2.44GHzPCB Antenna: AANPCBH2P2G44

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Features

high reliability, Convenient …

Part number

AAN PCB - H2 P 2G44
(1) (2) (3) (4) (5)

(1)Product Type	PCB Antenna
(2)Size Code	4.2x2.0mm
(3)Type Code	H2
(4)Packing	Paper Tape
(5)Frequency	2.44GHz

Electrical Specification

Working Frequency Range	2400 ~2500 MHz
Peak Gain	1.24 dBi (Typ.)
Impedance	50 Ohm
Return loss	9 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni- directional
Operation Temperature(℃)	-50 ~95℃

The specification is defined on EVB.

Dimension and Terminal Configuration

Thickness(1盎司)	W(mils)
1盎司	80
1盎司	120
1盎司	47
1盎司	34
1盎司	31
1盎司	58
1盎司	62
1盎司	27

Evaluation Board Reference

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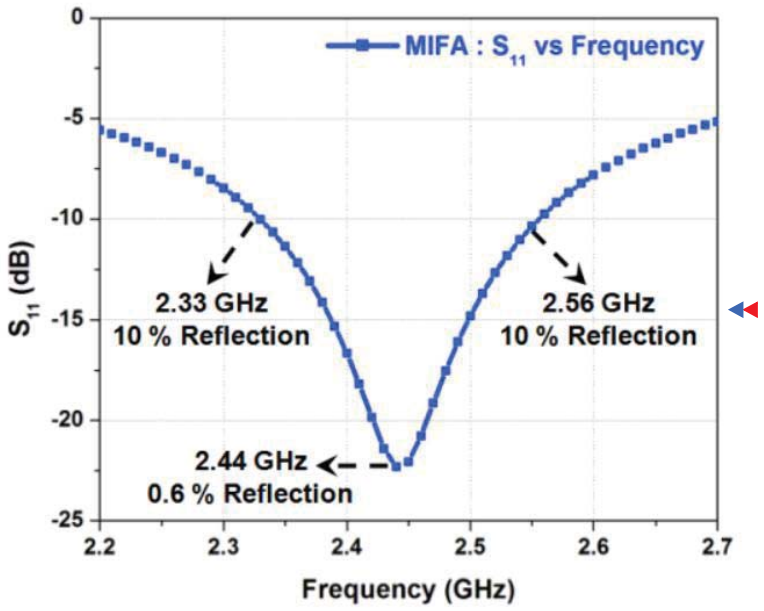
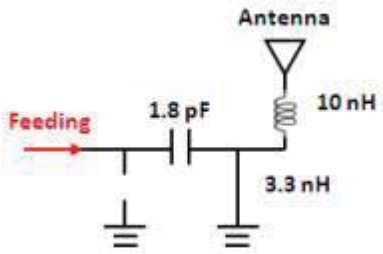
PCB Dimension	Antenna Layout Reference

Return Loss & Radiation

Return Loss





Frequency (MHz)	S11 (dB)
2400	-16.3
2442	-46.5
2484	-15.9

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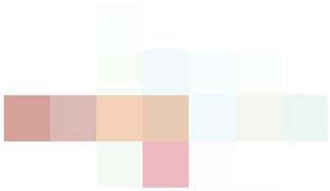

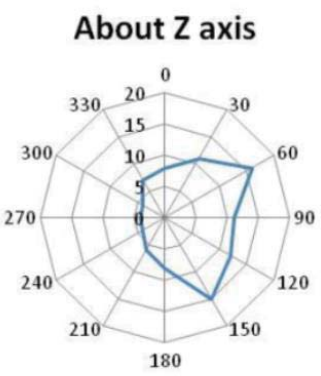

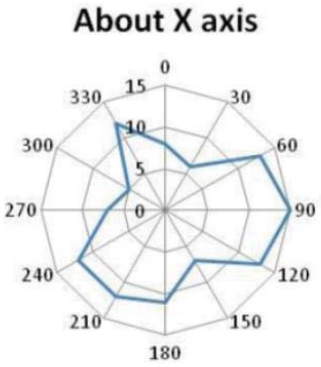

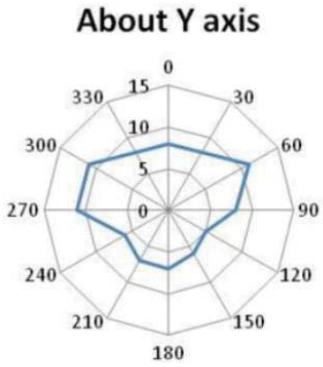

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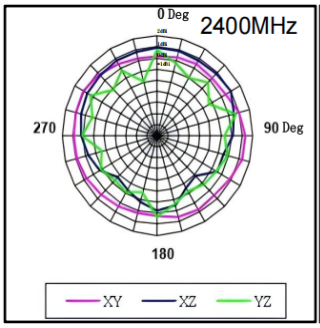
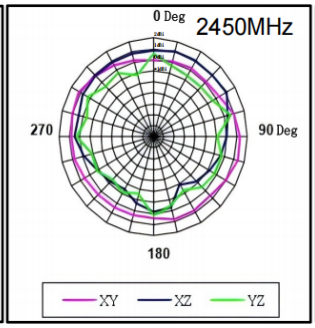
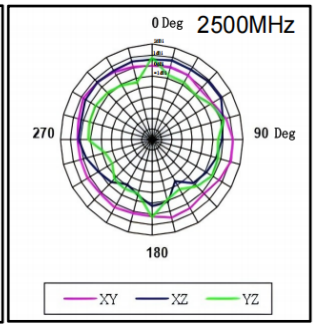
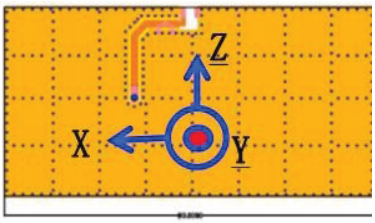
Radiation

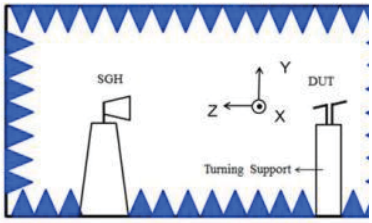








	2400MHz	2450MHz	2500MHz
Efficiency	82.52%	85.26%	83.01%
Peak Gain	1.15 dBi	1.24 dBi	1.19 dBi
Directivity	1.89 dBi	1.97 dBi	1.91 dBi



Reliability Table

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Test Item	Procedure	Requirements Ceramic Type	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification	User Spec.
Thermal Shock	1. Preconditioning: 50 ± 10℃ / 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℃ to +85℃; 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℃ to +85℃), 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℃ . 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℃ . 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