DATA SHEET

TTZ-500 and TTZ-100 Hexagonal Ferrites

Applications

- Antenna, absorber, and inductor applications for military and commercial markets

Features

- Co2Z:K (TTZ-500)
  - Highest frequency resonance on any Z-phase material in the market
  - Designed for 500 MHz antenna applications
- (Zn,Co)2Z (TTZ-100)
  - Designed for 100 MHz antenna applications

Description

Skyworks, through its wholly owned subsidiary, Trans-Tech, offers two composition products based on the Z-type hexagonal ferrite material designed for antenna, absorber, and inductor applications.

The TTZ-100 is a composition based on the Z-type hexagonal ferrite material with permeability ($\mu_r > 13$) and a magnetic Q factor ($Q = \frac{\mu''}{\mu'} > 20$) that is specifically designed for antenna applications around 100 MHz. The TTZ-100 may be supplied either in powder form with custom particle sizes, or as a sintered ceramic product with dimensions up to 4-inch x 4-inch squares.

The TTZ-500 is a composition based on the Z-type hexagonal ferrite material with permeability ($\mu_r > 7$) and a magnetic Q ($Q = \frac{\mu''}{\mu'} > 15$) that is specifically designed for antenna applications around 500 MHz. The TTZ-500 may be supplied either in powder form with custom particle sizes, or as a sintered ceramic product in shapes with dimensions up to 4-inch x 4-inch squares.

Blends of the TTZ-100 and TTZ-500 are also available for applications in the intermediate frequency range. Although the TTZ-500 may be used for applications up to 800 MHz, the magnetic Q decreases frequency. For applications below 100 MHz, the TT1 and TT2 series of spinels would be most suitable.

Figure 1 shows a typical microstructure at 500x magnification for TTZ-500.