

Technical Data Sheet



THICK FILM MATERIALS

Product Type: Dielectrics Product Name: IP9217



Lead Free Multilayer Dielectrics

Description

IP9217 is a blue 850° C firing dielectric composition which produces an extremely dense, hermetic fired film. IP9217 is compatible with a wide variety of Au and Ag conductors and resistor systems. Its unique glass system eliminates blistering in multilayer applications.

Key Benefits

- Excellent electrical properties
- Good adhesion of Au conductors
- Superior properties when resistors are used in multilayer applications
- Eliminates "Battery effect"
- Free of Pb and Cd

Recommended Processing Guidelines

Printing

280 mesh stainless steel screen 0.5 mil emulsion thickness For via geometries < 15 mils, use a 325 mesh screen. Three individually fired layers with a total thickness of at least 40 μm will be necessary to achieve the optimum performance level. Allow wet prints to level at room temperature for 5 minutes.

Drying

150 °C for 10 minutes

Firing

850 °C peak temperature Dwell time of 10 minutes

Thickness

Fired:

Dried:

21 µm 15 µm $> 40 \ \mu m$ (3 fired layers)

Thinner

RV-507

Warranty

Material guaranteed to meet specifications for 6 months from date of shipment.

Storage

Store in a dry location at 5 – 10 °C to ensure proper performance of shelf life.

Allow paste to come to room temperature prior to opening. Spatulate well before using.

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Typical Properties

Via Resolution 200 µm (8 mil)

 $\begin{array}{l} \textbf{Dielectric Constant} \\ 8.5-11.5 \text{ at } 1 \text{ KHz} \end{array}$

Dissipation Factor < 0.5 % at 1 KHz

Insulation Resistance $> 10^{\mbox{\tiny 11}}~\Omega$ at 100 V DC

Breakdown Voltage > 500 V DC per mil

Coverage 100 cm²/g at 50 μm wet film thickness

Viscosity 230 – 330 Kcps, Brookfield HBT, SC4-14 spindle with 6R utility cup at 10 rpm, 25 °C

Solids 75.0 ± 1.0 %

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