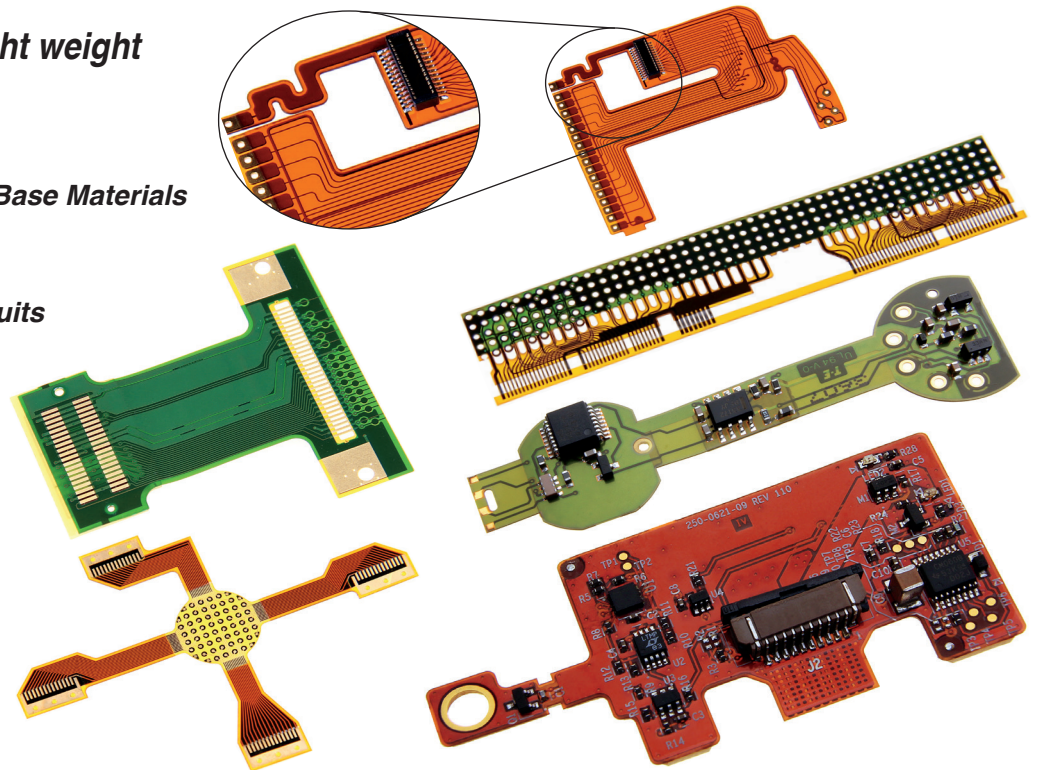


Flexible & Rigid Flex Circuits

Flexible Circuits

High reliability, thin and light weight flexible interconnect for critical applications

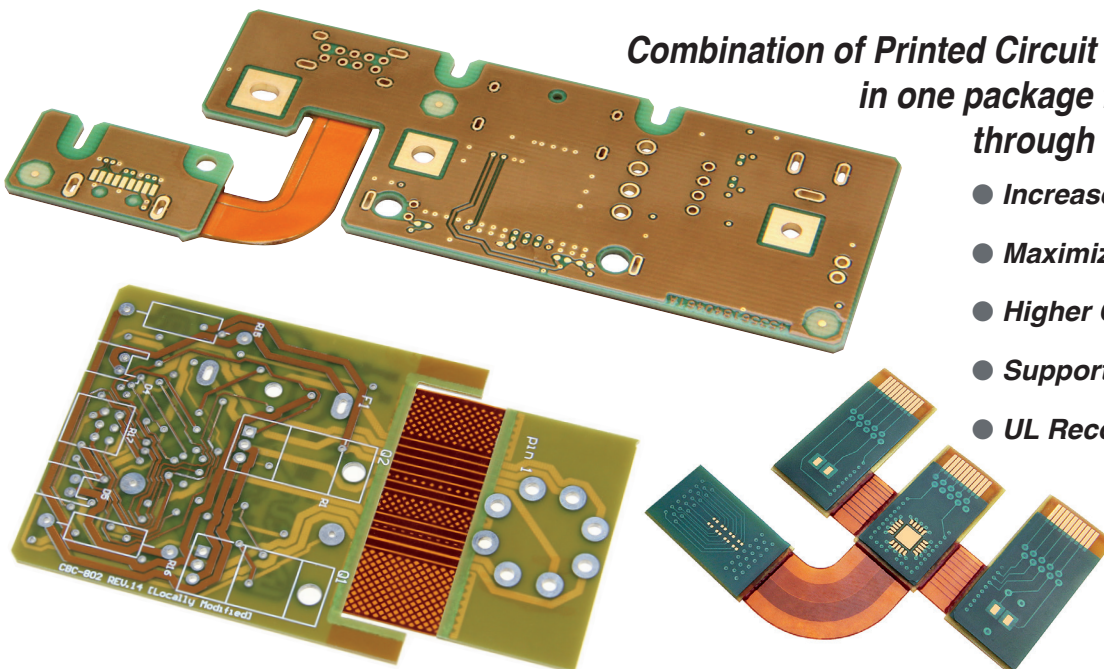
- Adhesive and Adhesiveless Base Materials
- Thin Copper 5um and Up
- Fine Line / High Density Circuits
- Laser Drilled Microvias
- Laser Direct Imaging
- Multilayer
- Windowed Leads
- SMT Component Assembly
- UL Recognized



Rigid Flex Circuits

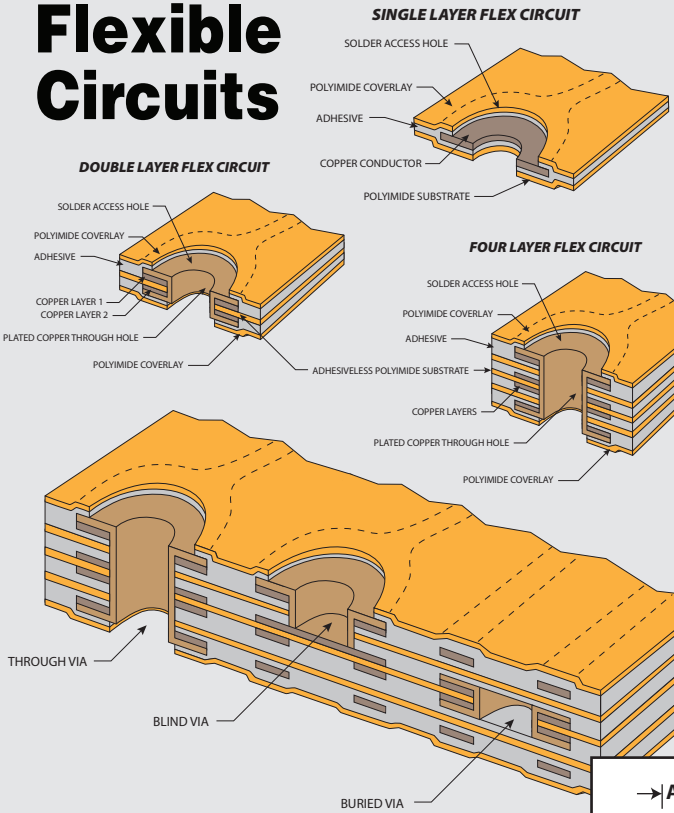
Combination of Printed Circuit Board and Flex Circuit in one package for improved reliability through reduced interconnects

- Increased Reliability
- Maximizes 3 Dimensional Space
- Higher Component Density
- Supports Leadless SMT Packages
- UL Recognized



- Windowed Leads
- Via Fill
- High Tg / Td Material

Flexible Circuits

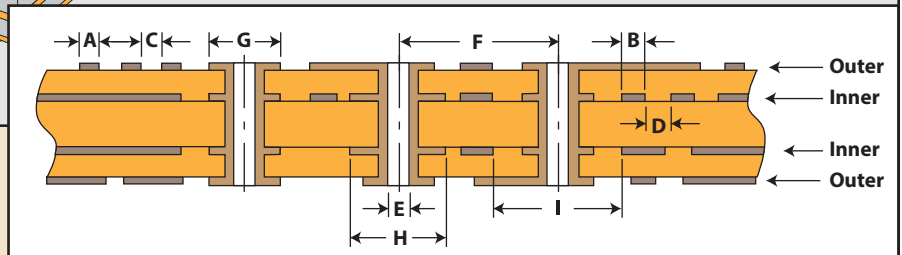


FLEXIBLE CIRCUIT CAPABILITIES MATRIX

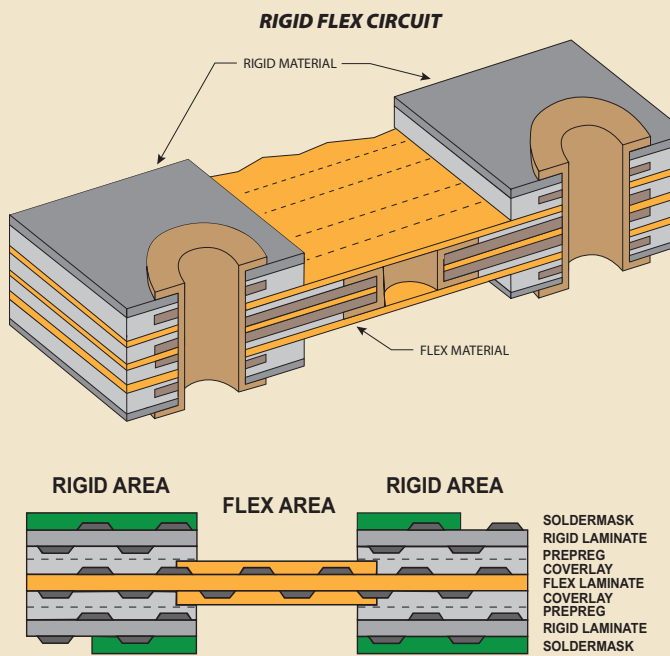
Circuit Layer Design Guidelines				
Attribute	Detail	Nominal		
		Minimum	Preferred	
Line Width – Outer Layers	A	.0015"	.002"+	
Line Width – Inner Layers	B	.001"	.002"+	
Line to Line Space – Outer Layers	C	.0015"	.002"+	
Line to Line Space – Inner Layers	D	.001"	.002"+	
PTH Diameter – Drilled	E	.001" min		
PTH to PTH Pitch – Center to Center	F	Ø+.0065"	Ø+.0075"+	
PTH Pad Diameter – Outer Layer	G	Ø+.002"	Ø+.003"+	
PTH Internal Land Dia. – Inner Layers	H	Ø+.002"	Ø+.003"+	
PTH Clearance Dia. – Inner Layers	I	Ø+.004"	Ø+.005"+	

	Polyimide Coverlay				Photo Imageable Coverlay			
	Nominal		Tolerance		Nominal		Tolerance	
	Min.	Pref.	Min.	Pref.	Min.	Pref.	Min.	Pref.
Feature Size	.008"	.020"	±.001"	±.010"	.003"	.006"	±.001"	±.002"
Registration	-	-	±.005"	±.010"	-	-	±.001"	±.002"

If your design requirements exceed the capabilities stated above, please contact the factory to see if an alternate process or tooling are available.



Rigid Flex Circuits



RIGID FLEX CAPABILITIES MATRIX

Circuit Layer Design Guidelines				
Attribute	Detail	Nominal		
		Minimum	Preferred	
Line Width – Outer Layers	A	.003"	.004"+	
Line Width – Inner Layers	B	.001"	.002"+	
Line to Line Space – Outer Layers	C	.004"	.005"+	
Line to Line Space – Inner Layers	D	.001"	.002"+	
PTH Diameter – Drilled	E	.006" min.		
PTH to PTH Pitch – Center to Center	F	Ø+.014"		
PTH Pad Diameter – Outer Layer	G	Ø+.006"		
PTH Internal Land Dia. – Inner Layers	H	Ø+.006"		
PTH Clearance Dia. – Inner Layers	I	Ø+.010"		
Buried Via (Flex only)		.001" min.		
Maximum PTH Aspect Ratio		10 : 1		

	Polyimide Coverlay				Photo Imageable Coverlay			
	Nominal		Tolerance		Nominal		Tolerance	
	Min.	Pref.	Min.	Pref.	Min.	Pref.	Min.	Pref.
Feature Size	.008"	.020"	±.001"	±.010"	.003"	.006"	±.001"	±.002"
Registration	-	-	±.005"	±.010"	-	-	±.001"	±.002"

If your design requirements exceed the capabilities stated above, please contact the factory to see if an alternate process or tooling are available.