

# AT9520 Series

## Multilayer Chip Antenna

### Features

- ❖ Monolithic SMD with small, low-profile and light-weight type.
- ❖ Wide bandwidth

### Applications

- ❖ 2.4GHz WLAN, Home RF, Bluetooth Modules, etc.



### Specifications

Part Number	Frequency Range (MHz)	Peak Gain (XZ-V)	Average Gain (XZ-V)	VSWR	Impedance
<b>AT9520-B2R4HAA_</b>	2400~2500	3.0 dBi typ.	1.0 dBi typ.	2 max.	50

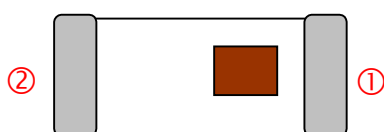
Q'ty/Reel (pcs) : 1000pcs  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : -40 ~ +85 °C  
 Power Capacity : 3W max.

### Part Number

AT   9520   -   B   2R4   HAA   □   /LF  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

① Type	AT : Antenna	② Dimensions ( L x W )	9.5x 2.0 mm
③ Material Code	B	④ Frequency Range	2R4=2400MHz
⑤ Specification Code	HAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	=lead-containing /LF=lead-free		

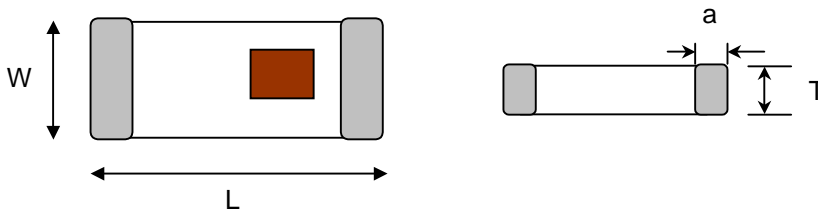
### Terminal Configuration



No.	Terminal Name	No.	Terminal Name
①	Feeding Point	②	NC

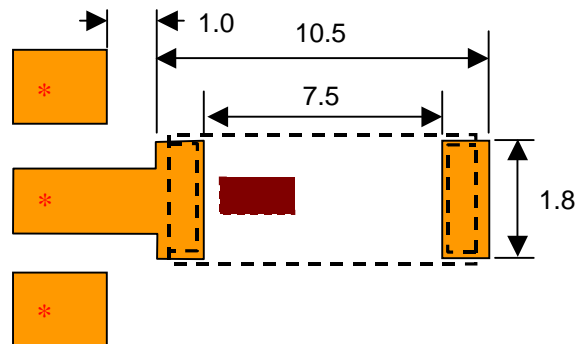
**Dimensions and Recommended PC Board Pattern**

Unit : mm

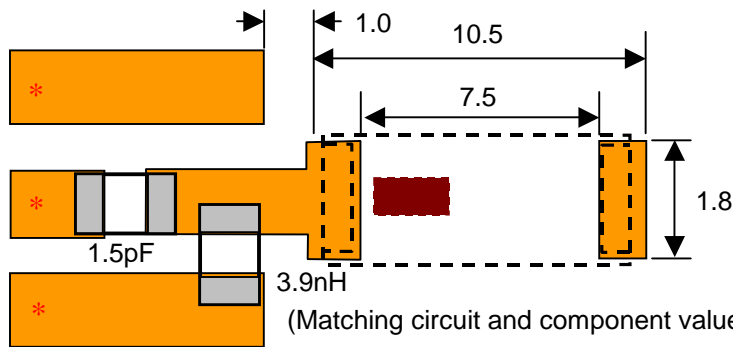


Mark	L	W	T	a
Dimensions	9.5±0.2	2.0±0.2	1.2+ 0.1/-0.2	0.5±0.3

(a) Without Matching Circuits (Moderate Bandwidth)



(b) With Matching Circuits (Wide Bandwidth)

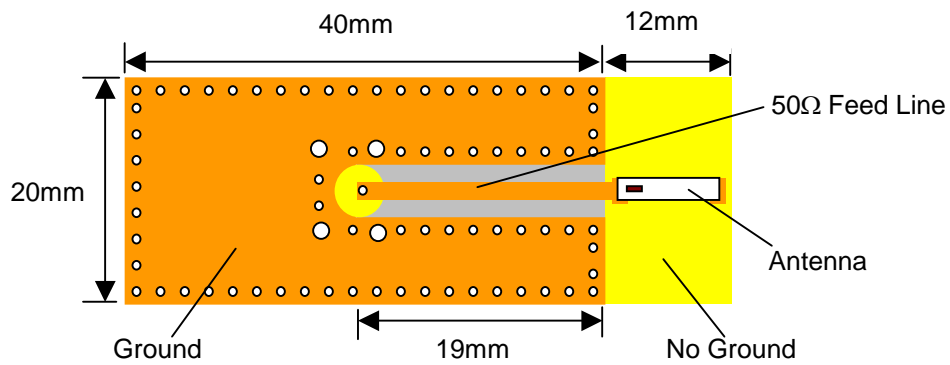


(Matching circuit and component values will be different, depending on PCB layout)

\*Line width should be designed to match 50 characteristic impedance, depending on PCB material and thickness.

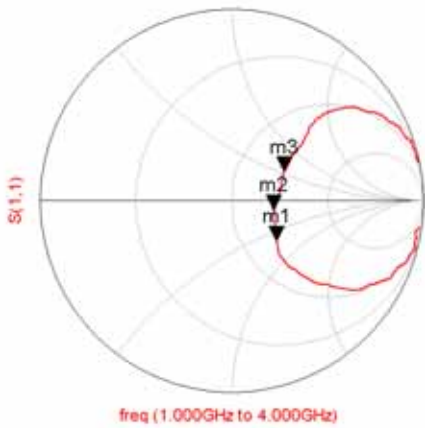
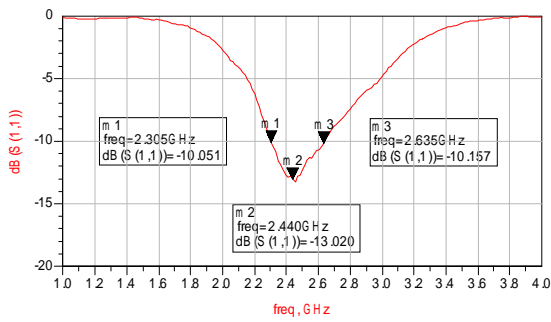
**Typical Electrical Characteristics (T=25°C)**

❖ Test Board

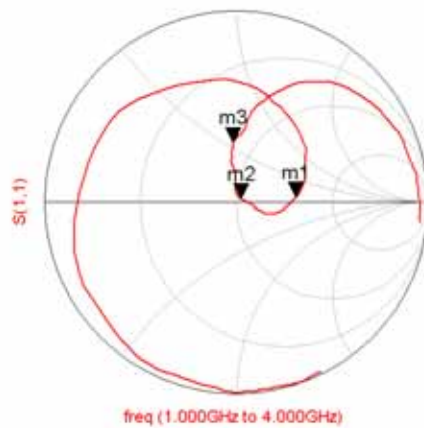
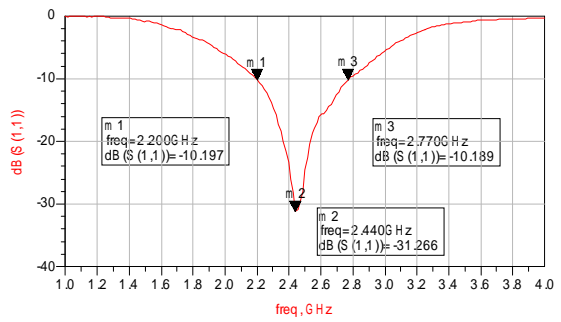


❖ Return Loss

(a) Without Matching Circuits

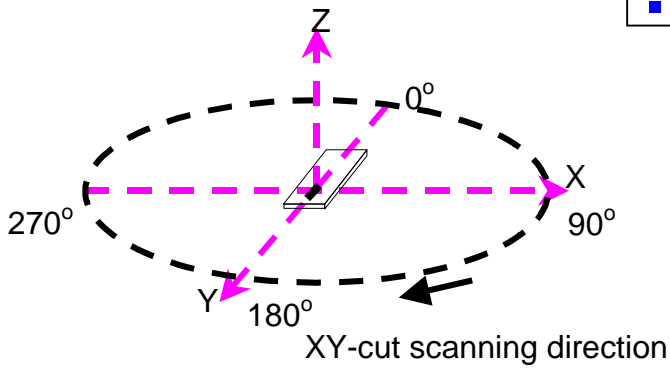


(b) With Matching Circuits

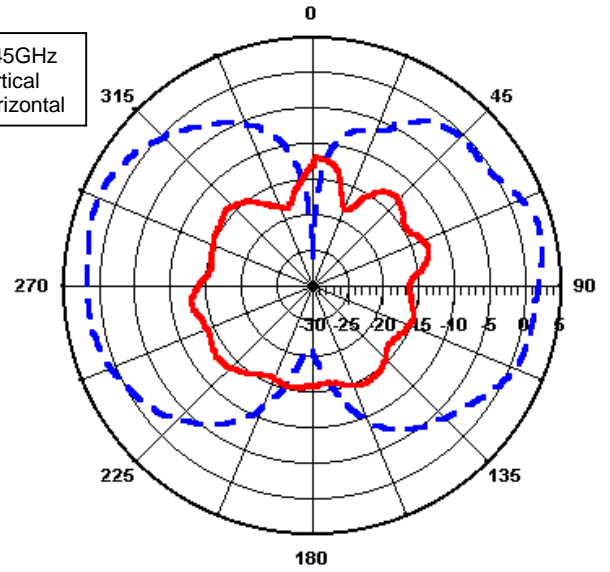


❖ Radiation Patterns

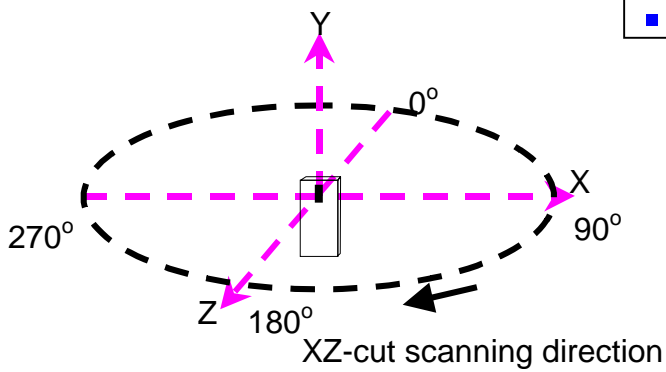
XY-V/XY-H



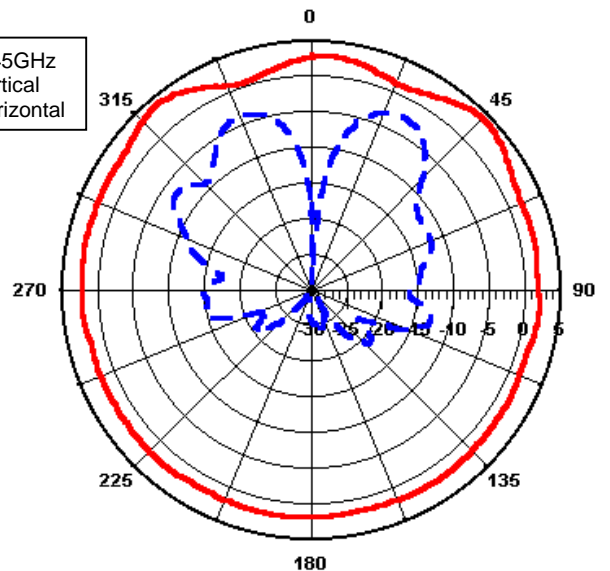
XY cut @2.45GHz  
— Vertical  
- - - Horizontal



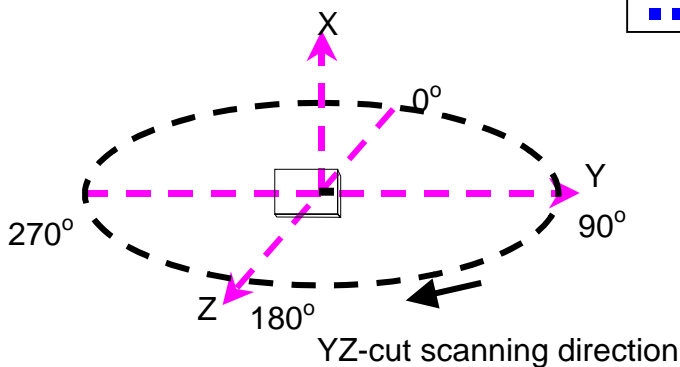
XZ-V/XZ-H



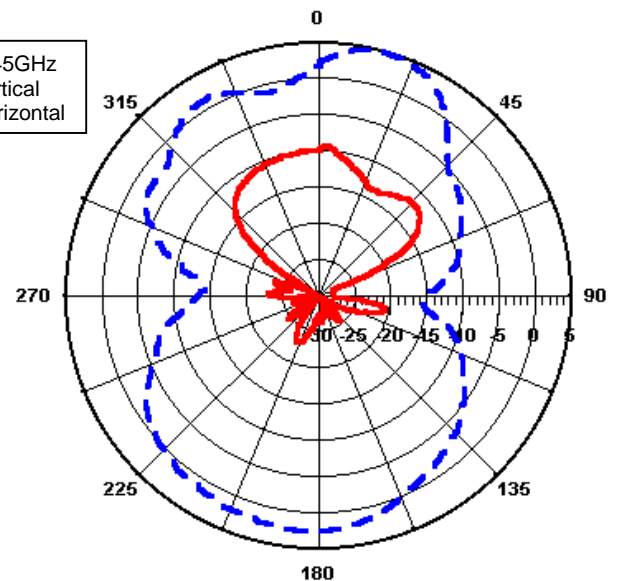
XZ cut @2.45GHz  
— Vertical  
- - - Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz  
— Vertical  
- - - Horizontal



**Advanced Ceramic X Corp.**

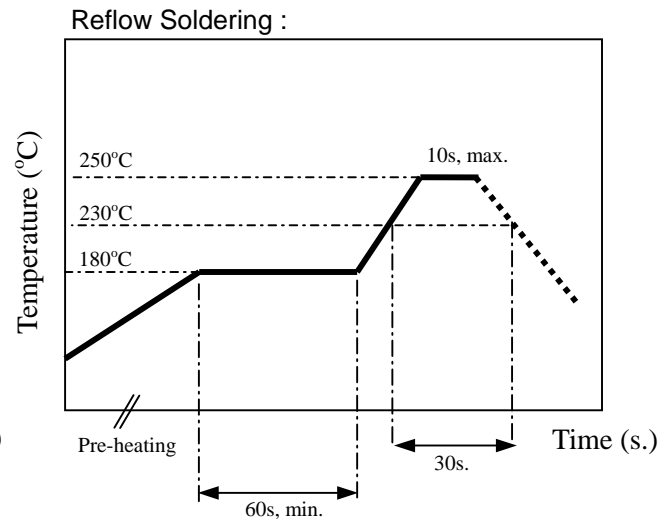
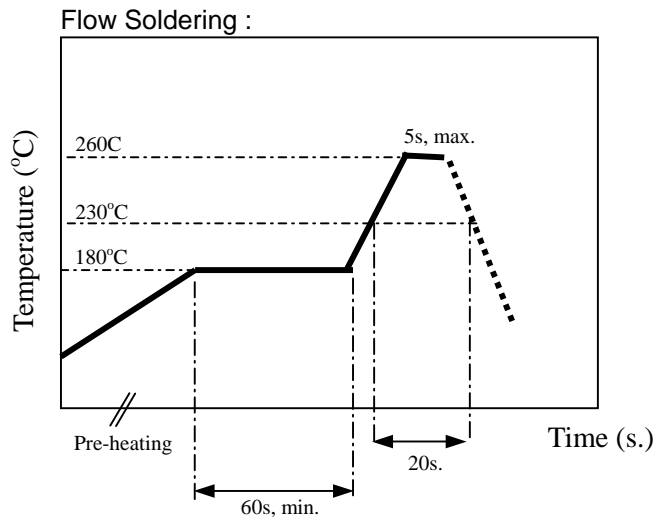
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## Soldering Conditions

### ❖ Typical Soldering Profile for Lead-free Process



### Notes

❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

D/C : Date code

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