HUBERT HEUSNER
AGENT & DISTRIBUTOR

Phone: +49 - 6106 – 64 64 39
e-mail: hhi@dcb-substrate.com
Internet: www. dcb-substrate.com

Metallization

* TF means Thick Film

** **New is our enhanced AuSn (Gold/Tin) metallization. The thickness of our AuSn layer is 2 µm - 75 µm. no need of expensive solder pre forms.**

*** **A wide variety of plating finishes including selective Gold, Palladium and Gold Tin allows the use of various soldering materials and assembly techniques: Gold wire bonding, brazing and epoxy die attach.**

PCTF (Plated Copper on Thick Film) on AL203 (alumina), AIN (aluminum nitride) and BeO (beryllium oxide)

1. Ceramic-TF Ag (10-12 µm typical) - electroplated Cu (15-75 µm) - Ni (2,54 µm typical) - Au (0,05 µm -1,27 µm) **Al-Wire bonding**

2. Ceramic-TF Ag (10-12 µm typical) - electroplated Cu (15-75 µm) - Ni (2,54 µm typical) - electro less Pd (0,14 µm – 0,35 µm) - Au (0,05 µm -1,27 µm) **Al-Wire bonding and Au-Wire bonding**

AgENIG on alumina (AL2O3) and beryllium oxide (BeO), Low Cost Thick Film Substrates

1. Ceramic-TF Ag (10-12 µm typical) – electro less Ni (2,54 µm typical) - Au (0,05 µm - 0,1 µm) Note: Adding electroplated gold (0,254 µm - 1,27 µm) for wire bonding is optional

2. Ceramic-TF Ag (10-12 µm typical) – electro less Ni (2,54 µm typical) - electro less Pd (0,1 µm - 0,35 µm) - Au (0,05 µm - 0,1 µm)

PCTF (Plated Copper on Thin Film) on AlN (aluminum nitride)

1. Ceramic- Thin Film Layer (Ti , etc) - Electroplated Cu (15-75 µm) - Ni (2,54 µm typical) - Au (0,05 µm -1,27 µm)

AgENIG auf AlN (aluminum nitride), Low Cost Thick Film Substrates

1. Ceramic-TF Ag (10-12 µm or more if needed) - Electroplated Ni (2,54 µm typical) - Electroplated Au (0,05 µm - 1,27 µm). It is not really a PCTF: there is no either copper as it is substituted by silver, double layers if required to improve electrical conductivity. It is not AgENIG either as electro less Ni and immersion gold is substituted by electroplated Ni and gold.

3. The same but added Pd layer to save on thick gold. Ceramic-TF Ag (10-12 µm or more if needed) - electroplated Ni (2,54 µm typical) – electro less Pd (0,14 µm – 0,35 µm) - Au (0,05 µm – 1,27 µm)

Metallization of Submounts

1. Ceramic-TF Ag (15 µm) - Cu (50 µm) Electroplated – Ni (2,5 µm) Electroplated - Au electro less (0,5 µm) - AuSn Electroplated (5 µm).

2. Ceramic-TF Ag (15 µm)- Cu (50 µm)Electroplated – Ni (2,5) µm Electroplated - Au1 electro less (0,25 µm) - Au2 Electroplated (1,0 µm).

3. TiW (0,1 µm) electro less - Cu(25 µm) Electroplated – Ni (2,5) µm Electroplated - Au electro less (0,5 µm) - AuSn Electroplated (5 µm).

4. TiW (0,1 µm) µm)- Cu(50 µm) electroplated – Ni (2,5) µm Electroplated - Au1 electro less (0,25 µm) - Au2 (1,0 µm)

Metallization of DBC (Direct Bond Copper) Substrate

1. Ni (2,54 µm typical) - Au (0,05 µm -1,27 µm)

2. Ni (2,54 µm typical) - electro less Pd (0,14 µm – 0,35 µm) - Au (0,05 µm -1,27 µm)

3. Ni (2,5) µm Electroplated - Au electro less (0,5 µm) - AuSn Electroplated (5 µm)

4. Chemisch Ag (Silber) - 0,15 µm - 0,45 µm