

CATHETER FLEXIBLE CIRCUITS

Enhancing catheter performance with flexible circuits



There is significant momentum and growing needs within medical field for catheter flexible circuits. Catheter related solutions

provide minimally invasive procedures while addressing a broad range of applications. These applications include catheters for ablation, electrophysiology, mapping and diagnostic, angioplasty, stent deployment, and more.



PRECISION & RELIABILITY

Flexible circuits enhance catheter performance with improved movement control, durability, and dependable operation in medical procedures.

SEAMLESS SENSOR INTEGRATION

Incorporate advanced sensors for real-time monitoring, diagnostics, and data collection to improve procedural accuracy and patient outcomes

MINIATURIZATION

Ultra-thin, compact designs allow for greater flexibility, ease of use, and enhanced functionality in minimally invasive applications.

ENHANCED FUNCTIONALITY

Built to withstand the rigors of catheter applications, offering flexibility, dynamic movement, and long-term reliability.



Flexible Circuit Technologies
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FPC PROCESS CAPABILITY FOR ENDOSCOPE PRODUCT LINE



ITEMS	MASS PRODUCTION
Layer	1-6L
Thickness	Multi-layer: according to customer requirements
	Single-sided: 0.065mm MIN
	Double-sided: 0.125mm MIN
Outline	Length: single/double/multi-layer: 1.45m MAX
	Width: single/double/multi-layer: 0.5mm - 0.8mm MIN
	Multi-layer: 1.0mm MIN
	(The data obtained from the average calculation according to the wiring of the product)
Options	Shield Film: (thickness: 16um, 20um)
	FR4 (0.1-0.5mm) PI stiffener
	(0.075-0.225mm) Metallic stiffener
Min. Conductor Width & Spacing	(0.1-0.3mm) Single and double sided: 0.05mm
	Multi-layer: 0.075mm
Alignment Tolerance Between Layers	0.05mm
Conductor To Outline	Single and double sided board: >0.10mm
	Multi-layer circuit: >0.15mm
PAD To Outline	0.2mm MIN
Min. Hole Size	Laser drill: Ø0.05mm
	Mechanical drill PTH: Ø0.1mm
Copper Plating Thickness	10-15um (hole)
Min. Coverlay Openings	0.50mm
Min. Coverlay Web	0.30mm
Min. Solder Mask Opening	0.20-0.30mm
Min. Solder Mask Web	0.10mm
Max. Panel Size	≤250*1500mm (single/double/multi-layer)
Final Finish	ENIG (NI:2-6um AU:0.05-0.09um)
	Electroplated hard gold (NI:2-6um AU:0.1-1.0um)
	Electroplated soft gold (NI:2-6um AU:0.1-1.0um)
Trim Method	Laser (outline<1mm)
	Tooling (Outline>1mm)-- The mold costs ≥\$4k
Impedence Requirement	Differential impedance: 100ohms+/-10%

inTFlex

The EMS Group of Flexible Circuit Technologies

With over 900,000 sq/ft of cutting-edge manufacturing technology, inTFlex merges FCT's electronic manufacturing and contract manufacturing services into a new state-of-the-art facility. inTFlex, the EMS group of Flexible Circuit Technologies, features high-speed, fully automated SMT smart lines, plastics molding, membrane switches, CNC capabilities, fixtures, and all existing value-added services. inTFlex allows FCT to continue providing outstanding EMS and CM services to bring world-class interconnect solutions to life, optimize production efficiency, and support program scalability for global medical clients.

To learn more about inTFlex, visit:

flexiblecircuit.com/intflex

- FPCA and PCBA
- Sub-Assembly
- Box Build
- Plastics and Sterilization
- Bare flex circuits
- Substrate like PCB's (SLP)

We currently partner with major medical OEMs across the globe!

Contact FCT to explore the possibilities for your catheter program! sales@flexiblecircuit.com



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