

Multilayer Chip Antenna

Features

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



Applications

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

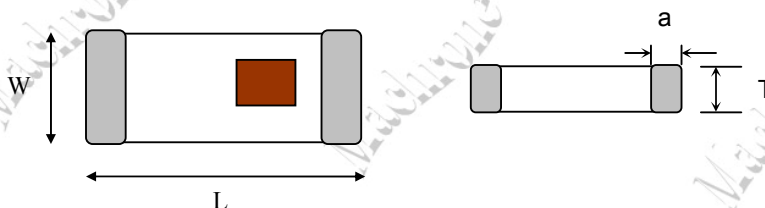
Part Number Systems

MAT - 9520 - B - 2R4 - HAA - LF

(1) (2) (3) (4) (5) (6)

(1)	Product series	(2)	Dimensions (L x W): 9.5 x 2.0 mm
(3)	Material code	(4)	Frequency Range: 2R4 = 2400MHz
(5)	Specification code	(6)	ROHs Compliant

Shape And Dimensions



Unit: mm

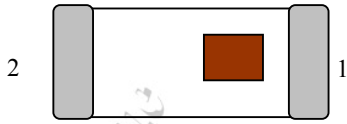
Type	L	W	T	a
9520	9.5 ± 0.2	2.0 ± 0.2	1.2 +0.1/-0.2	0.5 ± 0.3

MAT-9520 -Series			Electrical Characteristics			
Part Number	Frequency Range (MHz)	Peak Gain (XZ-V)	Average Gain (XZ-V)	VSWR	Impedance	Power Capacity
MAT-9520-B-2R4-HAA-LF	2400 ~ 2500	3.0 dBi typ.	1.0 dBi typ.	2 Max	50 Ω	3W Max

*All specifications are subjected to change without prior notice.

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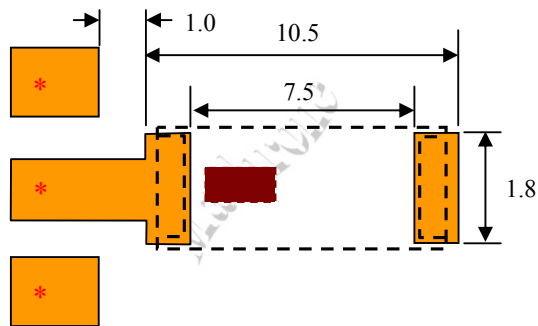
Terminal Configuration



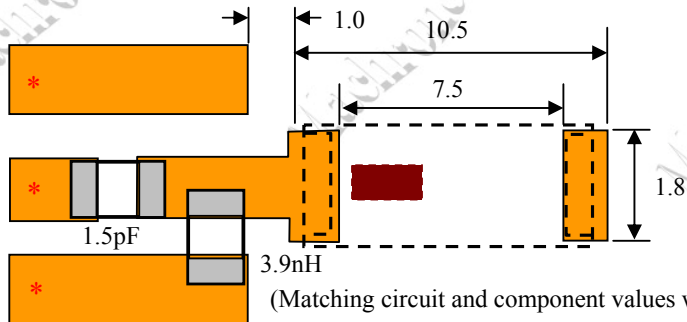
No.	Terminal Name	No.	Terminal Name
1	Feeding Point	2	NC

Recommended PC Board Pattern (Unit: mm)

(a) Without Matching Circuits (Moderate Bandwidth)



(b) With Matching Circuits (Wide Bandwidth)



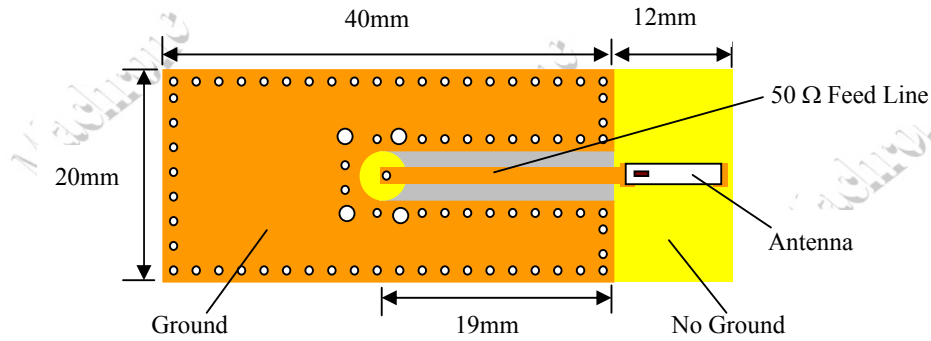
(Matching circuit and component values will be different, depending on PCB layout)

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

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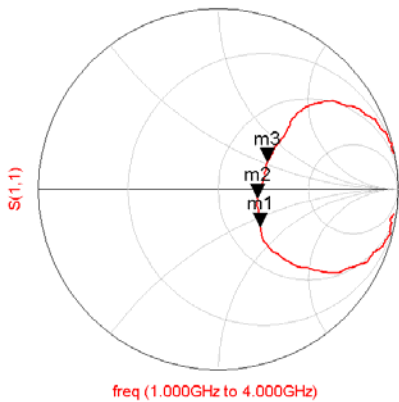
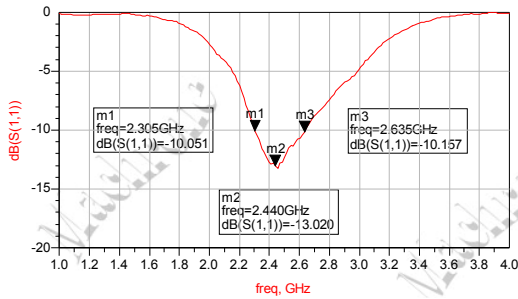
Typical Electric Characteristics (T = 25°C)

❖ Test Board

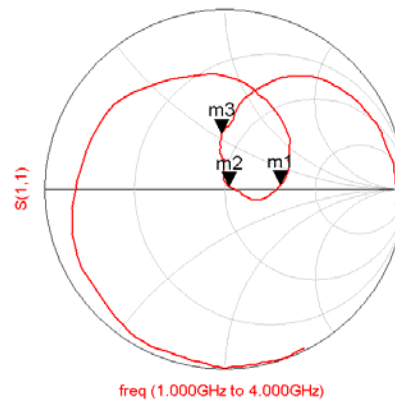
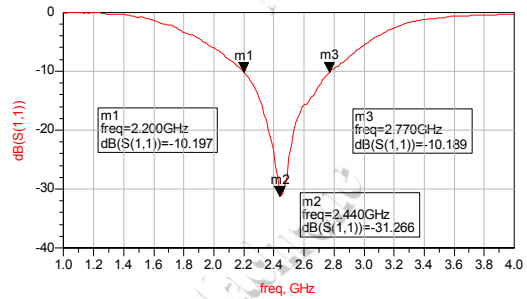


❖ Return Loss

(a) Without Matching Circuits



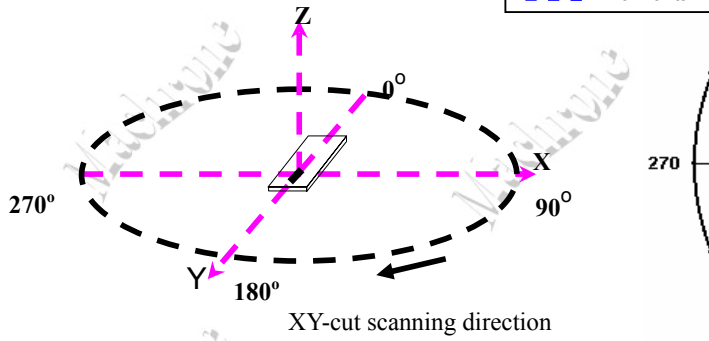
(b) With Matching Circuits



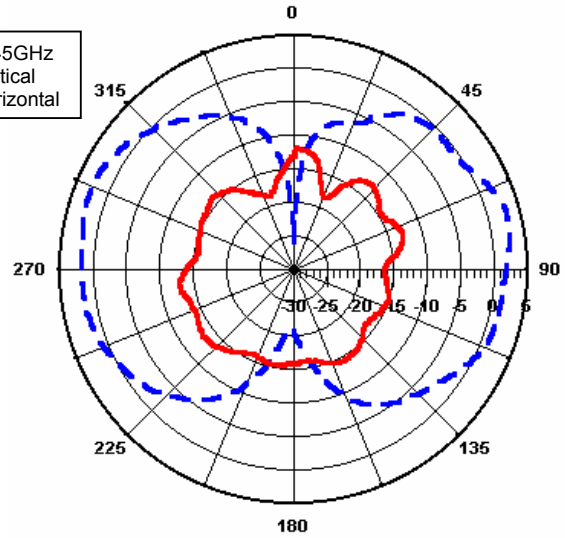
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❖ Radiation Patterns

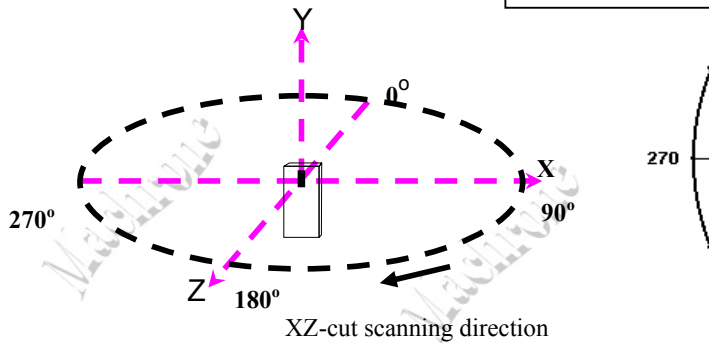
XY-V/XY-H



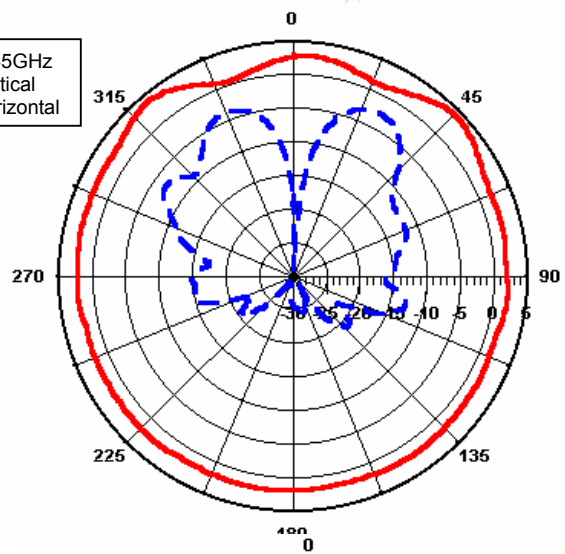
XY cut @2.45GHz
— Vertical
- - - Horizontal



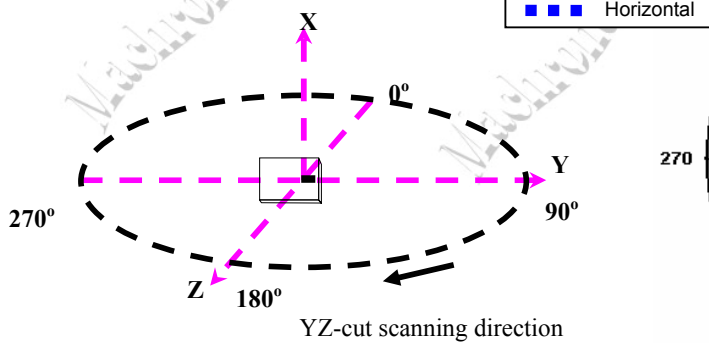
XZ-V/XZ-H



XZ cut @2.45GHz
— Vertical
- - - Horizontal



YZ-V/YZ-H



YZ cut @2.45GHz
— Vertical
- - - Horizontal

