CONDUCTIVE SILVER CERMET 9990

Cermet silver ink 9990 with its MICRO-LOK® bonding mechanism gives excellent adhesion on a variety of substrates, such as, 96% alumina, 99.5% alumina, beryllia, and ferrite. ESL 9990 exhibits excellent solder wetting and solder leach resistance characteristics as well as good aluminum wirebonding.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VIS COSITY:
(Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C) 225±25 Pa·s

BONDING MECHANISM: MICRO-LOK®

SHELF LIFE: (25°C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325/25 µm

LEVELING TIME: (25°C) 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING RANGE: 850°C-950°C

OPTIMUM: 930°C

TIME AT PEAK: 10-12 minutes

RATE OF ASCENT/DESCENT: 50°C-60°C/minute

SUBSTRATE OF CALIBRATION: 96% alumina

THINNER: ESL 401

9990 9807-C
TYPICAL PROPERTIES

FIRED THICKNESS: 10-15 μm
APPROXIMATE COVERAGE: 100-125 cm²/g
RESISTIVITY: ≤ 3.0 mΩ/sq.
PRINTING RESOLUTION: (Line/Space) 250 μm x 250 μm

SOLDER WETTABILITY:
(RMA flux, 5 sec. dip)

(62 Sn/36 Pb/2 Ag, 220°C±5°C) 95%-100%
(63 Sn/37 Pb, 250°C±5°C) 95%-100%

SOLDER LEACH:
(No. of 10 sec. dip to double resistance of 0.25 mm wide x 100 mm long conductor)

(62 Sn/36 Pb/2 Ag 220°C±5°C) ≥ 5
(63 Sn/37 Pb 250°C±5°C) ≥ 2

ADHESION:
(90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag)

Initial pull strength: ≥ 60 N

ULTRASONIC WIREBOND:
(25 μm Al wire) 7-10 g

CAUTION: Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.

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