



ATP1005 Samples

Beryllium Oxide Solderable Submount Samples with Palladium Barrier Metalization

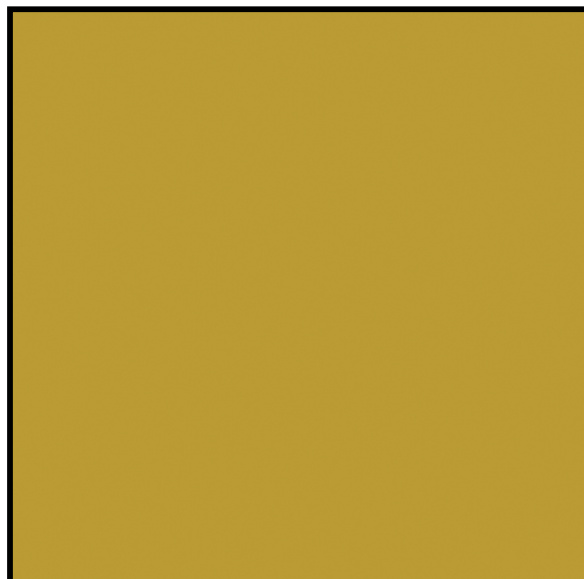
Applied Thin-Film Products (ATP) is pleased to provide ceramic thin-film samples for your evaluation.

TiW/Pd/Au is a solderable metalization on Beryllium Oxide (BeO). Since BeO has a thermal conductivity of 270 Watts/mK and is ideal for the toughest thermal applications.

Material Specifications:

| Properties | Units | BeO |
|--|----------------------|------------------------------|
| Chemical Composition | | BeO |
| Purity | % | 99.5 |
| Color | | White |
| Nominal Density | g/cm | 2.85 |
| Surface Finish, Polished | u-inches / (nm) | 2.0 - 4.0(50-100nm) |
| Coefficient of Thermal Expansion (CTE) | 10 (-6) | 9.0 (25-1000 °C) |
| Camber | inches / um(microns) | .0003" / .0005" (7.6/12.7um) |
| Thickness | inches / um(microns) | .015" (.381mm) |
| Thickness Tolerance | inches / um(microns) | +/- 0.0005" (+/- 12.7 um) |
| Thermal Conductivity | Watts/m K | 270 |
| Dielectric Constant | 1 MHz | 6.5 |
| Dissipation Factor (Loss Tangent) | 1 MHz | 0.0004 |
| Hardness | Rockwell | n/a |
| Flexural Strength | K(10-3) lbs/sq.in | 35 (4 pt. Bend) |
| Compressive Strength | M(10-3) lbs/sq.in. | n/a |
| Grain Size | um (microns) | 9 to 16 |

Samples Provided:



ATP1005, Material is 15 mil BeO
 TiW = 400 to 800 Angstroms
 Pd = 1000 to 1500 Angstroms
 Au = 120 u" minimum

Material Specifications provided by Accumet Engineering 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, 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

