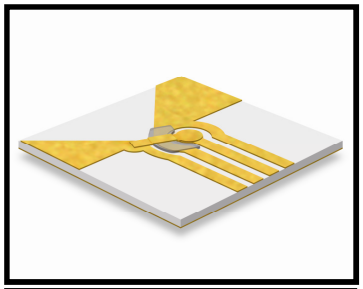
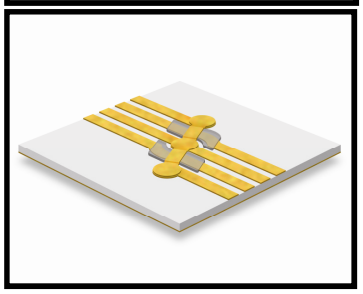
ATP1007 Samples





As-Fired Aluminum Oxide with Polyimide Supported Bridges

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

TaN/TiW/Au metalization on Aluminum Oxide (Al_20_3) with polyimide supported Lange coupler interconnects. This process provides a consistent Lange coupler interconnect, which reduces test and tune time and eliminates wire bonding. Since the interconnects are supported by 3 to 4 microns of polyimide there is virtually no risk of collapsing or damaging the bridge during shipment or assembly.

Polyimide supported bridges are used instead of wire bonding.

Let ATP add these to your new or existing designs.

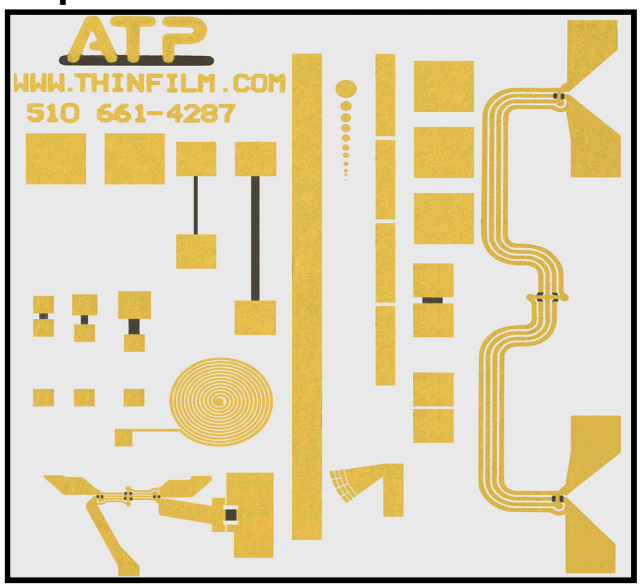
Please ask for Polyimide Bridge Design Rules document #50031.

Material Specifications:

Properties	Units	Asfired High Density 996 Aluminum Oxide Superstrate 996
Chemical Composition		Al_2O_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℃)
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℃	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

Samples Provided:



ATP1007, Material is 15 mil As-Fired Al_2O_3
TaN Resistors = 50 Ohms per Square
TiW = 400 to 800 Angstroms
Au = 120 u" minimum
With Polyimide Supported Bridges

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, 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.

web site: www.thinfilm.com

3439 Edison Way-BLDG 1
Fremont, CA 94538 U.S.A

3620 Yale Way-BLDG 2
Fremont, CA 94538 U.S.A

Tel: (510) 661-4287
Fax: (510) 661-4250