



ATP1006 Samples

As-Fired Aluminum Oxide Plated Thru Vias

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

TaN/TiW/Au metalization with CO₂ laser drilled conductive plated thru via holes in Aluminum Oxide (Al₂O₃) provides a cost effective solution for applications that require interconnects to ground.

The conductive plated thru vias replace the tedious process of bonding from the top side of the circuit to ground.

Material Specifications:

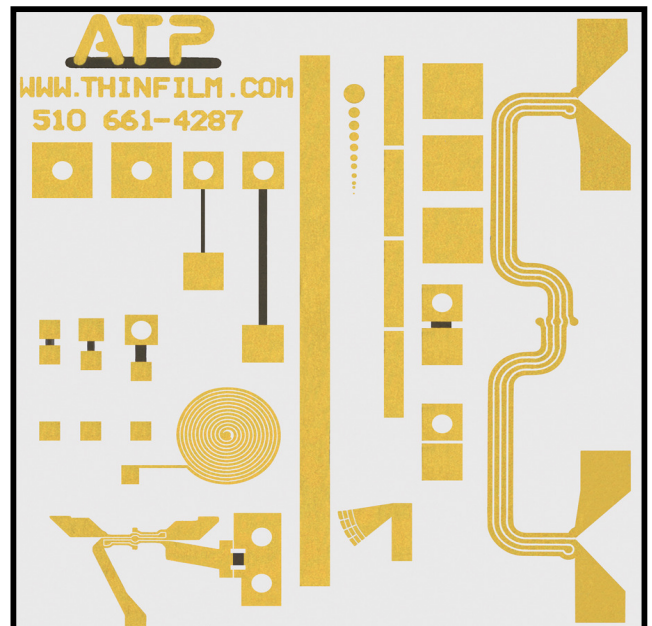
Properties	Units	Asfired High Density 996 Aluminum Oxide Superstrate 996
Chemical Composition		Al ₂ O ₃
Purity	%	99.6
Color		White
Nominal Density	g/cm	3.88
Surface Finish As-Fired	u-inches / (nm)	3u"(76.2nm)
Coefficient of Thermal Expansion (CTE)	10 (-6)	7.0-8.3 (25-1000 °C)
Camber	inches / um(microns)	0.002/(.508um)
Thickness	inches / um(microns)	.015/(.381mm)
Thickness Tolerance	inches / um(microns)	0.001/(25.4um)
Thermal Conductivity 100 °C	Watts/m K	26.9
Dielectric Constant	1 MHz	9.9 +/- .1
	10 GHz	9.7 +/- .1
Dissipation Factor (Loss Tangent)	1 MHz	0.0001
Hardness	Rockwell	87
Flexural Strength	K(10-3) lbs/sq.in.(Mpa)	90(620)
Compressive Strength	M(10-3) lbs/sq.in.	54
Grain Size	um (microns)	<1.0

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 Asfired Alumina to Beryllium to Fused Silica, even Silicon. Metalizations range from the standard Tan/TiW/Au to films including Nickel, Palladium, Platinum, or Titanium.

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 (510) 661-4287 or visit our web site www.thinfilm.com. ATP would enjoy discussing your application with you and working to develop a solution.

Samples Provided:



ATP1006, Material is 15 mil As-Fired Al₂O₃

TaN Resistors = 50 Ohms per Square

TiW = 400 to 800 Angstroms

Au = 120 u" minimum

Does not have indicator on circuit

Via Hole Size: .015+/- .002"

web site: www.thinfilm.com

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