

Fusca 2.4GHz SMD Antenna

Part No. A10192-L

Product Specification

1 Features

- Designed for 2.4GHz applications [Bluetooth[®], WiFi[®] (802.11b/g), ZigBee[®], etc.]
- Intended for SMD mounting
- Supplied in tape on reel

2 Description

The Fusca antenna is intended for use with all 2.4GHz applications. The antenna requires a groundplane, i.e. your device acts as an active part of the antenna and thus demands careful consideration concerning its placement.

3 Applications

- Mobile phones
- PDAs
- Headsets
- PC-Cards
- CF-Cards



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4 Model Name

A10192



5 General Data

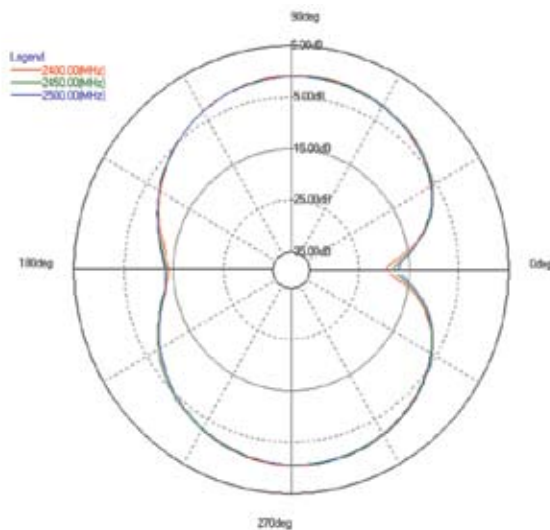
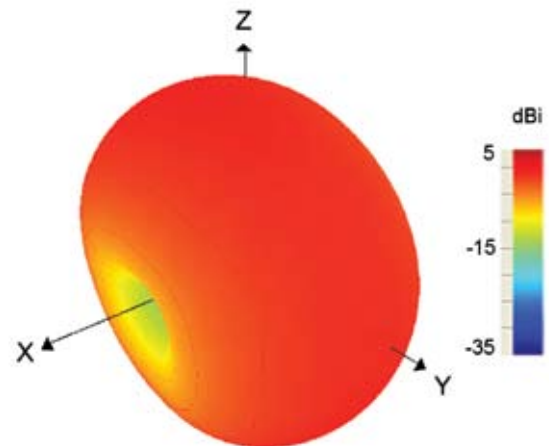
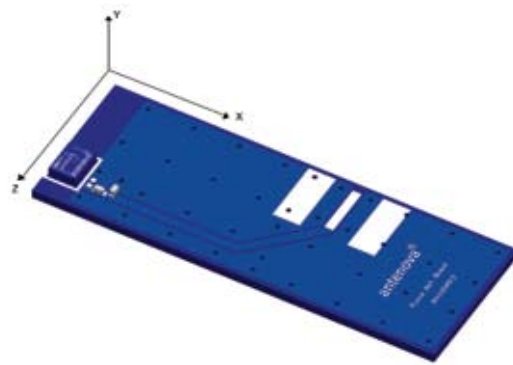
Product Name	Fusca 2.4GHz
Part No.	A10192-L
Frequency	2.4 – 2.5GHz
Polarization	Linear
Operating Temperature	-40 to +85 °C

6 Electrical Characteristics

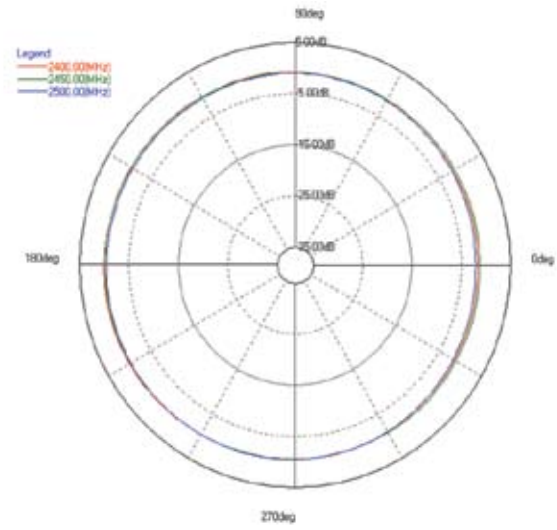
	Characteristics			*Conditions
	Min	Typ	Max	
Peak Gain	TBD	0.4dBi	TBD	Frequency 2.4-2.5GHz, Measured in 3D chamber (near field)
Efficiency	TBD	50%	TBD	
VSWR	TBD	2:1	TBD	Frequency 2.4-2.5GHz, Measured with Network Analyser

* Note all data provided in this table are based on the Antenna reference board.

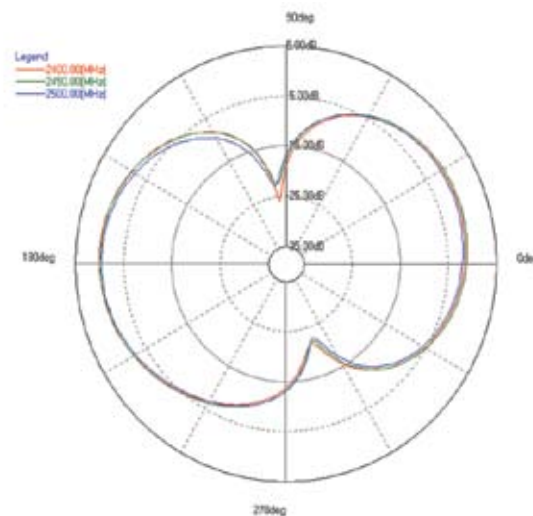
7 Electrical Performance



xy plane

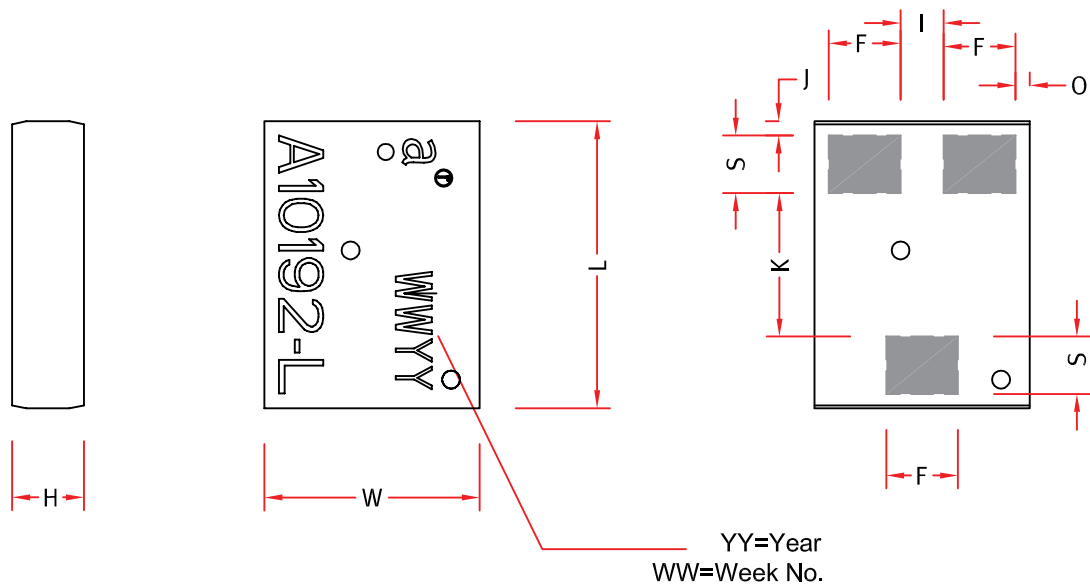


yz plane



xz plane

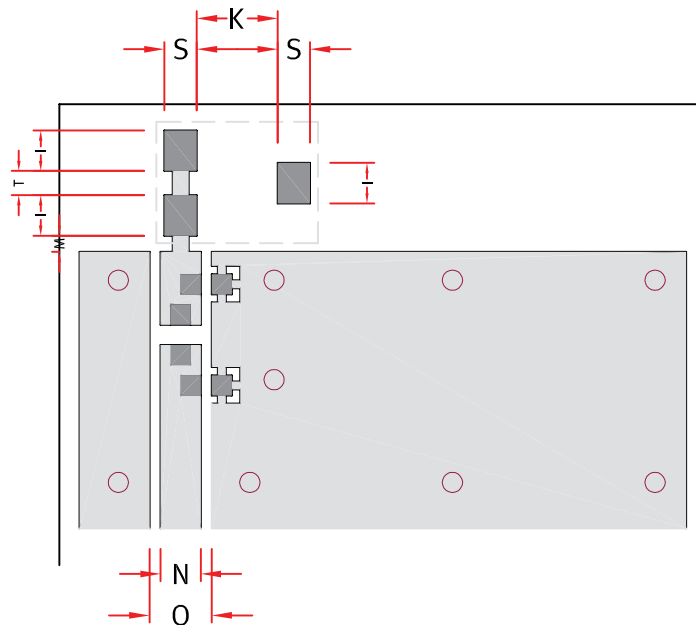
8 Antenna Dimensions



L	W	H	F	S	K	J	I	O
Length	Width	Height						
4.0 ±0.2	3.0 ±0.2	1.1 ±0.2	1.0 ±0.15	0.8 ±0.15	0.2 ±0.15	0.2 ±0.15	0.6 ±0.15	0.2 ±0.15

All dimensions in mm

9 Antenna Footprint

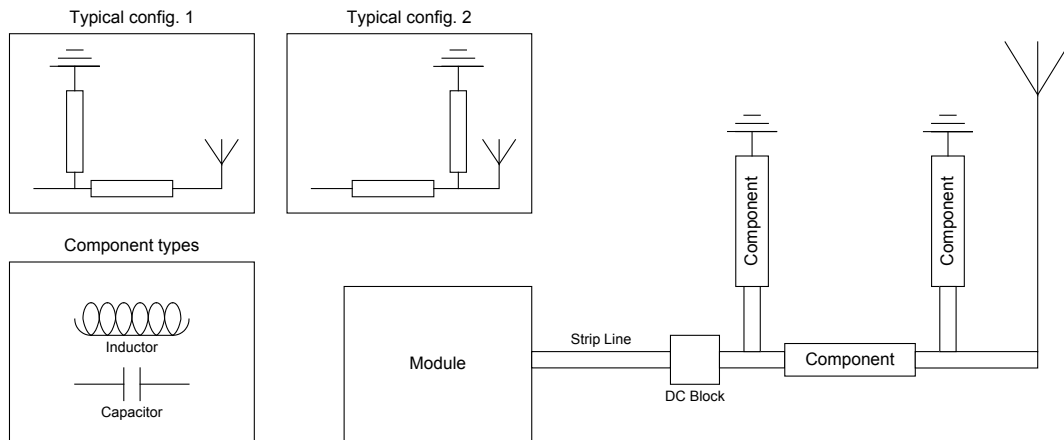


S	I	K	T	M	N	O
Pad					50Ω transmission line. Dependent on substrate	
0.8 ±0.1	1 ±0.1	2 ±0.1	0.6 ±0.1	0.4 ±0.2		

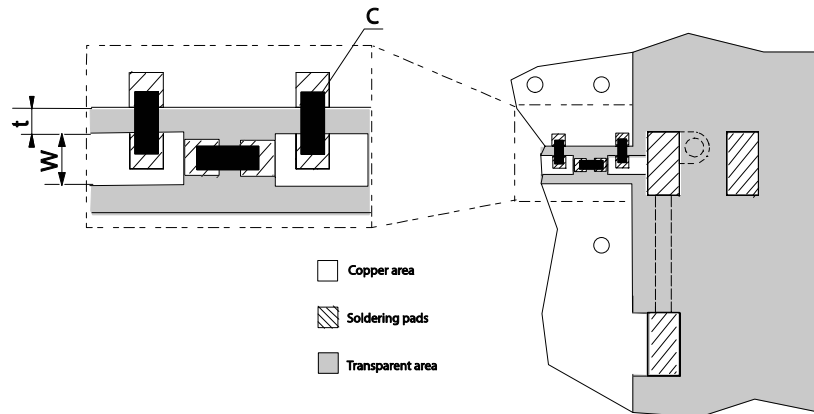
All dimensions in mm

10 Electrical Interface

10-1 Transmission Line and Matching



The matching network has to be individually designed using one, two or three components.

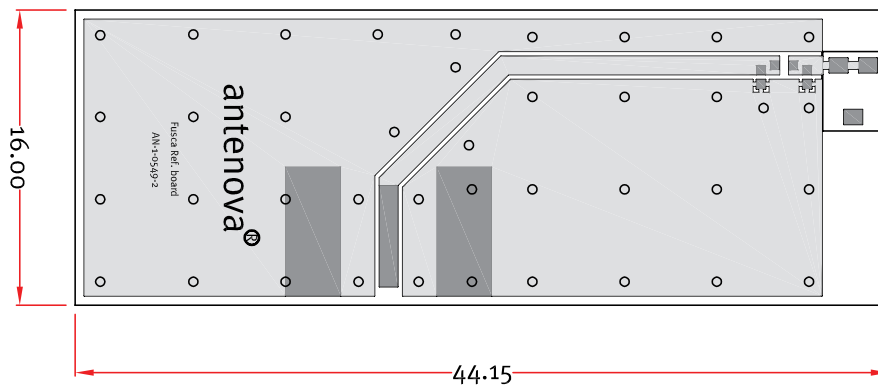


t, W Unique dimensioning according to your PCB*

C Inductor and capacitor values according to your device*

*Antenna provides a design service to determine these parameters on request.

11 Test Board Dimensions



The test board is designed for evaluation purposes for Fusca 2.4GHz SMD antenna. The card is a similar size to a typical Bluetooth headset.

12 Soldering

The antenna has been designed for lead free soldering. A recommended solder paste and reflow profile will be provided.

13 Reliability

13-1 Temperature and Humidity

The antenna will be tested for conformance to the following standards:

Item	Standard	Low	High	Duration
Operating Temperature	EN/IEC 60068-2-2, Test Bd: Dry heat	-30 °C	+90 °C	-
Temperature Cycling	EN/IEC 60068-2-14, Test Na: Change of temperature	-40 °C	+90 °C	500 cycles / 10 min
Storage Life Humidity	EN/IEC 60068-2-1, Test Ca: Damp heat	+60 °C / 90% RH		-
Storage Life Low Temperature	EN/IEC 60068-2-1, Test Ad: Cold	-55 °C	-	-
Storage Life High Temperature	EN/IEC 60068-2-2, Test Bb: Dry heat	-	+125 °C	-

13-2 Mechanical

The antenna will be tested for conformance to the following standards:

Item	Standard	Low	High	Duration
Bending	IEC 60068-2-21, Test Ue1: Bending	Bending 1mm at a rate of 1mm/s with support at end of PCB 1mm depth on reference board		
Shear	IEC 60068-2-21, Test Ue3: Shear	Force of 5N applied to the side of the antenna		
Drop Test		Dummy weight: 150g Height: 170cm		One drop at each side, total drops: 6
Vibration	EN/IEC 60068-2-6, Test Fc (sinusoidal)	Acceleration spectral density: 10-1000Hz Acceleration: 20m/s ² Number of axes: 3 mutually perpendicular		5 cycles per axis

14 Hazardous Material Regulation Conformance

Restriction of Hazardous Substances (RoHS)

The Fusca SMD Antenna A10192-L will be certified to be in full compliance with the relevant EU directives with respect to the content of:

Cadmium and cadmium compounds	Chlorinated paraffin (CP)
Lead and lead compounds	Organic tin compounds
Organic brominated compound (PBB, PBDE)	Mirex
Mercury and mercury compounds	Asbestos
Polychlorinated biphenyl (PCB)	Formaldehyde
Hexavalent chromium compounds	Azo compounds
Polychlorinated naphthalene (PCN)	Tetra-bromo-bisphenol-A-bis (TBBP-A-bis)

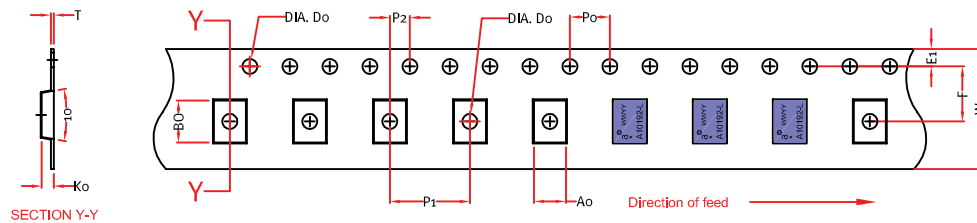
Antenova's Declaration of Compliance for the Fusca SMD Antenna A10192-L will be available upon request from Antenova Technical Support.

15 Packaging

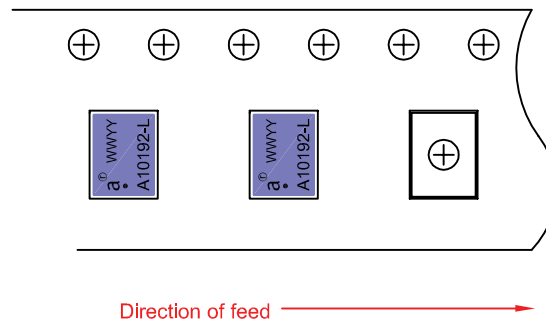
15-1 Shelf Storage Recommendations

Temperature	-10 to +40 °C
Humidity	Less than 75% RH
Shelf Life	18 Months
Storage Place	Away from corrosive gas and direct sunlight

15-2 Tape Characteristics



Detail of Antenna in reel (Scale 2:1)

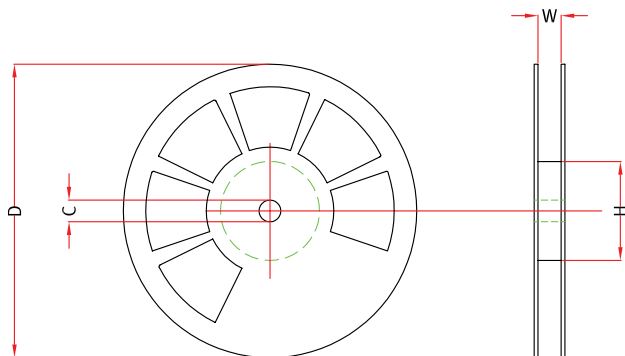


W	F	E1	P0	P1	P2	A0	B0	K0	T	D0	D1
12.00 ±0.2	5.50 ±0.1	1.75 ±0.1	4.00 ±0.1	8.00 ±0.1	2.00 ±0.1	3.20 ±0.1	4.20 ±0.1	1.30 ±0.1	0.30 ±0.1	1.50 ±0.1	1.50 ±0.1

Quantity	Leading Space	Trailing Space
TBC	60 blank antenna holders	37 blank antenna holders

15-3 Reel Dimensions

Material	Conductive Polystyrene
Width (W)	14mm
Reel Dia (D)	178mm ±2.0mm
Hub Dia (H)	60mm
Shaft Dia (C)	13.2mm ±0.5mm





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Certificate No: 4598/04

Integrated Antenna Solutions



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