

DATASHEET

TP-1 High Density Anisotropic Conductive Film (ACF)

btechcorp has invented and patented a process for aligning high density fibers through the thickness of a polymer matrix... up to 20 million fibers per square inch.

High conductivity metallic fibers provide a continuous path through the thickness of the film, thus avoiding the particle-to-particle contact problem of filled adhesives.

TP-1 High Density Anisotropic Conductive Film (ACF) adhesive is currently being qualified for a variety of applications, including:

- display interconnect
- replacing wafer bumps and underfill for flip chip packaging
- lead-free solder replacement

TP-1 Properties

Electrical Resistance	Z-axis: 0 microhms (1.0 cm ² , 100μ thick) X-Y plane: >20 megaohm
Z-Axis Connection Density	11μ pitch
Z-Axis Thermal Resistance	<0.20 °C-cm ² /W (100μ thick bond)
Coefficient of Thermal Expansion	Z-Axis: 15 ppm/°C X-Y plane: 45ppm/°C
Young's Modulus	<10 Ksi (0.06 GPa)
Ionic Purity	Hydrolyzable Chloride <5 ppm Hydrolyzable Sodium <2ppm
Operating Temperature	4°K to 90°C

Processing

Product Form Film pre-form for reel supply. 2-8 mils (0.05-0.20mm) thick, +/- 0.1 mil

Cure Cycle 50 psi bond compression (<3 sec) at 125 °C (resin temperature)

Storage Life 6 months at 27 °C (80 °F)



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