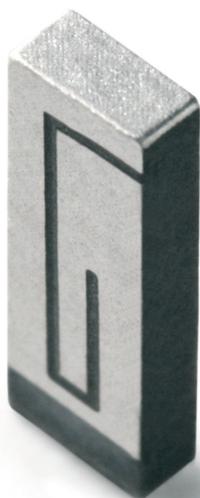


Dualband WLAN Ceramic Chip Antenna

Ground cleared under antenna 11.60 x 6.00 mm. Pulse Part Number: W3006



Features

- Omnidirectional radiation
- Low profile
- Compact size WxLxH (10.0 x 3.2 x 1.5 mm)
- Low weight (240 mg)
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product
- Single feed point

Applications

- IEEE 802.11a/b/g
- 5 GHz WLAN
- 2.4 GHz WLAN
- 2.4 GHz ISM Band Systems
- ZigBee IEEE 802.15.4

Electrical specifications @ +25 °C

Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

Dualband WLAN

Typical performance (testboard size 80 x 37 mm, PWB ground clearance area 11.60 x 6.00 mm)

1.5nH shunt inductor used for impedance matching.

| Frequency Range [MHz] | Max Gain [dBi] | Efficiency [%] / [dB] | Return loss min. [dB] | Impedance [Ω] | Operating Temperature [°C] |
|-----------------------|--------------------------------|--|-----------------------|---------------|----------------------------|
| 2400–2483.5 | 3.2 (peak) 2.7 (band edges) | 70 / -1.55 (peak) 65 / -1.85 (band edges) | -8 | 50 | -40 to +85 |
| 5150–5850 | 4.2 (peak) 3.0 (band edges) | 80 / -0.95 (peak) 70 / -1.55 (band edges) | -10 | 50 | -40 to +85 |

Pulse Finland Oy

Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

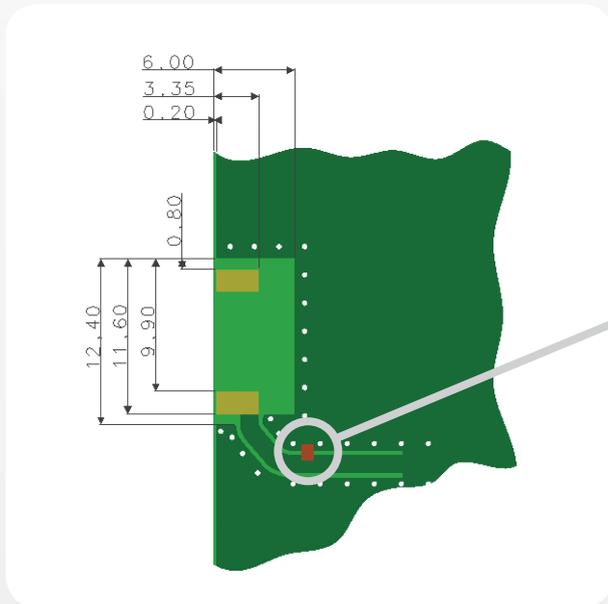
www.pulseeng.com/antennas



Dualband WLAN Ceramic Chip Antenna

Ground cleared under antenna 11.60 x 6.00 mm. Pulse Part Number: W3006

**Recommended test board layout for electrical characteristic measurement,
test board outline size 80 x 37mm**



Shunt matching inductor,
1.5nH with presented setup.
Exact inductor value depends
on specific application.

Feed line should be designed to match 50 Ω characteristic impedance, depending on PWB material and thickness.

Pulse Finland Oy

Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

www.pulseeng.com/antennas

Dualband WLAN Ceramic Chip Antenna

Ground cleared under antenna 11.60 x 6.00 mm. Pulse Part Number: W3006

Typical Electrical Characteristics (T=25 °C)

2,4 GHz Typical Return Loss S11/ impedance, measured on the test board

Dualband WLAN

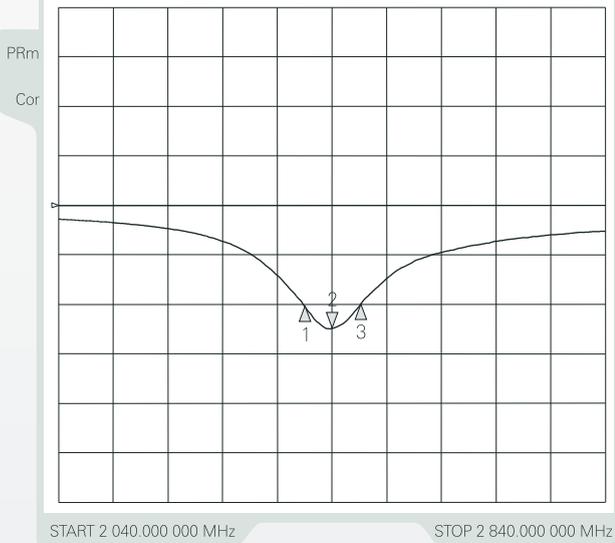
6 Nov 2006 15:08:00

CH1Markers

- | | | |
|----|------------|---------------|
| 1. | -10.222 dB | 2.40000 GHz |
| 2. | -12.440 dB | 2.440.000 MHz |
| 3. | -9.9001 dB | 2.48300 GHz |

CH1 S11 LOG

5 dB/REF 0 dB

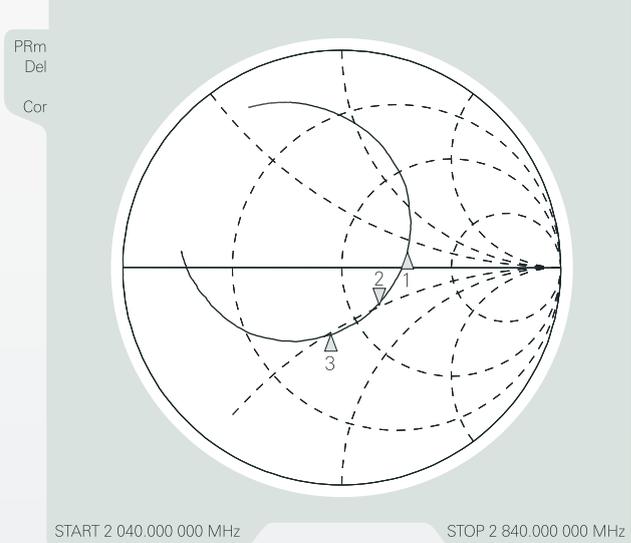


Dualband WLAN

6 Nov 2006 15:10:39

- | | | | |
|----|----------|-----------|-------------|
| 1. | 91.352 Ω | 14.160 Ω | 2.40000 GHz |
| 2. | 66.293 Ω | -22.988 Ω | 2.8374 pF |
| 3. | 37.697 Ω | -25.881 Ω | 2.48300 GHz |

CH1 S11 1 U FS



5GHz Typical Return Loss S11/ impedance, measured on the test board

Dualband WLAN

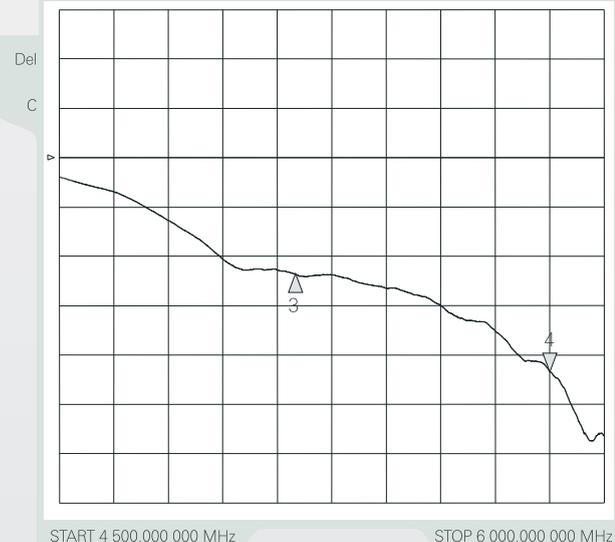
6 Nov 2006 14:47:27

CH1Markers

- | | | |
|----|------------|---------------|
| 3. | -11.876 dB | 5.15000 GHz |
| 4. | 21.610 dB | 5.850.000 MHz |

CH1 S11 LOG

5 dB/REF 0 dB

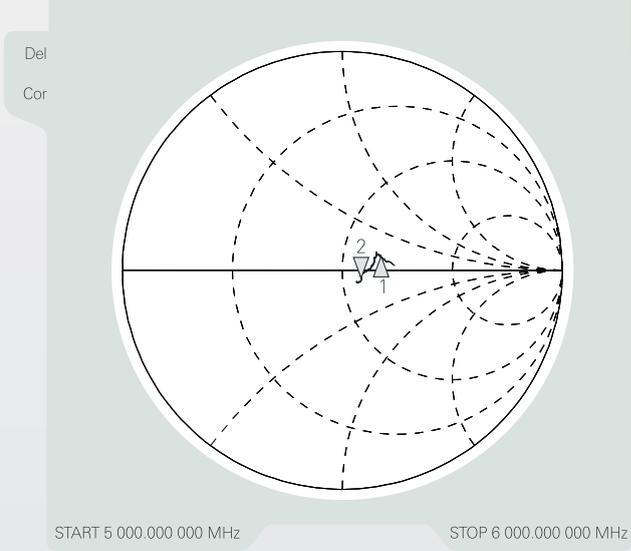


Dualband WLAN

7 Nov 2006 10:55:26

- | | | | |
|----|----------|-----------|---------------|
| 1. | 70.812 Ω | 8.9375 Ω | 5.15000 GHz |
| 2. | 59.072 Ω | -3.6074 Ω | 7.5417 pF |
| | | | 5.850.000 MHz |

CH1 S11 1 U FS



Pulse Finland Oy

Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501
www.pulseeng.com/antennas

