**FDC 100® FLAT DISPLAY CONNECTION FOR LVDS TO MATE FI-R PCB CONNECTORS**

**CONCEPT**

Designed to connect shielded flat cables with a pitch of 0.50 mm for full HD flat screen TV displays, AXON’s new connector is characterised by its unique and simple connection system compared to other connectors on the market: the flat cable is used to make the connection into the FI-R receptacle. No need to have an extra metal link between connector and screen. AXON’ CABLE’s vertically integrated expertise in the manufacture of precision conductors, wires and flat cables together with their extensive knowledge of overmoulding techniques and EMI protection makes it possible to offer complete solutions tailored to customer requirements.

**ADVANTAGES**

FDC LVDS high speed cable assembly offers many advantages:
- Small dimensions: low profile, narrow width design.
- Low cost / high reliability.
- Good flexibility.
- 100 ohm impedance.
- Foldable for easy integration mounting.
- Excellent high speed signal transmission.

**FPC MANUFACTURING**

AXOJUMP® Flat Flexible Cable is manufactured by AXON’ using the ultimate in high performance mass production technology: AXON’ constantly monitors every aspect of production from the wire drawing, gold plating and rolling of conductors through to the application of insulation, shielding, final cutting, inspection and packing. The manufacturing facilities for Flat Flexible Cables are amongst the most sophisticated and largest in Europe.

**Gold-plated cables to avoid whiskers**

A fine gold coating on the exposed ends of the flat cables guarantees the absence of tin whiskers. (whiskers are metal filaments or knots which can grow from metal such as tin after several months). The risk is that whiskers can produce short circuits between fine pitch conductors. AXON’ can offer stripped gold tipped flat cables in different pitches compatible with a large range of gold contact connectors. AXON’ manufactures flat cables using state-of-the-art mass production technology in it’s European, Mexican and Chinese factories.

**PERFORMANCES**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MATERIALS &amp; FINISHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FPC</td>
</tr>
<tr>
<td>2</td>
<td>CONNECTOR</td>
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<tr>
<td>3</td>
<td>CONNECTOR</td>
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<tr>
<td>4</td>
<td>CONTACTOR</td>
</tr>
<tr>
<td>5</td>
<td>CONNECTOR RESISTANCE</td>
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</tbody>
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**IDENIFICATION CODE**

FDC 100® - FDC LVDS
CONDUCTORS: 41, 51
LENGTH (mm)
A: FI-R / FI-R CONNECTOR

**ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>IMPEDANCE</th>
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<tr>
<td>LVDS</td>
<td>50 ohms</td>
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**FOLDING IMPACT ON PERFORMANCES**

45° Fold 90° Fold opposite direction

ZC: ± 3 ohms

**CONCLUSION**: folding has no adverse effect on the electrical performances, up to a data rate of 2 Gbit/s.

**FOLDING IMPACT ON PERFORMANCES**

**INTERCONNECTION WITH FI-R** 20 mattings tested: no change of electrical parameters.