ESL ELECTROSCIENCE
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SILVER PALLADIUM CERMET CONDUCTOR 9633-T

For use on AlN Substrates

ESL 9633-T is a high performance conductor specially formulated for use on aluminium nitride substrates. It exhibits good adhesion, very good solderability, leach resistance, and silver migration resistance.

PASTE DATA

RHEOLOGY:	Thixotropic, screen-printable paste
VISCOSITY: (Brookfield RVT, ABZ spindle, 10 rpm, 25.5 ± 0.5 °C)	275 ± 25 Pa.s
BONDING MECHANISM:	Mixed-bonded
SHELF LIFE: (at 25 °C)	6 months

PROCESSING

SCREEN MESH/EMULSION:	325/25 µm
LEVELING TIME: (at 25°C)	5 - 10 min
DRYING TIME: (at 125°C)	10 -15 min
FIRING RANGE:	850°C - 930°C in air
OPTIMUM:	850°C
TIME AT PEAK:	10 - 12 min
RATE OF ASCENT/DESCENT:	60°C - 100°C/minute
SUBSTRATE FOR CALIBRATION:	aluminium nitride
THINNER:	ESL 401

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TYPICAL PROPERTIES

FIRED THICKNESS: (measured on a 2 mm x 2 mm pad)	10 - 15 µm
APPROXIMATE COVERAGE:	70 - 100 cm²/gram
RESISTIVITY: (measured on a 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness)	≤ 50 mΩ/square
PRINTING RESOLUTION: (line/space)	250 µm x 250 µm
SOLDER WETTABILITY: (RMA flux, 5 sec. dip, 62 Sn / 36 Pb / 2 Ag, 220°C ± 5°C)	Very Good
SOLDER LEACH RESISTANCE: (Number of 10 sec. dips to double resistance of 100 mm x 0.25 mm conductor track at 12.5 µm fired thickness, 62 Sn / 36 Pb / 2 Ag, 220°C ± 5°C)	> 8 dips
ADHESION: (90º pull, 2.0 mm x 2.0 mm pads, 62 Sn / 36 Pb / 2 Ag, 220°C ± 5°C, on AlN) **INITIAL PULL STRENGTH:**	≥ 75 N