

Technical Data Sheet



THICK FILM MATERIALS

Product Type: Conductors Product Name: C7462



Fine Line, ENIG Plateable Copper Conductor

Description

C7462 is a copper conductor paste designed for screen printing application on alumina substrates where ENIG plating is required. It has the capability to print 100 μ m lines and spaces using 280 or 325 mesh screens with 0.2 to 0.5 emulsion.

Key Benefits

- Exceptionally high conductivity
- Migration resistant
- ENIG plateable on alumina

Recommended Processing Guidelines

Printing

280 - 325 stainless steel mesh screen 0.2 - 0.5 mil emulsion Allow to level at room temp for 2 - 3 minutes

Drying

125 °C for 10 minutes

Firing Profile

Fire in Nitrogen with O_2 between 2 – 10 ppm 925 °C peak Dwell time of 8 – 10 minutes Typical rise time of 20 – 23 minutes (measured from 100 °C entry point) Total cycle time of 50 – 65 minutes

Line Resolution

 ≥ 4 mils (100 μm)

Thickness

 $\begin{array}{ll} \text{Dried} & 40-50 \ \mu\text{m} \\ \text{Fired} & 20-25 \ \mu\text{m} \end{array}$

Thinner

RV-507

Warranty

TBD

Storage

Store in a dry location at 5 - 25 °C. **DO NOT REFRIGERATE.**

Allow paste to come to room temperature prior to opening. Materials should be mixed thoroughly before using, as settling may occur during storage.

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Typical Properties

 $\begin{array}{l} \mbox{Resistivity} \\ \leq 1.75 \mbox{ m}\Omega/\Box \\ \mbox{at 25 } \mu\mbox{m fired film thickness} \end{array}$

Adhesion

80 x 80 mil pad ENIG plated SAC 305 at 245 °C RMA flux Initial \geq 5.0 lbs Aged \geq 5.0 lbs (48 hours at 150 °C)

Solderability

ENIG plated SAC 305 at 245 °C 5 sec dip, RMA flux > 95%

Coverage

 $55~\text{cm}^2\text{/g}$ at 25 μm fired film thickness

Viscosity

150-220 Kcps, Brookfield HBT, SC4 - 14 spindle and 6R cup at 10 rpm, 25 $^\circ C$

Solids

 90.0 ± 1.5 %

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