Micromax™ QF482

Electronic Inks and Pastes

Crossover Dielectrics

Product information

Solvent or thinner	Micromax™ 9180

Rheological properties

Viscosity	150 - 190[1]	Pa.s

[1]: Brookfield HAT, UC&S #14, 10 rpm, 25°C

Application technique

Mask mesh	200 - 325	
Drying time	10 - 15	min
Drying temperature	150	°C
Theoretical coverage	70 - 75[2]	cm^2/g
Recommended film thickness, fired	40[3]	µm
Leveling time	5 - 10	min

[2]: Based on 30µm fired thickness using 2 points with a 325 mesh stainless steel screen (Based on 40µm and 200 mesh, 55 - 60 cm^2/g)

[3]: 2 fired layers, 200 or 325 mesh screen, between metal layers

Electrical properties

Dielectric Constant	9 - 14	
Dissipation Factor	≤0.2	%
Insulation Resistance, DC	≥1E12[4]	Ohm
Insulation Resistance, HBT	≥1E11[5]	Ohm
Insulation Resistance, HHBT	≥1E11[6]	Ohm
Surface Leakage Current	≤10	$\mu A/cm^2$
Breakdown Voltage	≥1000[7]	V

[4]: Measured at 100 VDC

[5]: HBT 150°C/200 VDC/1000 hr.

[6]: HHBT 85°C/85%R#/5VDC/1000 hr.

[7]: VAC at 25µm

Storage and stability

Shelf life	6[8]	months

[8]: in unopened containers, from date of shipment, at temperature <25°C

Additional information

How to use

Processing

- Substrates
  - Properties are based on tests on 96% alumina substrates. Substrates of other compositions and from various manufacturers

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may result in variations in performance properties.

- Printing
  - Print two dielectric layers with a 200 or 325 mesh stainless steel screen. The combined thickness of the fired dielectric should be at least 30µm (1.2mil). Printing speeds up to 25 cm/s (10 in/s) can be used for crossover areas as large as 25 cm^2.
- Drying
  - Allow prints to level for 5-10 minutes at room temperature. Dry 10-15 minutes at 150°C in air.
- Firing
  - Each dielectric print should be fired in a belt furnace. Use a 30 minute cycle with a peak temperature of 850°C for 10 minutes.

Properties

- All values reported here are results of experiments in our laboratories intended to illustrate product performance potential with a given experimental design. They are not intended to represent the product's specifications.

Storage and shelf life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

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