Large Current FPC

BigElec

Patented

Large current wiring with freedom!

Ideal for assembly in narrow space due to its bendability.

Product spec. in photo

Structure	: 6 layers
Size	: 300×25mm
Conductor width	: 8mm
Conductor thickness	: 450μ (Total)

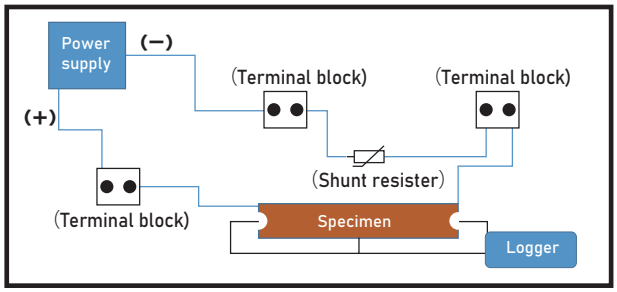
※Structure can be changed

Product Features

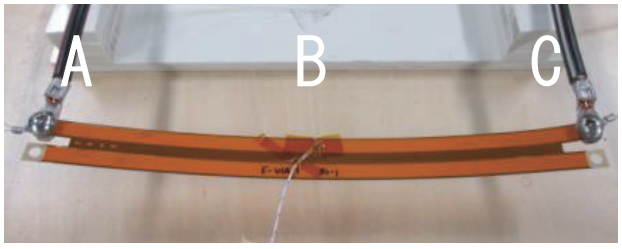
- **Unique structure provides conductor with thick and flat shape.**
  Larger current can be carried than standard flexible printed wiring board
- **Polyimide is used for base material**
  Bendable and foldable. Suitable for assembly in narrow space

Reliability test

Measurement circuit



Measurement Point



Measurement Condition: Measure the temperature 30 minutes after applying current to a specimen in air.

Standard structure

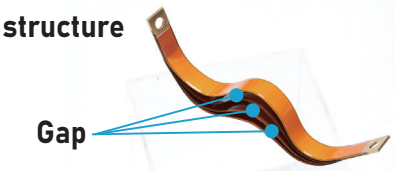
Environmental temperature : 24.9℃
Humidity : 32% Unit : ⊿t℃

Specimen temperature	A	B	C
50A	41.6	54.0	39.7
70A	59.9	90.3	55.9
100A	98.4	155.2	89.3

Gap structure

Specimen temperature	A	B	C
100A	38.5	59.0	40.0

Gap structure



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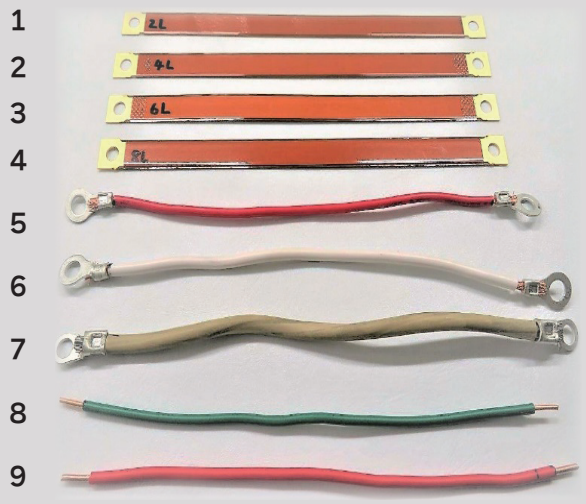
Inductance Measurement

Measured specimen



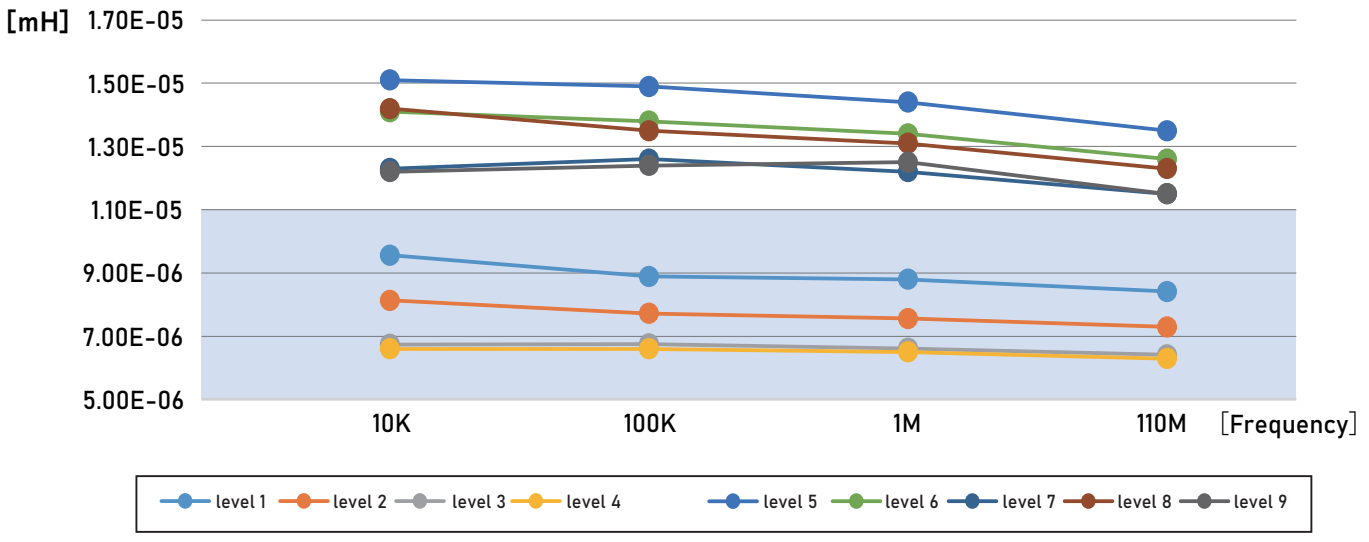
Measure the inductance (H) when the frequency of an AC signal is continuously changed from 50 Hz to 110 MHz.

Impedance analyzer
Manufacturer： Agilent Technologies
Model ：4294 A
Test fixture：16047 E （Frequency used：DC～110MH z）

Measurement Result

Level	Specimen （200mm）			Inductance(mH)			
	Type	Structure	Conductor cross-sectional area （㎟）	10KHz	100KHz	1MHz	110MHz
1	BigElec 2 layers	Integral structure	2.2	9.56E-06	8.89E-06	8.80E-06	8.41E-06
2	BigElec 4 layers	Integral structure	3.6	8.13E-06	7.72E-06	7.56E-06	7.29E-06
3	BigElec 6 layers	Integral structure	5	6.74E-06	6.75E-06	6.61E-06	6.41E-06
4	BigElec 8 layers	Gap structure	6.4	6.60E-06	6.60E-06	6.50E-06	6.29E-06
5	VFS	Stranded wire	2	1.51E-05	1.49E-05	1.44E-05	1.35E-05
6	KIV	Stranded wire	3.5	1.41E-05	1.38E-05	1.34E-05	1.26E-05
7	CT	Stranded wire	5.5	1.23E-05	1.26E-05	1.22E-05	1.15E-05
8	IV	Single wire	2	1.42E-05	1.35E-05	1.31E-05	1.23E-05
9	IV	Single wire	3.1	1.22E-05	1.24E-05	1.25E-05	1.15E-05

The inductance is smaller than that of cables with the same cross-sectional area, achieving voltage drop suppression and stable power supply.



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