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CERMET PLATINUM GOLD CONDUCTOR

5837

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
VISCOSITY: (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

5837 9711-E

ESL Affiliates

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See Caution and Disclaimer on other side.

TYPICAL PROPERTIES

FIRED THICKNESS:	10-14 μm
APPROXIMATE COVERAGE:	55-70 cm^2/gram
RESISTIVITY:	40-60 $\text{m}\Omega/\text{square}$
PRINTING RESOLUTION: (Line/Space)	125 μm x 125 μm
SOLDER WETTABILITY: (RMA flux, 5 sec, dip)	
62 Sn/36 Pb/2 Ag, 220°C\pm5°C	Excellent
63 Sn/37 Pb, 250°C\pm5°C	Excellent
SOLDER LEACH: (62 Sn/36 Pb/2 Ag, 220°C \pm 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:	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 and D-R-300-B Resistor Series

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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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