CERMET PLATINUM GOLD CONDUCTOR  

ESL 5837 is a platinum gold conductor well suited for resistor terminations in hybrid circuits. It exhibits excellent bond strength as well as good solderability and solder leach resistance. It is intended for use directly on alumina substrates.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VISCOITY:

(Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)

350±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:

96% alumina

THINNER:

ESL 413
TYPICAL PROPERTIES

Fired Thickness: 10-14 µm
Approximate Coverage: 55-70 cm²/gram
Resistivity: 40-60 mΩ/square
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: (62 Sn/36 Pb/2 Ag, 220°C±5°C)
No. of 10 sec. dip to double resistance
of 0.25 mm wide x 100 mm long conductor  6-10 dips

Adhesion: (90° pull, 2.0 x 2.0 mm pads, 62 Sn/36 Pb/2 Ag)
Initial pull strength:
Aged 48 hours at 150°C:
50-60 N  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 and D-R-300-B Resistor Series