

DLI utilizes the unique advantages offered by its proprietary ceramic formulations as the differentiator from typical RF and Microwave manufacturers. DLI will design both Duplexers and Diplexers to customer specifications. The distinction between the two is subtle, but the understanding is essential to proper design. **Duplexers** are three port devices used to separate and combine frequencies, having two filters with a common driving point covering two frequency bands. **Diplexers** are three port devices used to separate and combine frequencies, having one filter covering all frequency bands

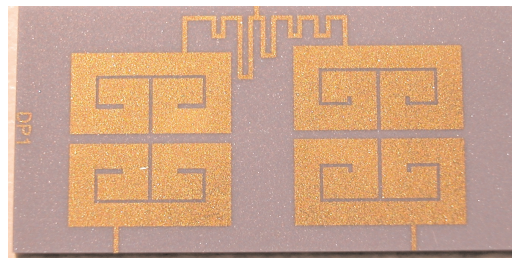
Typical Specifications

- Frequencies from 1 to > 67 GHz
- Insertion loss < 3 dB
- Return loss 20 dB minimum
- Isolation > 50 dB

Features and Benefits

- Highly integrated SMT or wirebond formats
- Available in gold and copper metallizations
- Photolithography defined
- Accurately reproducible

Below is one example of a UMTS Duplexer. This discrete ceramic Duplexer utilizes high performance ceramic thin film materials from DLI. Thin film technology offers these types of devices with the ability to meet conflicting and challenging demands for size reduction, low insertion loss, bandwidth, as well as ideal matching conditions. In this case the DLI designed device eliminated 2 separate filters and an isolator in one-fifteenth the size of a PWB implementation with far better temperature stability.



UMTS Duplexer

