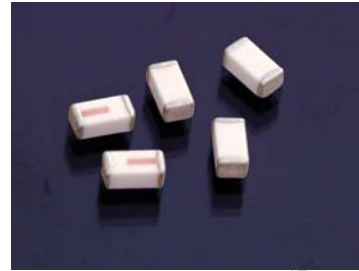


Multilayer Chip Antenna

Features

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



Applications

- Bluetooth/Wireless Lan/Home RF
- ISM band 2.4 GHz applications

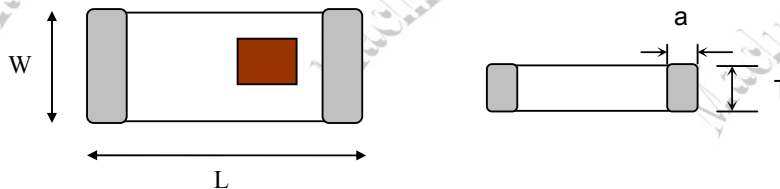
Part Number Systems

MAT - 5020 - B - 2R8 - HAA - LF

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

(1)	Product series	(2)	Dimensions (L x W): 5.0 x 2.0 mm
(3)	Material code	(4)	Frequency Range: 2R8 = 2800MHz
(5)	Specification code	(6)	ROHs Compliant

Shape And Dimensions



Unit: mm

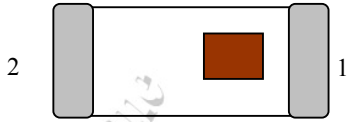
Type	L	W	T	a
5020	5.0 ± 0.2	2.0 ± 0.2	1.1 ± 0.2	0.5 ± 0.3

MAT-5020 -Series				Electrical Characteristics		
Part Number	Frequency Range (MHz)	Peak Gain (XZ-V)	Average Gain (XZ-V)	VSWR	Impedance	Power Capacity
MAT-5020-B-2R8-HAA-LF	2400 ~ 2500	0 dBi typ.	-1 dBi typ.	2 Max	50 Ω	3W Max

*All specifications are subjected to change without prior notice.

Multilayer Chip Antenna

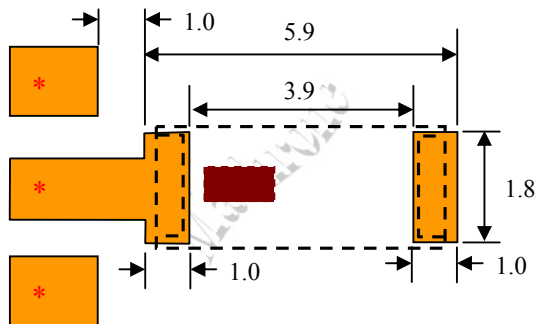
Terminal Configuration



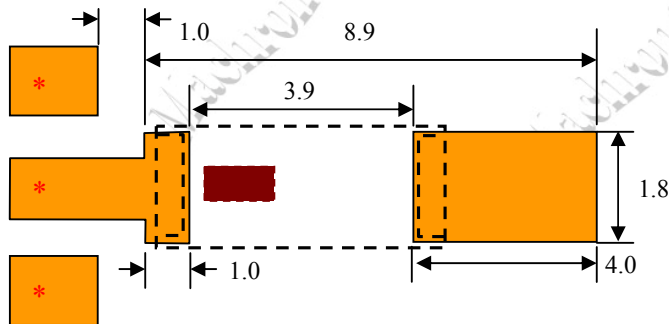
No.	Terminal Name	No.	Terminal Name
1	Feeding Point	2	NC

Recommended PC Board Pattern (Unit: mm)

(a) Without Matching Circuits



(b) With Matching Circuits

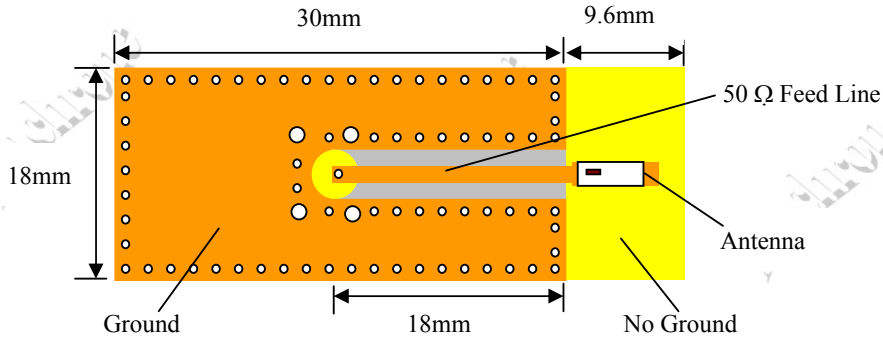


*Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Multilayer Chip Antenna

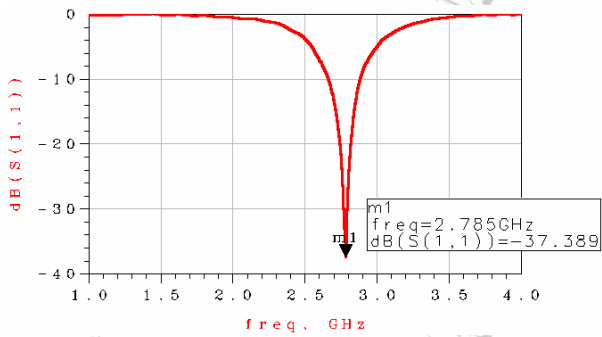
Typical Electrical Characteristics (T = 25°C)

❖ Test Board

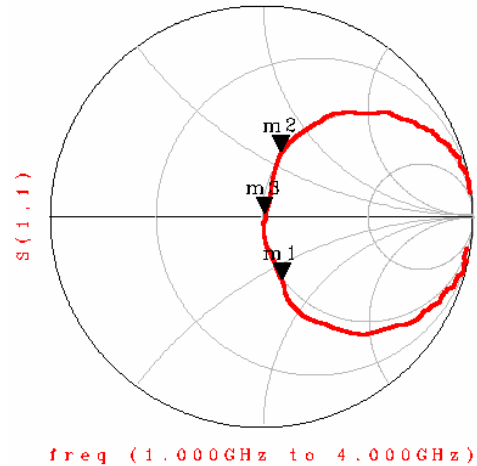
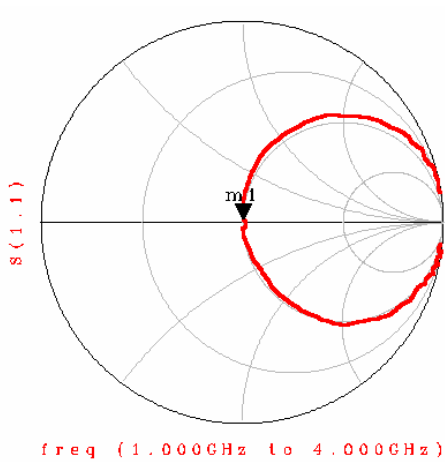
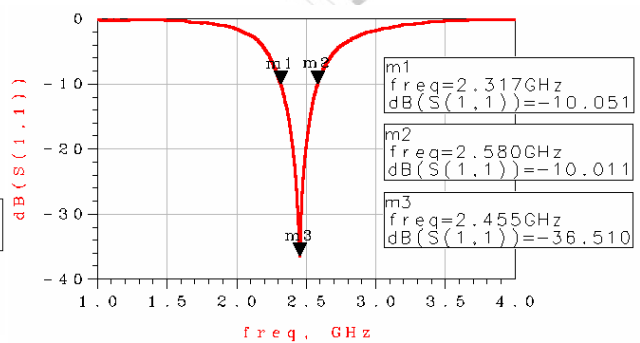


❖ Return Loss

(a) Without Matching Circuits



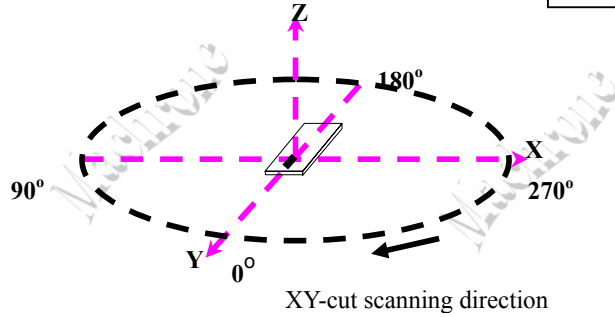
(b) With Matching Circuits



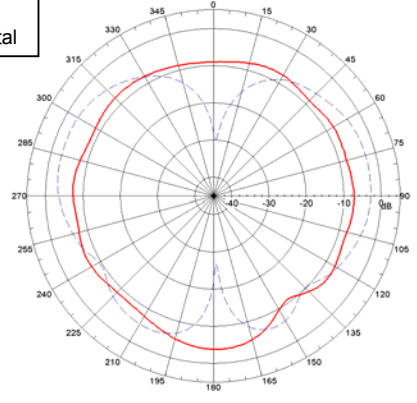
Multilayer Chip Antenna

❖ Radiation Patterns

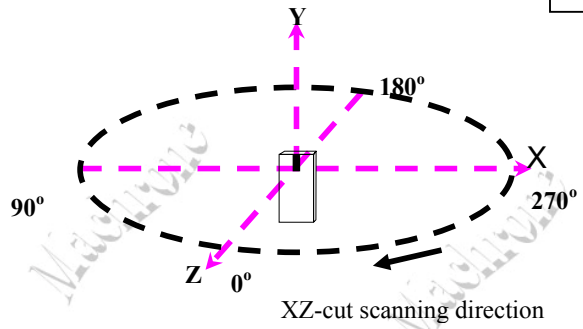
XY-V/XY-H



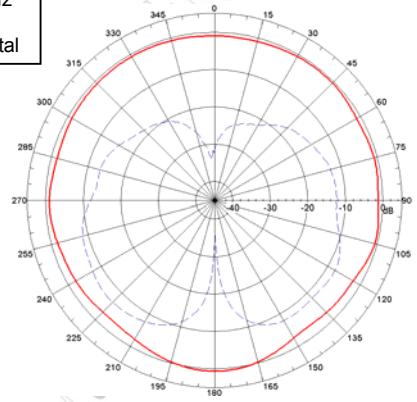
XY cut @2.45GHz
 — Vertical
 - - Horizontal



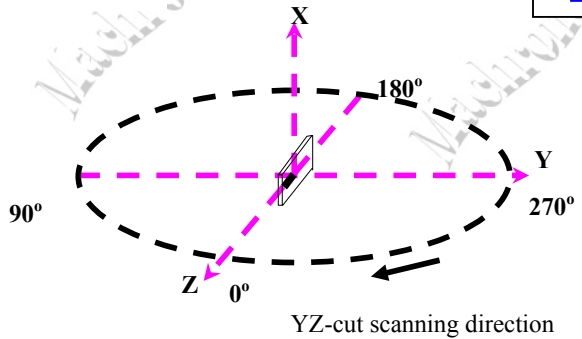
XZ-V/XZ-H



XZ cut @2.45GHz
 — Vertical
 - - Horizontal



YZ-V/YZ-H



XY cut @2.45GHz
 — Vertical
 - - Horizontal

