Heraeus

Conductors

C4303M

Silver/Palladium Conductor

Description:
C4303M Pd/Ag Conductor paste exhibits high density, high reliability and good fine line definition, (5mil lines and spaces). It fires to a smooth surface and is mechanically durable and chemically resistant. Conductivity, leach resistance, and resistance to silver migration are exceptional. Due to these characteristics, C4303M is a frequently preferred material for fuel sensor applications, particularly in automobiles.

- **Key Benefits:**
  - Exceptional silver migration resistance
  - Smooth fired surface
  - Excellent solderability and leach resistance

- **Typical Properties:**

Resistivity:
≤ 50 milliohms/sq @ 12 microns fired film thickness

Viscosity:
150-200 kcps
Brookfield HBT, SC4-14 spindle and 6R utility cup at 10 rpm, @25°C

Solder Acceptance:
62Sn/36Pb/2Ag @ 225°C
RMAflux, 5 sec. dip
100%

Leach Resistance:
62Sn/36Pb/2Ag @ 225°C
RMA flux
> 90%, 2 x 10 second dips

Adhesion:
80 x 80 mil pad
62Sn/36Sn/2Ag @ 225°C
RMA flux
≥ 4.5 lbs

Solids:
83.1 ± 1%

- **Recommended Processing Guidelines:**

Printing:
280-325 mesh screen
0.5 mil emulsion, 1.1 mil wire
Let the print level at room temperature for 10 minutes before drying.
Printing speeds capable up to 6 in/sec.

Drying:
Dry at 150°C for 10 minutes

Firing:
850°C peak for 10 minutes,
with a total cycle time of 30-60 minutes.

Thickness:
Dried: 15-18 microns
Fired: 10-12 microns

Line Definition:
≥ 5 mils (125 microns)

Thinner:
RV-372 (Terpineol)

Coverage:
84 cm^2/g

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

Storage:
Store in a dry cool and dark location at 5°C -25°C.
DO NOT REFRIGERATE.
Allow paste to come to room temperature prior to opening.
Spatulate well before using.

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