Heraeus

Conductors

C5755A

Fine Line Printable Gold Conductor

Description:
C5755A is a cadmium free gold conductor paste, specially developed for easy bonding and fine line, multilayer applications, where high conductivity and high density are critical. This material uses the same advanced developments in sub-micron gold powder technology as other Heraeus CMD high performance conductors, with the vehicle optimized for fine line screen printing C5755A is capable of resolving 75 micron (3 mil) lines and spaces.

- **Key Benefits**

  - Excellent Au bondability – 1.25 mil (30 micron) and below
  - High conductivity
  - Ultra fine line printing
  - Cadmium free
  - Compatible on dielectric

- **Typical Properties:**

Resistivity:
< 4 milliohms/square
@ 10 microns thickness using 25 mil wide serpentine conductor pattern

Lines/Spaces Resolution:
75 micron (3 mils) lines and spaces

Coverage:
95 cm^2/g
(400 mesh, 0.9 mil wire, 0.5 mil emulsion)

Viscosity:
95 - 125 kcps, Haake C-20, 1° Cone
@ 30 sec^{-1}

Au Wire Bondability:
1.25 mil Au Wire (Manual Bonding)
99.99% Au, Elongation 3-5%
Initial: > 11 grams

1.0 mil Au wire (Automatic Bonding)
99.99% Au, Elongation 5-7%
0 misses out of 11,900 bonds

% Solids:
86% ± 1.0%

- **Recommended Processing Guidelines:**
  (For more detailed information, see document entitled, "Processing Guidelines for C5755A and C5756", AN#KQ005).

Printing:
325 mesh, 0.9 mil wire /350 mesh, 0.63 mil wire/
400 mesh, 0.7 mil wire
0.5 - 0.6 mil emulsion

Print Speed:
> 6 in/sec (15 cm/sec)

Settling:
A settling time of 10 – 15 minutes is recommended. Parts should be dried as soon as possible after this settling period, (within 20 minutes), so the paste does not skin over. Parts should not be left out for long periods of time before drying. This allows the paste to skin over and can compromise adhesion.

Drying:
Dry at 150°C for 10 minutes
Make sure ventilation is sufficient to prevent the wet film from skinning.

Firing:
850°C peak temperature, 10 minutes at peak
Total cycle time of 45 - 60 minutes

Thicknesses:
Dried: 7 - 12 microns
Fired: 6 - 8 microns

Compatibility:

- IP9117/IP9117S Multilayer Dielectrics
- For solderable overlaps with C5755A; use C4003, C4006, C4740S, C1076SD and C4131S
- For C5755A overlaps with solderable conductors; use C4740S, C1076SD and C4006 (on alumina only)

Thinner:
V-500

Storage:
DO NOT REFRIGERATE.
Spatulate well before using.

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

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