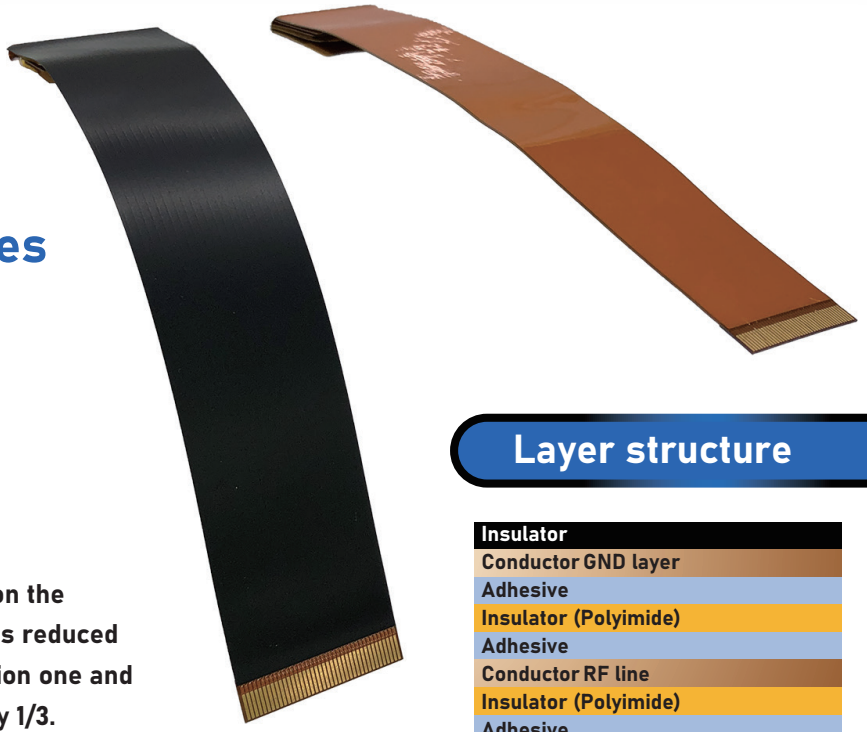
Low-Repulsion/High-Speed Transmission FPC

Low-repulsion FPC, having stripline structure, that is excellent in measures for noise!



* Single ended 50 Ω ± 10%
* Strip Line

Features

- As compared with the three-layer FPC based on the conventional structure, the transmission loss is reduced to the level equal to or lower than the convention one and the repulsive force is reduced to approximately 1/3.
- FPC can be expected to be improved in assembling operability or to be used for a movable part.

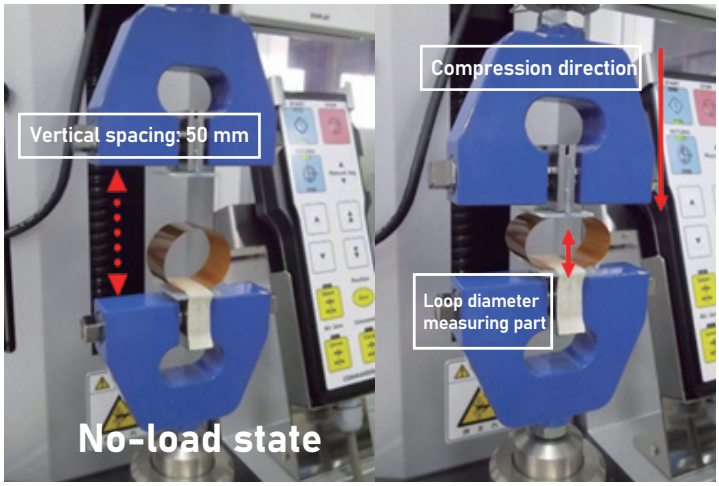
Layer structure

Insulator
Conductor GND layer
Adhesive
Insulator (Polyimide)
Adhesive
Conductor RF line
Insulator (Polyimide)
Adhesive
Conductor GDN layer
Insulator

Thickness of bending part: Approx. 130 µm

Flexibility evaluation (Loop stiffness test)

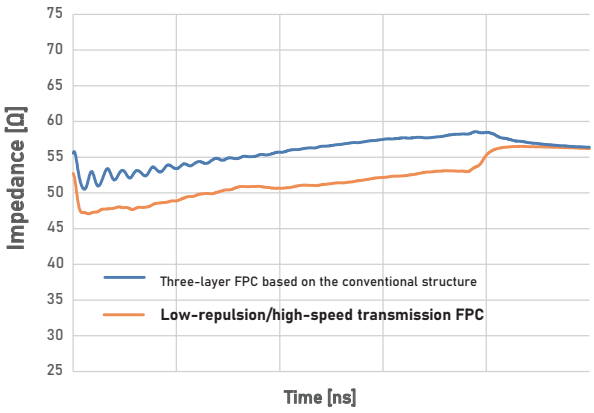
Contents of test: Fix a specimen in a loop state and perform compression operation (compression speed: 30 [mm/min]) continuously for three minutes until a loop diameter reaches 5 [mm]. After that, measure the repulsive force.



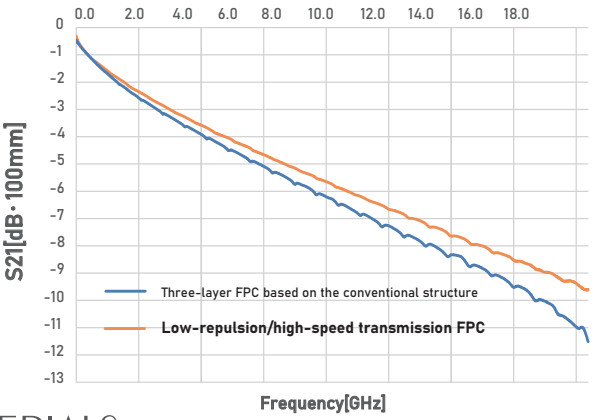
		Repulsive force [mN/mm]
Three-layer FPC based on the conventional structure	1	144.2
	2	153.0
	3	154.4
	Mean value	150.5
Low-repulsion/high-speed transmission FPC	1	52.9
	2	58.4
	3	55.1
	Mean value	55.5

Reduced in flexibility to approx. 1/3.

TDR waveform (Line length: 100 mm)



TDR waveform (Line length: 100 mm)



YAMASHITA MATERIALS

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