FRALOCK®
Leading the Way in Advanced Materials Solutions

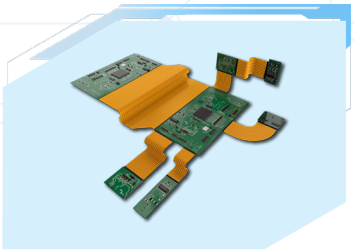
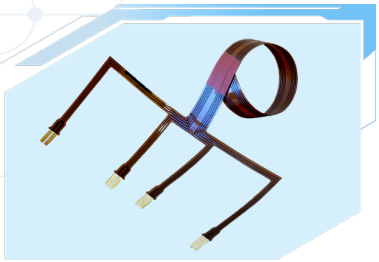
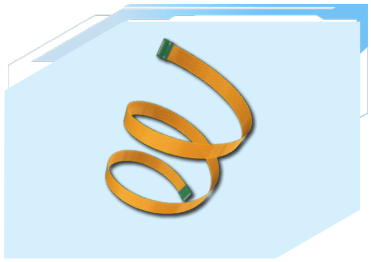
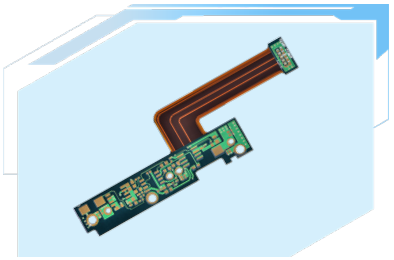
FLEX CIRCUIT SOLUTIONS

Fralock's flexible printed circuits and assemblies are engineered and manufactured for critical applications in advanced technologies. Our capabilities include single and multi-layer fine-pitch flexible circuits from the smallest format applications to large format solutions. Fralock's polyimide flex solutions are lighter and more flexible compared to standard flexible printed electronics, and are are highly suited for electrically, chemically, and environmentally destructive environments.

Our team of experts are ready to assist with your design, engineering, prototypes, and qualification, as well as full rate production needs.

FLEX AND RIGID-FLEX CIRCUITS

Fralock's flex circuits and cables maintain flexibility at temperature extremes from -269°C to +220°C, and etched-foil flex cables can reach up to 50 ft length. Our pioneered adhesiveless polyimide lamination technology (ALT) eliminates delamination and provides superior flexibility and durability for a wide variety of applications. Our flex circuits and cables can be bonded either with or without adhesives.

Applications Include:

- Small, compact packages where interconnects are needed in multiple axes
- High complexity interconnects requiring passive and active component assembly
- Low outgassing environments
- Aerospace applications where weight savings is critical
- Extreme environment applications with exposure to harsh conditions (plasma, autoclave, cryogenic)
- Medical applications where repeatability and reliability is critical

Features and Benefits

- Adhesiveless constructions resulting in thinner, lighter, and more flexible circuit solutions
- High Density Interconnect (HDI): trace and space capabilities down to 1.5 mil
- Microvia sizes down to .002".
- Selective surface finishing allowing for multiple finishes on the same board
- Foils such as CuNi, Constantan, Inconel, stainless steel, and nickel can be used to create circuits for unique applications.

ISO 13485:2016 CERTIFIED
ISO 9001/AS9100 CERTIFIED
ITAR, FDA REGISTERED

Manufacturing Capabilities

- Trace / Space 37um (1.5 mil)
- Micro / Vias Min 50u (2 mil)
- Blind, Buried and Stacked Vias (2mil)
- Conductive, Non-Conductive and Copper-Filled Vias
- Laser- Precision Drilling / Excising<50um (2mil)
- Layer Count Capability 1-10+
- Surface Mount Technology (SMT) and thru-hole assembly services. Package sizes down to 01005 and 0.4mm pitch
- Unsupported Traces / Cantilever Leads
- Controlled Impedance Capabilities
- Liquid Photo-Imageable Soldermask Thickness 25um (1mil)
- Photo Imageable Coverlay Min 25um (1mil)
- RoHS & Non RoHS PCB/Flex Circuit Manufacturing
- Automated Optical Inspection (AOI)
- Electrical Testing (Flying Probe, Functional Test , and Hi-Pot)
- Large and long format circuits
- Screened silver shielding and EMI shielding film

Assembly

Flexible printed circuits are the preferred option for both static and dynamically bending applications with multiple interconnect options including through-hole, board mount, zero insertion force, and discreet wire termination. Flexible circuits offer a versatile solution to complex assemblies, while providing significant weight savings compared to discreet wire. Virtually any active or passive component that can be assembled to a rigid board can be assembled in flexible circuit.

Get in touch with us to discuss your project

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