

#### APPLICATION

CN34-100 mixed-bonded, silver palladium conductor paste has been especially formulated to produce high adhesion, low resistivity conductor patterns on aluminum nitride substrates. Its excellent match to this difficult to bond to substrate material offers exceptional performance in all types of power hybrid circuitry.

#### FIRED FILM PROPERTIES

**Film Thickness:** 10 to 18  $\mu\text{m}$

**Resistivity:**  $\leq 15 \text{ m}\Omega/\text{sq}$  at 25  $\mu\text{m}$  (fired)

**Solderability**<sup>[1]</sup>:  $\geq 95\%$  wetting after one 3s dip, at  $230 \pm 5^\circ\text{C}$ , using RMA flux

**Leach Resistance**<sup>[1]</sup>: Withstands 25 to 30 one second dips with  $< 20\%$  loss at  $215 \pm 5^\circ\text{C}$ , using RMA flux

**Adhesion**<sup>[1]</sup>:

$\geq 5 \text{ Kg}$  Peel on 2mm square pads, initial  
 $\geq 4 \text{ Kg}$  Peel after 48 hrs at  $150^\circ\text{C}$

**Line Resolution:**  $\leq 150 \mu\text{m}$  lines and spaces

#### FORMULATION PROPERTIES

**Storage:** This paste should be stored in tightly capped containers, at room temperature in a dry place away from direct sunlight

**Shelf Life:** 6 months at  $25^\circ\text{C}$

#### PROCESS RECOMMENDATIONS

**Printing:** A 325-mesh stainless steel screen with a 12  $\mu\text{m}$  thick emulsion typically yields a dry thickness of  $22 \pm 4 \mu\text{m}$ .

**Leveling:** 3 to 4 minutes at room temperature

**Drying:** 10 to 15 minutes at 90 to  $110^\circ\text{C}$  in an oven with forced air flow or an equivalent conveyor drier

**Firing:** Optimum results are obtained by firing at a peak temperature of  $850^\circ\text{C}$  for 10 minutes with a total cycle time of 30 to 60 minutes

**Thinning:** Thinning is not recommended, since the paste is supplied at the correct viscosity for application. Contact your local Ferro Representative for appropriate solvent details, should thinning become necessary to replace solvent lost through evaporation.

<sup>[1]</sup> 62Sn-36Pb-2Ag

**This data represents typical properties and is not intended to be used as specification limits**

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