CERMET PLATINUM GOLD CONDUCTOR

ESL 5837-A is designed for use on top of 4905-C multilayer dielectric. It is solderable with Sn 60 solder and exhibits good solderability and excellent solder leach resistance. This material is ideally suited for high reliability hybrid circuits and for resistor terminations. This material should not be used directly on alumina substrates.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VIScosity: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C) 300±25 Pa·s

BONDING MECHANISM: Mixed

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:

OPTIMUM: 850°C

TIME AT PEAK: 10-12 minutes

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

SUBSTRATE OF CALIBRATION: 4905-C on 96% alumina

THINNER: ESL 413
TYPICAL PROPERTIES

FIRED THICKNESS: 10-15 µm
APPROXIMATE COVERAGE: 55-70 cm²/gram
RESISTIVITY: (Normalized to 12.5 µm) ≤ 70 mΩ/sq.
PRINTING RESOLUTION: (Line/Space) 125 µm x 125 µm
SOLDER WETTABILITY: (RMA flux, 5 sec, dip)
- 62 Sn/36 Pb/2 Ag, 220°C±5°C Excellent
- 63 Sn/37 Pb, 250°C±5°C Excellent
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 5-10 dips
ADHESION: (90° pull, 2.0 x 2.0 mm pads, 62 Sn/36 Pb/2 Ag, 220°C±5°C)
- Initial pull strength: 50-60 N
- Aged 48 hours at 150°C: 30-50 N
ULTRASONIC WIRE BOND: (25 µm Al wire) 5-8 grams
THERMOSONIC WIRE BOND: (25 µm Au wire) 3-5 grams
COMPATIBILITY: R-300-A & D-R-300-B Resistor Series

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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