DUAL-BAND COMPACT LOW-PROFILE ANTENNA (DCLA)

Description
A dual-band compact low-profile antenna was developed to be embedded in wireless fixed and mobile devices and is ready to be introduced into future systems including third-generation personal radios, Bluetooth third-party, and WiFi (wireless fidelity) applications. The improvement of the DCLA1 compared to other dual-band antennas is that its two bands are very wide, while the size of the antenna still remains small. In fact, this antenna covers the current 2G as well as the 3G-system frequency bands, from 1.83 to 2.52 GHz. This wide coverage of the antenna lower band will help the 2G-to-3G personal radios transition go smoothly. In addition, the DCLA can also be used in the 5-GHz U-NII band, including the ISM band, which is the useful band for the next generation of wireless LANs.

Specifications

- **Frequency**: 1.83-2.52 GHz / 5.05-5.39 GHz
- **Typical Gain**: 2.5 dBi / 6 dBi
- **Radiation Pattern**: Omnidirectional
- **Polarization**: Linear
- **Nominal Impedance**: 50 Ω
- **VSWR**: 2:1
- **Dimensions**: 3x10x57 mm³

Applications

- DCS-1800
- PCS-1900
- IMT2000/UMTS
- ISM (WLAN)
- BLUETOOTH
- 802.11

Numerical and Experimental (DCLA1) Plots