GOLD CONDUCTOR

Conductor for Low Temperature Co-fired Ceramic Tapes

ESL 803 is a gold conductor paste specially developed for use with ESL low temperature co-fired ceramic tapes (LTCC). This material is designed for use as an inner layer or top layer metallization.

PASTE DATA

RHEOLOGY: Thixotropic, screen-printable paste

VISCOITY: (Brookfield RVT, ABZ spindle, 10 rpm, 25.5 ± 0.5 °C) 225 ± 50 Pa.s

SOLIDS CONTENT: 77.0 ± 1.5 %

SHELF LIFE: (at 25 °C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325 / 25 ± 12 µm

LEVELING TIME: (at 25°C) 5 - 10 min

DRYING TIME: (at 80°C) 10 -15 min

FIRING TEMPERATURE: Co-fired with LTCC

RATE OF ASCENT/DESCENT: 60°C - 100°C/minute

SUBSTRATE FOR CALIBRATION: ESL 41010

THINNER: ESL 401
TYPICAL PROPERTIES

FIRED THICKNESS:
(measured on a 2 mm x 2 mm pad) 6 - 12 µm

RESISTIVITY:
(measured on a 100 mm x 0.25 mm conductor track at 9 µm fired thickness) ≤ 10 mΩ/square

SOLDER WETTABILITY:
(80 Au / 20 Sn solder) Good

WIREBONDABILITY:
(25 µm Au wire)
INITIAL PULL STRENGTH: ≥ 10 grams

ADHESION:
(90° pull, 2.0 mm x 2.0 mm pads)
INITIAL PULL STRENGTH: ≥ 13 N

NOTES: All data was collected using ESL 41010 or similar tape, co-fired at 850°C.