Multilayer FPC for High-Speed Transmission

Multilayer FPC having a function similar to a rigid flexible printed board!

Can be suited to use of a high frequency of several tens of GHz by reducing a reflection point without the connecting point between FPC and PCB.

Number of layers	: 3 to 8
Connecting via	: Through-via, blind via, and filled via
Base materials	: Polyimide and liquid crystal polymer
FPC thickness	: FPC thickness: Approx. 200 to 800 μm
Surface treatmen	: Gold flash plating, nickel palladium gold plating, and lead-free solder plating

Features

- Measures for heat radiation can be taken by attaching a reinforcing such as a metal or ceramics.
- Can be miniaturized using a high-density RF line.
- Can be used for wire bonding.

Example of layer structure

	IC		
Resist	10	Ni Pd Au	
Resist L1 conductor Polyimide L2 conductor Adhesive Polyimide Adhesive Polyimide Adhesive L3 conductor Polyimide L4 conductor Adhesive Polyimide Adhesive Polyimide Adhesive L5 conductor Polyimide		Example: 50 Ω single ended, 100 Ω differential RF (High-speed signal line) GND A reflection point due to impedance mismatching does not exist because there is no connecting point.	prox. 350 µm thick
L6 conductor			
L6 conductor			
Resist			
Adhesive			
	AL.SU	US. Al N etc. Flexible area Parts mounting area	
		J	
Parts	moun	inting area YAMASHITA MATERIALS	