Glass Ceramic Powders for Passive Components
Low Temperature Glass-Ceramic Composites

Application
Ferro’s low temperature ceramic formulations have a wide range of K values for use in a variety of components for a wide range of frequencies including Ceramic Inductors, Fuses, Common Mode Filters, SAW devices, Antennas, EMI, ESD, and other chip and multilayer components. Powder forms are available for both wet-stack and tape application processes.

Ferro’s L-Series Ceramics are Pb/Cd free and formulated and processed to be RoHS compliant.

Typical Process Parameters
Storage and Shelf-life: These products should be stored in tightly sealed containers at 10 - 25°C, in a dry place away from direct sunlight. Shelf life of a factory seal container is minimum 2 years from date of shipment when properly stored.

Slurry Process:
- Dispersion: Ball mill 1.2” ZrO₂ Media
- First Stage Milling: 2Hrs 45% Formulation Powder 30% Ethanol
- Second Stage Milling: 3+Hrs 25% BX-054-4 Binder solution

Metallization:
- CN33-390 85% Ag Inner electrode and via
- TM63-147 Plateable Ag termination

Lamination:
3000 psi at 70°C with a 10 minute dwell time; no pressure followed by a lamination time of 10 minutes.

Firing:
- Forced air/exhausted belt or box furnace.
- 2°C/min from 25°C to 450°C
- 2 Hr. soak @ 450°C
- 6-8°C/min from 450°C to 850/900°C
- Minimum 10 minutes at peak temperature

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