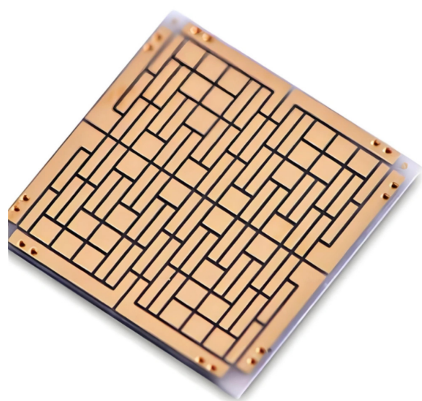




AIN Direct-Plated Copper DPC Substrates

Product ID / SKU: FWM/CS-DPC-003

Material: Ceramic / Plated Copper System

Product type: Ceramic Substrate

AIN DPC substrates combining controlled plated copper with an electrically insulating thermal path.

AIN DPC ceramic substrate with patterned copper

95% AIN Substrate Properties

Property	95% AIN typical value	Condition / method
AIN content (%)	95	-
Density (g/cm ³)	≥3.3	-
Flexural strength (MPa)	≥400	-
Thermal conductivity (W/(m·K))	≥170	Room temperature
Relative permittivity	8-10	1 MHz; room temperature
Dielectric loss tangent	≤0.0003	1 MHz; room temperature
Dielectric strength (kV/mm)	17	-
Volume resistivity (Ω·cm)	≥10 ¹⁴	-

Typical Construction Parameters

Construction item	Typical configuration	Applicable condition
Ceramic base	Aluminum nitride (AIN)	Surface preparation dependent
Copper thickness	10-130 μm	Plated thickness and pattern evaluated together
Line / space	Layout-dependent	Copper thickness, plating distribution and pattern geometry
Holes / vias	Laser holes and selected plated features	Aspect ratio and registration dependent
Surface finish	Ni/Au, Ni/Pd/Au or Ag examples	Finish stack matched to the attachment process