

Technical Data Sheet

THICK FILM MATERIALS

Product Type: Conductors

Product Name: C2160B



Pb and Cd Free Silver/Palladium Conductor

Description

C2160B is a Pb, Cd and Ni free Pd/Ag composition designed for hybrid applications and application where more leach resistance is required. The C2160B conductor is suitable for a wide variety of applications such as automotive electronics, power hybrids and commercial applications where more stringent requirements exist. It exhibits excellent solderability, aged adhesion and is aluminum wire bondable.

Key Benefits

- Excellent solderability and leach resistance
- Excellent long term adhesion
- Pb, Cd and Ni free
- Good Al wire bond adhesion (initial and aged)
- REACH¹ and ROHS² compliant

Typical Properties

Resistivity

10 – 20 mΩ/□ at 12 μm fired film thickness

Viscosity

150 – 220 Kcps Brookfield HBT
SC4 – 14 spindle, 6R utility cup at 10 rpm, 25 °C

Solids

79.0 ± 1.0 %

Solderability

Sn95.5/Ag3.5/Cu0.5 at 250 °C, RMA flux
100 % for 5 second dip

Solder Leaching

Sn95.5/Ag3.5/Cu0.5 at 250 °C, RMA flux
≥ 2 dips (5 seconds for each dip)

Adhesion

80 x 80 mil pad
Sn95.5/Ag3.5/Cu0.5 at 255 °C
Forced air box oven

Initial: ≥ 5.0 lbs
48 hours @ 150 °C: ≥ 4.0 lbs

Wire Bond Adhesion

10 mil Al wire, 99.999 % Al, Elongation > 5 %
5 x 850 °C firing
Initial: ≥ 450.0 g
1000 hours @ 150 °C: ≥ 400.0 g

Recommended Processing Guidelines

Printing

280 – 325 mesh stainless steel screen
0.5 mil emulsion
Allow to level at room temperature for 5 – 10 minutes before drying

Printing Speed

Up to 7 in/sec

Coverage

80 cm²/g at 12 μm fired film thickness

Drying

150 °C for 10 to 15 minutes

Firing

850 °C peak temperature
10 minutes at peak
Total cycle time 30 – 60 minutes

Film Thickness:

Wet: 35 – 37 μm
Dried: 20 – 24 μm
Fired: 10 – 15 μm

Line Definition:

≥ 6 mils (150 μm)

Thinner:

RV-372

Warranty:

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

Storage:

Store in a dry location at 5 – 25 °C.

DO NOT REFRIGERATE.

Allow paste to come to room temperature prior to opening.
Spatulate well before using, as settling may occur during storage.

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Legend:

1) REACH compliant according to the latest * Annex XIV to Regulation (EC) of the European Parliament and of the council on the Registration, Evaluation, Authorisation and Restriction of Chemicals ("REACH") by European Chemicals Agency and its subsequent amendments; the material does not contain any substance listed in Annex XIV.

2) RoHS compliant according to the latest * Directives (European Union) of Restriction of Hazardous Substances ("RoHS") and its subsequent amendments (including the exceptions related to Pb)

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