ESL ELECTROSCIENCE
CERAMIC TAPES & THICK-FILM MATERIALS
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CERMET GOLD CONDUCTOR

8884
8884-A

The ESL 8884 and 8884-A are fritless 850°C firing gold conductors (MICRO-LOK®) that exhibit excellent adhesion on both alumina and beryllia. They are commonly used for high reliability, power hybrid modules. 8884-A is an alloyed version to give superior aged aluminium wire bond results; especially with large diameter wire.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10rpm, ABZ spindle, 25.5 ± 0.5 °C)	400 ± 25 Pa.s
Bonding Mechanism:	Fritless, MICRO-LOK®
Shelf Life (20 - 25 °C):	6 Months

PROCESSING

Screen Mesh, Emulsion:		325 S/S, 25 µm
Levelling Time (at 20°C):		5 - 10 min
Drying Time (at 125°C):		10 -15 min
Firing Temperature Range:		850 - 980°C in air
	Optimum:	850 °C
	Time at peak:	10 min
Rate of Ascent/Descent:		50 - 60°C / min
Substrate for Calibration:		96% alumina
Thinner:		ESL 401

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TYPICAL PROPERTIES

Fired Thickness:		
(measured on a 2 mm x 2 mm pad on 96% alumina)		12.5 ± 2.0 µm
Approximate Coverage:		60 - 70 cm^2/g
Resistivity:	8884	2.5 - 3.0 mΩ/□
(measured on a 100 mm x 0.25 mm conductor track)	8884-A	3.5 - 5.5 mΩ/□
Printing Resolution:		
(line/space)		0.125 mm / 0.125 mm
Adhesion:		
(90° pull, 2 mm x 2 mm pads,	Initial pull strength:	6.0 - 9.0 kg
80 Au/20Sn and 62Sn/36Pb/2Ag)	Aged 48 Hours at 150°C:	5.0 - 8.0 kg
Ultrasonic Al Wire Bond:		
(50 µm wire)	8884-A	90 g
(500 µm wire)	8884-A	2,000 g
Thermosonic Au Wire Bond:		
(25 µm wire)	8884 & 8884-A	≥ 8 g