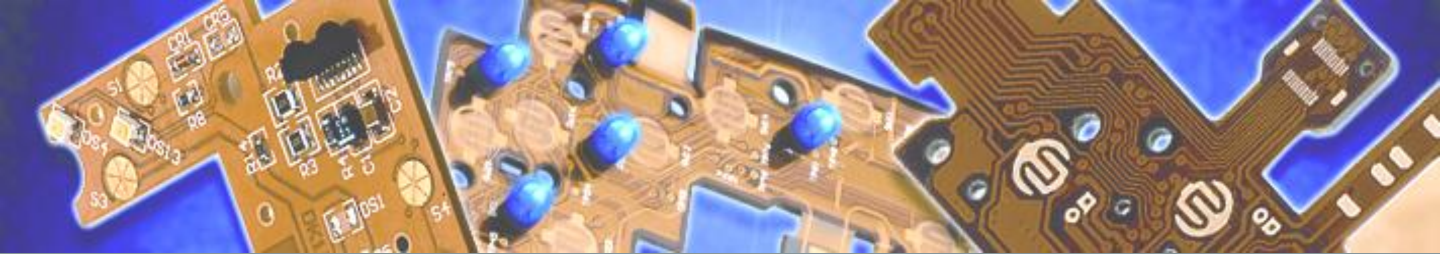
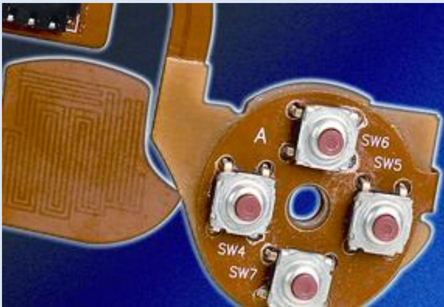


Rigid-Flex and Multilayer Circuit Designs from Parlex

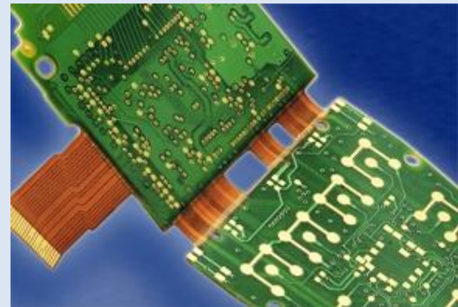
Many Fortune 500 companies trust Parlex engineers to produce their most demanding small to medium volume rigid-flex and multilayer circuit designs. Whether you need to reliably package your circuitry in limited space with Rigid-Flex or solve a crosstalk shielding issue with Multilayer Flex Circuitry, you can rely on Parlex Specialty Manufacturing expertise to move your project through to commercialization. Contact Parlex Dynaflex today for technical guidance on your next prototype rigid-flex or multilayer project.

Rigid Flex Circuit Advantages:



- High connection reliability- flexible cable connecting rigid layers is an integral piece of multiple boards
- Reduce parts count- fewer connectors and cables required
- Ultimate design flexibility- easily package circuitry in confined spaces or in 3 dimensions while maintaining a rigid substrate
- Flexible design parameters- circuits can accommodate EMI shielding layers, through-hole assembly, controlled impedance and other customer-specified electrical requirements

Multilayer Flex Circuit Advantages:

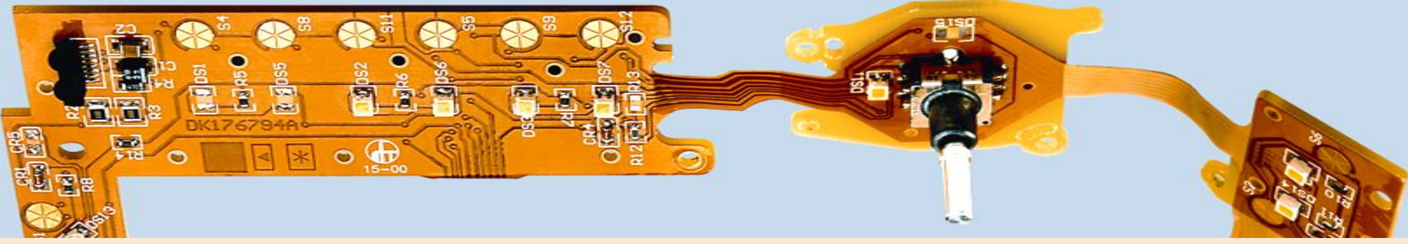


- Save space- high circuit density system can handle multiple conductive layers
- High performance and reliability in extreme conditions- even in situations where circuit is exposed to excessive vibration, shock, bending and folding
- Flexible design parameters- circuits can accommodate EMI shielding layers, through-hole assembly, controlled impedance and other customer-specified electrical requirements.

Parlex Dynaflex Corporation

1756 Junction Avenue
Suite D
San, Jose, CA 95112
Tel: (408) 441-8713
Fax: (408) 441-8734

www.parlex.com
flexcircuits@parlex.com



Parlex Dynaflex Manufacturing Capabilities

Technical Capabilities

> 3 mil line & 4 mil space/prototype environment
> 10 layer rigid flex
> Reverse bare circuitry
> Soft tool ZIF tolerance (± 0.003)
> Control Impedance
> Micro BGA Assembly

Material

> PET
> Polyimide/Adhesive/Adhesiveless
> ½ oz. copper – 6 oz. copper
> Cover-layer – ½ mil – 5 mil
> Major Material Manufactures
•Dupont
•Rogers
•Shinetsu

Surface Finish

> HAL
> Gold hard/soft
> Wire bondable gold
> Immersion tin plate
> Flexible soldermask

Panel Size

> 12 x 18
> 18 x 24
> Custom panel size available upon engineering review
> Low/medium production capabilities

Standards – IPC & SPC

IPC 6013 - Qualification & Performance Specification for Flexible Printed Wiring Boards

IPC-6011 – Generic Performance Specification for Printed Boards

IPC –A-600 Acceptability of Printed Boards

IPC-2223 – Sectional Design Standard for Flexible Printed Boards

IPC 2221 – Generic Standard on Printed Board Design

SPC Key Processes: Chemical Floor

> Copper Deposit Elongation
•Acid Tin Bath
•Sulfuric Acid
•Tin
•Chloride
> Acid Copper
•Chloride
•Copper
•Sulfuric Acid
> Etch
•Etch PH
•Copper Concentration

SPC Key Processes: Dry Process

> Lamination
•Rate of Rise
> Dry Film Lamination
•Temperature
•Pressure
•Speed

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