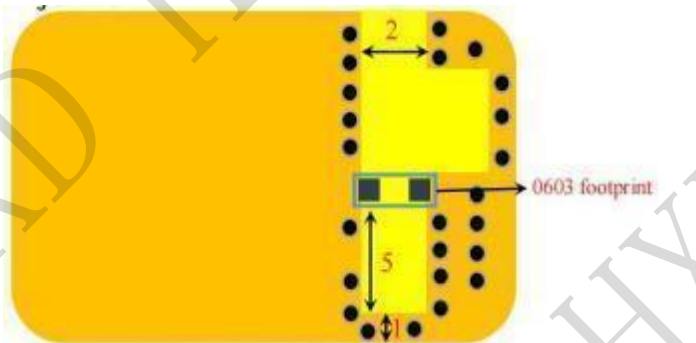
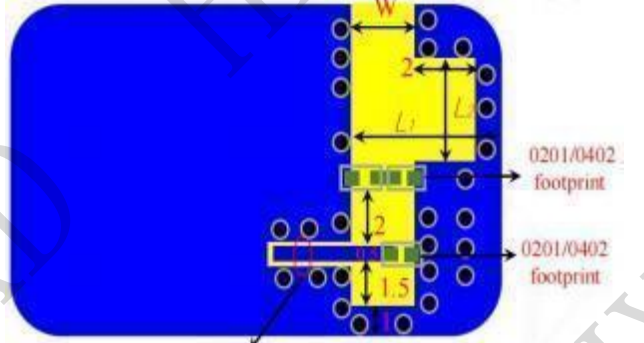
The specification is defined on EVB.

Dimension and Terminal Configuration

Dimension (mm)		No.	Terminal Name
L	1.60 : 0.10	1	Feeding/ GNG
W	0.80 : 0.10	2	GND/ Feeding
T	0.80 : 0.10		

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Evaluation Board Reference

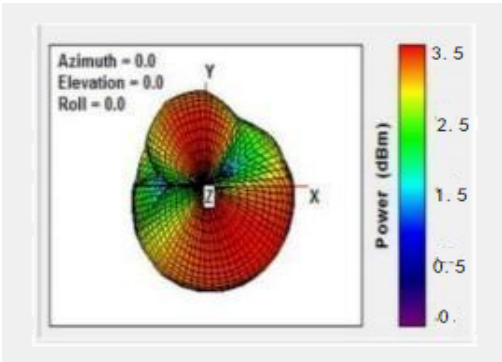
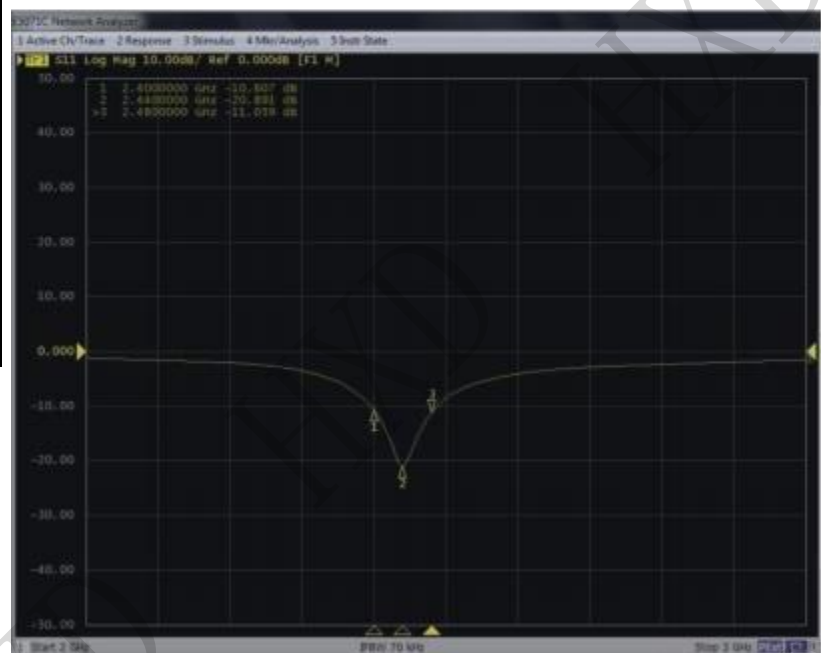
	
设计标准: 1. 图示中的尺寸为标准封装, 仅作为参考; 净空区的尺寸会根据每个版型进行调整和优化。 2. 天线最优放置于PCBA的中间区域; 天线及其板后的匹配物料最优放置于板边缘。 3. 净空区周围需一排过孔, 与PCBA上的其它回路或物料进行隔离。 4. G最优为1.5~2mm, W最优为3~5mm, L最优为4~6mm, D最优为0.5~1mm。 5. 天线性能与版型、组装、佩戴等相关, 因而各版型的性能会有所不同。	
	
设计指导: 1、原则上, 净空区左侧边缘距离板边的间距 L1 应该尽量大, 且 注意与底部电池的间距。 2、净空区的宽度 W 最优为 1.5mm~2mm。 3、净空区的长度 L2 的长度为 2mm~4mm。	

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Electrical Characteristics

Return Loss & Radiation

ELECTRICAL CHARACTERISTICSS1 1



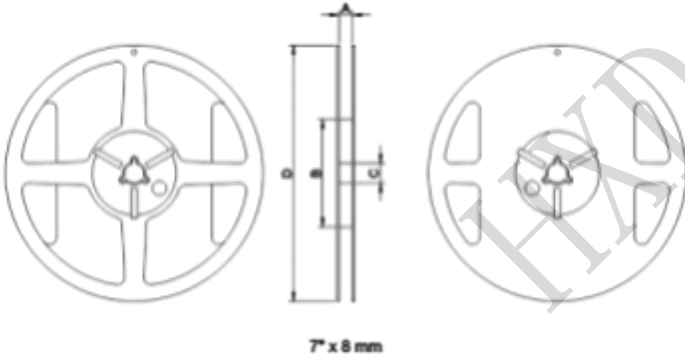
Radiation Pattern

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Taping Specifications

Reel and Taping Specification

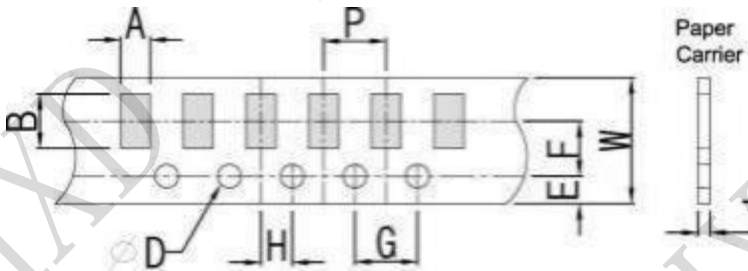
Reel Specification



7" x 8 mm

TYPE		SIZE		A	B	C	D
1608		7"	4K/ Reel	4.0±0.5	4.0±2	13.5±0.5	178±2

Tapping Specification



Paper Carrier

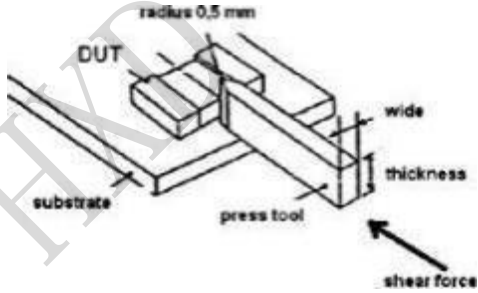
Packaging	Type	A	B	W	E	F	G	H	T	ψ D	P
Paper Type	1608	1.90±0.20	3.50±0.20	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	0.75±0.10	1.50±0.10	4.0±0.1

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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 ± 10C / 1 hr , then keep for 24 ± 1 hrs at room temp. 2 . Initial measure: Spec: refer Initialspec . 3 . Rapid change of temperature test: - 30 C to + 85 C; 100 cycles; 1 5 minutes at Lower category temperature; 1 5 minutes at Upper category temperature.	No Visible Damage . Fulfill the electrical specification .	MIL-STD-202 107
Temperature Cycling	1 . Initial measure: Spec: refer Initialspec . 2 . 100 Cycles (- 30 C to +85 C) , Soak Mode= 1 (2 Cycle/ hours) . 3 . Measurement at 24 ± 2 Hours after test condition.	No Visible Damage. Fulfill the electrical specification.	JESD22 JA104
High Temperature Exposure	1 . Initial measure: Spec: refer Initialspec . 2 . Unpowered; 50 0 hours @ T=+ 8 5 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 Initialspec . 2 . Unpowered : 50 0 hours @ T= - 3 0 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
V ibration	5 g ' 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 (1 8 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
H umidity Bias	1 . Humidity: 85% R . H . , Temperature:85 ± 2 ° C . 2 . Time: 500 ± 24 hours . 3 . Measurement at 24 ± 2 hrs after test condition.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 Method 106

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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
Ad hes ion	Force of 1 . 8 Kg for 6 0 seconds. 	No V is ible DaMage Magnification of 2 0 X or greater may be employed for inspection of the mechanical integrity of the device body terminals and body/ terminal junction .	AEC-Q200 006
P hysical D imension	A ny applicab le met hod us ing x10 mag nification, micrometers, calipers , gauges , contour projectors , or other measuring equipment , capable of determining the actual specimen dimensions .	In acco rda nce with specification .	JESD22 JB100

Revision History

Revision	Date	Content
1	2021/05/01	New Datasheet
2	2024/06/25	Add 2D radiation characteristic
3	2025/03/26	Add company address

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