CERMET SILVER CONDUCTOR

Low Temperature Firing Conductor

ESL 599-E conductive paste offers versatility and superior performance in many applications. It exhibits excellent adhesion and high conductivity. ESL 599-E may be processed at temperatures as low as 400°C.

Suitable substrates include aluminum, various ceramics, porcelain enameled steel, soda-lime and other glass substrates. This conductive coating is compatible with various dielectrics.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VISCOSITY:
(Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C) 200±25 Pa-s

BONDING MECHANISM: Fritted

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: 400°C-550°C
OPTIMUM PEAK TEMPERATURE/TIME AT PEAK: 450°C/10-15 min
RATE OF ASCENT/DESCENT: 60°C-100°C/minute
SUBSTRATE OF CALIBRATION: glass
THINNER: ESL 401

TYPICAL PROPERTIES

FIRED THICKNESS: 12.5±2.5 μm
RESISTIVITY: 3-6 mΩ/sq.
PRINTING RESOLUTION: 125 μm x 125 μm
(Line/Space)
SOLDER WETTABILITY: 62 Sn/36 Pb/2 Ag, 220°C±5°C excellent
(RMA flux, 5 sec. dip)
ADHESION: ≥10±0.5 N
(90° pull, 2.5 mm x 2.5 mm pads, 62 Sn/36 Pb/2 Ag)
Initial pull strength:

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