



Flexible Circuits and Interconnection Solutions

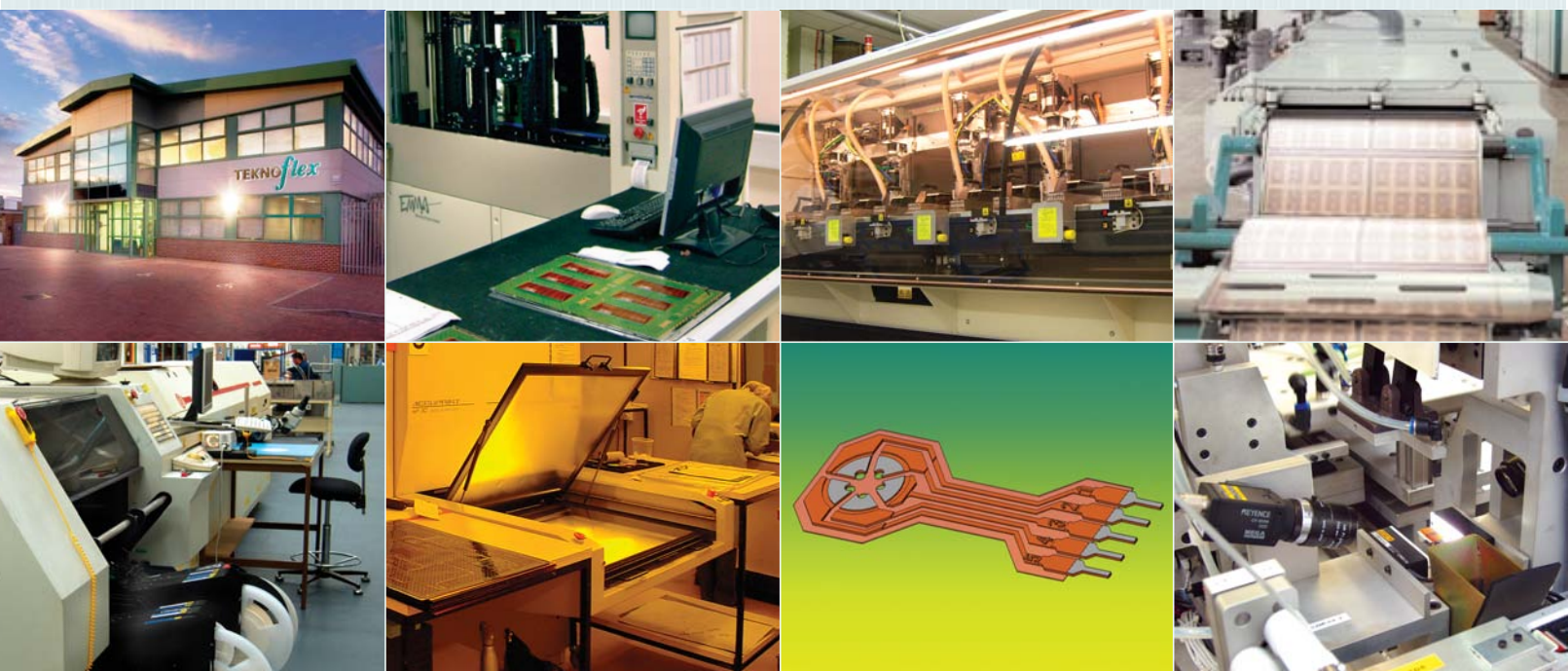
TEKNOflex
SOLUTIONS
INTERCONNECT

Our "Mission" is "to demonstrate through our unrivalled capability and service that Teknoflex sets the standard in the design, manufacture and assembly of all flexible and flex-rigid multilayer technologies."

With over 50 years experience in Printed Circuit Manufacture, Teknoflex has established a formidable reputation as the UK's largest supplier of flexible and flex-rigid multilayer circuits and assemblies.

Our breadth of technological capability and "in-house" design, assembly and test is unrivalled.

The company is proud to be associated with many internationally renowned organisations in market sectors ranging from Defence to white goods. Many of these organisations have forged strong collaborative agreements with the company.



Facilities

Teknoflex has continued to strengthen its market position over recent years by extending its operations into new impressive facilities and by ongoing investment in state of the art equipment.

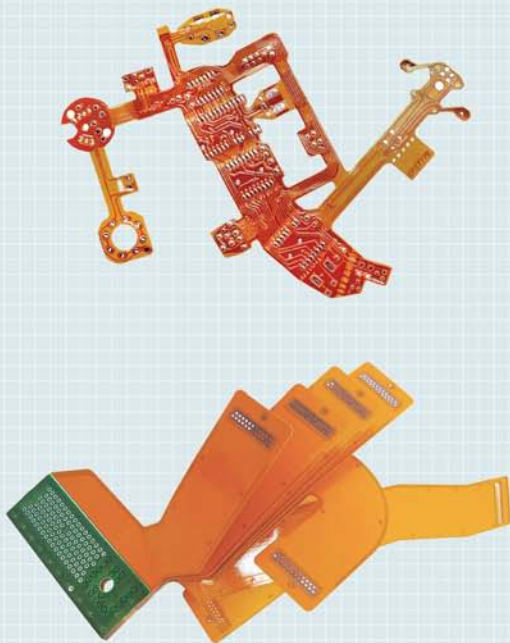
These include (clockwise from top left):

- I. New purpose built premises
- II. In-house electrical test of bare and assembled flexible & flex-rigid circuits
- III. State of the art drilling machines
- IV. UK's only high volume, low cost "Reel to Reel" flexible circuit manufacturing facility
- V. In-house surface mount and through hole assembly equipment
- VI. Enhanced photoimaging facilities
- VII. 3D software capability
- VIII. Custom built, automated inspect and pack equipment

Teknoflex offers what is believed to be the broadest range of flexible and flex-rigid circuit solutions in Europe.

Flexible Circuits

Single & double sided flexible circuits are globally the most widely used constructions. One or two conductive layers with bonded or printed insulators often combined with stiffeners or rigidisers for component mounting offer very cost effective, 3D interconnection solutions.

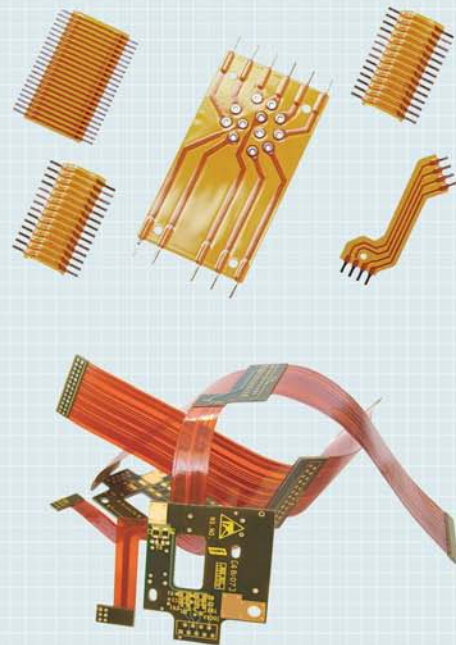


Multilayer Flexible Circuits

This technology is employed where packaging densities necessitate the use of more than two layers of circuitry in order to achieve complex component interconnections. Typically, up to eight conductive layers can be included in a multilayer flexible circuit - more than this may limit the flexibility. With the appropriate material choice however, the layer count can be extended beyond eight.

Sculptured Circuits

This technology is novel in that it provides the wherewithal for conductors to have variable thickness along their length. This can be particularly useful where unsupported fingers or raised contact points are a requirement.

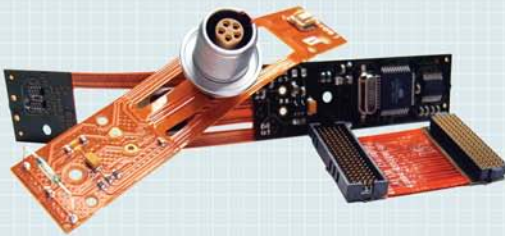


Flex-rigid Multilayers (FRMLs)

This technology comprises a combination of rigid and flexible circuit materials each of which would normally contain conductors. Rigid sections would typically be used for providing component mounting areas with the flexible portions providing the electrical interconnections. FRMLs are particularly useful at increased levels of packaging density and where complicated components and assemblies are involved.

Component Assembly

As part of its vertically integrated capability Teknoflex has invested in both through hole and surface mount component assembly facilities. These facilities extend to testing, conformal coating and back potting.

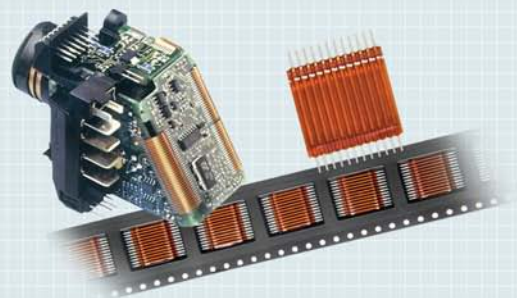


REGAL™ Flex

This technology enables high layer count flex-rigid multilayer circuits to be produced with exceptionally high integrity. This is achieved through the elimination of materials from the multilayer sections which have high thermal coefficients of expansion and high levels of moisture absorption. This ensures that the finished circuit can resist thermal stress without the risk of barrel cracking. The use of exceptionally high temperature resins is possible to further boost the capability benefits of this technology over conventional flex-rigid constructions.

Reel to Reel Production

The manufacture of single and double sided flexible circuits using highly automated "Reel to Reel" processing enables Teknoflex to offer very cost effective interconnection solutions for high volume applications. This facility also allows thinner materials to be processed than would otherwise be possible in panel form.



Surface Mount Interconnects (SMIs)

This interconnect solution is a machine placeable technology offering a low cost, low profile and low weight solution to rigid printed circuit board to board interconnection. SMI technology has been proven over many years as an alternative to flat flexible cables and flex-rigid multilayers in automotive, consumer and aerospace applications. Teknoflex offers a 0.93mm pitch variant with a choice of 4 to 22 conductors and a 0.50mm pitch variant with a choice of 10 to 40 conductors. Custom designs may also be available on request.

Markets

Flexible and flex-rigid circuits have long been utilised in numerous industry sectors including defence, electronic data processing (EDP), aerospace, communications, medical, automotive / motor sport, industrial and consumer.

The adoption of these technologies is associated with packaging high densities, increased reliability, lower overall total package cost and reduced weight.



Applications

Applications are wide ranging and include mobile phones, air & land based engine management systems, radar, airbags, security systems, dishwashers, palm pilots, storage systems, ABS, audio equipment, infusion pumps, pacemakers, weapon guidance systems, light clusters, instrument panel wiring, laptops, air data computers and defence and commercial communications systems.

The breadth of our technology, market sector involvement and international nature of our customers demands that high quality standards are maintained at all times.

Teknoflex holds the following national, international and customer specific approvals:

BS EN ISO 9001:2000

IECQ BS EN 123000 series

Release in accordance with IPC-6013 classes 2 or 3

Release in accordance with IPC-A-610 classes 2 or 3

Underwriters Laboratory (product specific)

Conformal coating to customer specifications

ANSI - J - 001 trained staff

AS9100 - completion 2008

BS8555 (leading to BS EN ISO 14001) - completion 2008

Working towards NADCAP implementation

SC21 - ongoing commitment to continuous improvement



Want to know more...

Contact our Sales Team for our free comprehensive "Designers Guide to Flexible Circuit Technology"



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