CERMET SILVER / PALLADIUM / PLATINUM CONDUCTOR

ESL 9562-G is a low-cost, ternary conductor that has excellent wire bonding characteristics with large diameter aluminium wire as well as gold wire. This conductor exhibits excellent conductivity, adhesion and solderability, and can be used as an economical conductor in automotive and consumer applications. The 9562-G may be protected with 850°C firing ESL 4924 overglaze.

PASTE DATA

Rheology: Thixotropic screen-printable paste

Viscosity:
 BROOKFIELD RVT, 10 rpm,
ABZ Spindle, 25.5 ± 0.5 °C) 185 ± 25 Pa.s

Bonding Mechanism: MICRO-LOK®

Shelf Life (20 - 25 °C): 6 months

PROCESSING

Screen Mesh, Emulsion: 325 S/S, 20 μm

Levelling Time (at 20°C): 5 - 10 min

Drying Time (at 125°C): 10 - 15 min

Firing Temperature Range: 850 - 930°C in air
Optimum: 850°C
Time at peak: 10 min

Total Firing Cycle: 30 min

Substrate for Calibration: 96% alumina

Thinner: ESL 401
TYPICAL PROPERTIES

Fired Thickness: 12.5 ± 2.5μm
(measured on a 2 mm x 2 mm pad on 96% alumina)

Approximate Coverage: 90 - 110 cm²/g

Resistivity: < 4.0 mΩ/
(measured on a 100 mm x 0.25 mm
conductor track at 12.5 μm fired thickness)

Printing Resolution: 0.150 mm / 0.150 mm
(line/space)

Solder Wettability: 100%
(RMA Flux, 5 sec. dip) (62Sn/36Pb/2Ag, 220°C)

Solder Leach: > 5 dips
(No. of 10 sec. dips to double minimum resistance of
100 mm x 0.25 mm conductor, 62Sn/36Pb/2Ag, 220°C)

Adhesion:
Initial pull strength: > 7.0 kg
(90° pull, 2 mm x 2 mm pads, 62Sn/36Pb/2Ag)
Aged 48 hours at 150°C: > 6.0 kg

Ultrasonic Al Wire Bond: > 600 g
(250μm wire; bond length 4.0 mm)

Aged Al Wire Bond: > 500 g
(48 hours at 150°C)

Thermosonic Au Wire Bond: > 7 g
(25μm wire; bond length 1mm; 100% wire breaks)

Aged Au Wire Bond: > 7 g
(24 hours at 200°C)

*Complies with RoHS, ELV, WEEE and CHIP 3 EC directives.

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 vapours 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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