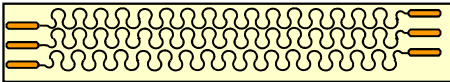




Specifications Stretchable Substrates PCB (ref. qpi_spec_es_1208_2016_STR)

Application	Stretchable substrates are particular suitable in those cases where stretch, bending or twisting (or a combination thereof) is needed of the PCB. The ductility of the stretchable substrates gives new possibilities in decoupling for mechanical resonances. Reduced effort for compensation of mechanical tolerances.	
Build	Single layer; Dual layer	
Base material	Polyurethane type	
Base material thickness	90 - 100 μm	3.5 - 3.9 mil
Copper weight	thickness 17,5 μm	0.50z
Finish	Immersion Silver; OSP	
Cover layer	Polyurethane type	
Peel strength	5 N/mm	456 Oz/in
Tensile strength at 50% strain	6MPa	870psi
Max. dimensions	420 x 266 mm	16.5" x 10.4"
Max. elongation	30%, max elongation depends on applied structure of the copper patron	
Repeating elongation	10%, max elongation depends on applied structure of the copper patron	
Interconnection options	Mounting components: <ul style="list-style-type: none"> • Z glue • Soldering process (SnBi), max. allowed temperature 150°C 302°F • FR4 interposer 	
Operation temperature range	0 - 100 °C	32 - 212 °F
Special	Application of stiffener, interposer	
Applications	<ul style="list-style-type: none"> • Mechanical constructions with need to resonance decoupling • One time (thermo)formed constructions. P.e. Interior parts • Functional clothing. P.e. Clothing with build in electronics, footwear • Medical application. P.e. Bandage with build in electronics 	
Structure of copper layer, Pattern	To overcome the ductility of copper, the copper should be structured in a special way. 	
	Horseshoe like patterns are favoured to overcome the limited ductility of copper. For detailed design suggestions contact Q.P.I. Group.	
Preferred track width copper	100 - 150 μm	4 - 5 mil

CAD/CAM

- Gerber + aperture list for all kinds of layers
- Gerber RS274X for all kinds of layers
- DPF for all kinds of layers
- ODB++ for all kinds of layers
- HPGL for mechanical drawings
- DXF for mechanical drawings
- DWG for mechanical drawings
- Excellon for all drill and rout files
- Sieb & Meyer for all drill and rout files
- Mentor neutral file for netlist comparison
- IPC356 file for netlist comparison

Manufacturing according

IPC-A600 Class 2

Testing According

IPC-TM-650

Special products

Q.P.I. always strives to provide its clients with the products and technologies which they require and, should these not already exist, will develop them itself or in cooperation with others. Contact Q.P.I. for further information