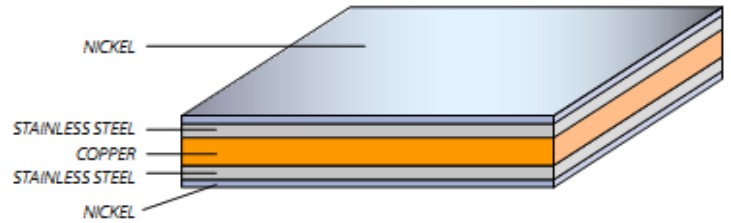




Material Attributes

- Resistance / Laser Weldable
- Solderable surface
- Superior conductivity to pure Nickel
- High power capacity
- Stainless steel layers provide robust welds
- Lighter weight (lower density)
- Increased conductivity enables gauge reductions
- Nickel surface provides high contact Corrosion protection



Physical Properties (typical properties)	PC799-60 Annealed	Nickel Annealed	Nickel 1/4 Hard
Density: Lbs/in ³ (g/cm ³)	0.309 (8.55)	0.321 (8.89)	0.321 (8.89)
Yield Stress: Ksi (MPa)	16 (110)	15 (103)	35 (241)
Tensile Strength: Ksi (MPa)	52 (359)	60 (414)	70 (483)
Elongation %	55	45	35
Erichsen Cup Height (mm)	11.9	12.1	9.6
Elastic Modulus: Msi (GPa)	21.5 (148)	30 (207)	30 (207)
CTE: $\mu\text{in/in}/^\circ\text{F}$ ($\mu\text{m/m}/^\circ\text{C}$)	9.3 (16.7)	7.4 (13.3)	7.4 (13.3)
Thermal Conductivity ⁽²⁾ : BTU-ft/h-ft ² -°F (W/mK)	140 (242)	42 (73)	42 (73)

⁽¹⁾ Properties can vary depending on finish thickness

⁽²⁾ Parallel to strip direction

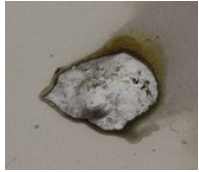
Description

EMS Designation	PC799-60
Composition	Nickel / Austenitic Stainless Steel / Copper / Austenitic Stainless Steel / Nickel
Ratio	60% Copper

Availability

Surface	Medium luster matte finish
Temper	Annealed Standard (specific tempers also available)
Hardness	H _v 150-210 (stainless steel)
Thickness	0.004 - 0.024" (0.10 - 0.60 mm)
Width	0.10 - 12.00" (2.5 - 305mm)

Electrical Properties @ 75°F (typical properties)	PC799-60		201Ni	
Conductivity - % IACS ⁽¹⁾	60.0%		19.6 - 22.6	
Resistivity - $\Omega/\text{CMF}^{(1)}$ ($\Omega\text{-m}$)	17.3	(0.029)	46-55	(0.076 - 0.091)



Soldering



Welding

Material	Thickness (mm)	Electrode Config.	Pull Strength (Cathode / Anode) {Lbs}
PC799-40	0.254	Parallel	51/61
PC799-40	0.406	Parallel	67/43
PC799-60	0.381	Parallel	51/69
PC799-60	0.508	Step	84/84

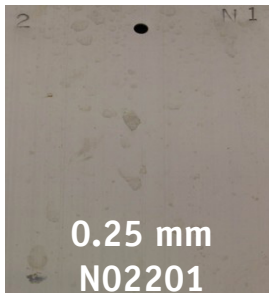
Good Solderability with Sn/Cu solder with rosin core

Welds readily with dual pulse welder, weld projections, and/or anti-shunt slot ⁽³⁾

⁽³⁾ Welding method required depends on bulk thickness and electrical conductivity.

Corrosion Resistance

One Cycle: Dip samples in ASTM D2570 Water (148 mg Sodium Sulfate, 165 mg Sodium Chloride, and 138 mg Sodium Bicarbonate dissolved in 1 litre of distilled or deionized water). Expose samples 16 hours in condensing humidity chamber (100% Relative Humidity, 100°F). 8 hour air dry.



0.25 mm
N02201



0.381 mm
PC799-60



0.120 mm
C7035-TM06

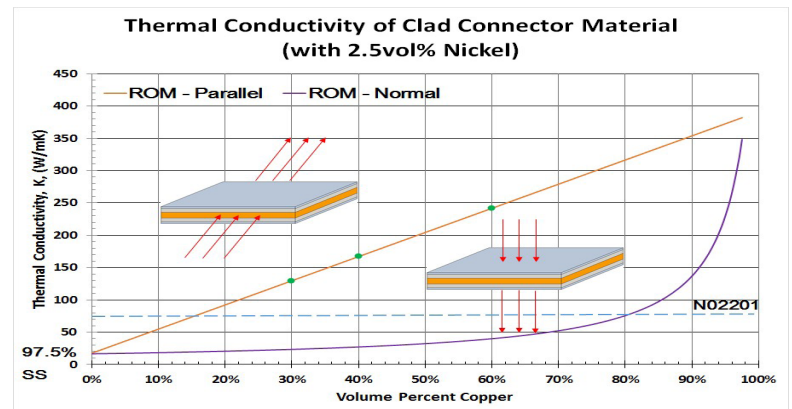
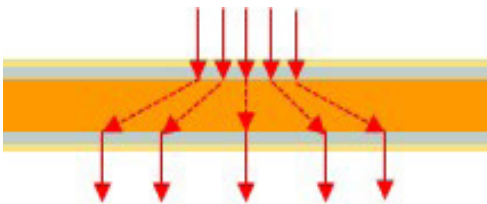


0.152 mm
Sn Plated
C19025

Corrosive Dip with ASTM D2570 Water
Excellent corrosion resistance

Thermal Conductivity

Illustration of heat spreading



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