

Product Samples

ATP1015: Enforced Via

Applied Thin-Film Products (ATP) is pleased to provide ceramic thin-film samples for your evaluation.

TaN/TiW/Au with conductive plated thru CO₂ drilled via holes and ATP's enforced hollow plated via wrap on Aluminum Oxide (Al₂O₃). The enhanced via wrap is an additive process to ATP's standard via process. This process will ensure increased via hole stability and conductivity.

Material Specifications

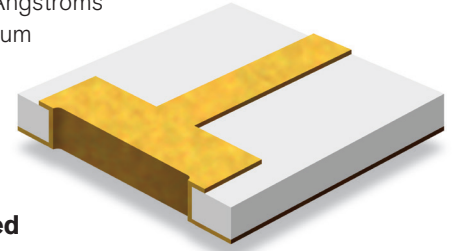
Asfired High Density 996 Aluminum Oxide Superstrate 996

Properties	Values
Chemical Composition	Al ₂ O ₃
Purity	99.6%
Color	White
Nominal Density	3.88g/cm ³
Surface Finish (Asfired)	3μ" (76.2nm)
Camber	0.002" (0.0508mm)
Thickness	0.015" (0.381mm)*
Thickness Tolerance (±)	0.001" (0.0254mm)
Coefficient of Thermal Expansion (CTE)	7.0–8.3 x 10 ⁻⁶ (25–1000°C)
Thermal Conductivity 100°C	26.9 Watts/m ² K
Dielectric Constant 1 MHz	9.9 @ 1 MHz ±0.1
Dielectric Constant 10 GHz	9.7 @ 10 GHz ±0.1
Dissipation Factor (Loss Tangent)	0.0001 @ 1 MHz
Hardness (Rockwell)	87
Flexural Strength	90K (10 ⁻³) lbs/in ² (620Mpa)
Compressive Strength	54 x 10 ⁻³ M lbs/in ²
Grain Size	< 1.0μm

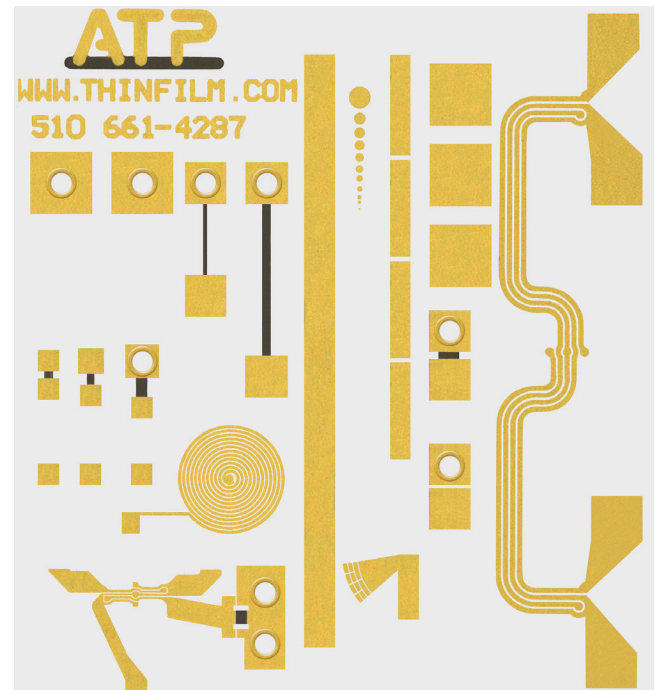
Material specifications provided by Coors Ceramic Company

ATP offers build-to-print service for a wide range of materials and metalization schemes. ATP fabricates circuits on substrates from As-Fired Alumina to Beryllium Oxide to Fused Silica, even Silicon. Metalizations range from the standard TaN/TiW/Au to films including Nickel, Palladium, or Titanium.

ATP1015: Material is 15 mil As-Fired Al₂O₃
 TaN Resistors = 50 Ohms per Square
 TiW = 400–800 Ångströms
 Au = 120μ" minimum



Sample Provided



At ATP, we constantly evolve our processing and material capabilities to reflect our customer's changing needs. If you have a circuit requirement that is out of the "normal" thin-film type, please contact ATP at 1.510.661.4287 or visit our website at www.thinfilm.com. ATP would enjoy discussing your application with you and working to develop a solution.