



Description: Hardline Connector, M054 to F-male.  
(Measured with Alcatel ACW4PTC 860 Cable)

### DATA SHEET

#### Electrical

|  | Specification  |  | Standard   |             |
|--|--|--|--|-------------|
| <b>Frequency Range</b>   | 5 MHz – 3.000 MHz  |  |  |             |
| <b>Impedance</b>   | 75 Ω nominal   |  |  |             |
|  | <b>Better Than</b>   | <b>Measured</b> – Worst case of 5 measurements                             |  |             |
| <b>Return Loss of assembly</b>                                   | 29 dB<br>27 dB<br>27 dB<br>27 dB<br>26 dB<br>20 dB   | ≥ 32.2 dB<br>≥ 30.1 dB<br>≥ 30.2 dB<br>≥ 30.1 dB<br>≥ 29.3 dB<br>≥ 23.2 dB | 5 MHz – 500 MHz<br>500 MHz – 860 MHz<br>860 MHz – 1.000 MHz<br>1.000 MHz – 1.750 MHz<br>1.750 MHz – 2.150 MHz<br>2.150 MHz – 3.000 MHz | IEC 61169-1 |
| <b>Return Loss Gated of M054-FM</b>                              | 34 dB<br>34 dB<br>34 dB<br>34 dB<br>33 dB<br>26 dB   | ≥ 37.8 dB<br>≥ 37.8 dB<br>≥ 38.0 dB<br>≥ 38.1 dB<br>≥ 36.3 dB<br>≥ 29.4 dB | 5 MHz – 500 MHz<br>500 MHz – 860 MHz<br>860 MHz – 1.000 MHz<br>1.000 MHz – 1.750 MHz<br>1.750 MHz – 2.150 MHz<br>2.150 MHz – 3.000 MHz | IEC 61169-1 |
| <b>Insertion Loss of Assembly</b>                                | 0.08 dB<br>0.10 dB<br>0.11 dB<br>0.15 dB<br>0.17 dB<br>0.21 dB   | ≤ 0.05 dB<br>≤ 0.07 dB<br>≤ 0.08 dB<br>≤ 0.12 dB<br>≤ 0.14 dB<br>≤ 0.18 dB | 5 MHz – 500 MHz<br>500 MHz – 860 MHz<br>860 MHz – 1.000 MHz<br>1.000 MHz – 1.750 MHz<br>1.750 MHz – 2.150 MHz<br>2.150 MHz – 3.000 MHz |             |
| <b>Shielding Effectiveness of assembly (Measured with CoMet)</b> | Transfer Impedance @ 5 – 30 MHz ≤ 0.14 mΩ/m<br>Screening Attenuation @ 30 – 1.000 MHz ≥ 120.6 dB<br>Screening Attenuation @ 1.000 – 2.000 MHz ≥ 116.1 dB<br>Screening Attenuation @ 2.000 – 3.000 MHz ≥ 113.8 dB<br>Class: A++ |  | IEC 62153-4-3<br>IEC 62153-4-4<br>IEC 62153-4-4<br>IEC 62153-4-4<br>EN 50117   |             |
| <b>Common Path Distortion</b>                                    | ≤ -110 dBc   |  | ANSI/SCTE 109 2005   |             |
| <b>Inner Conductor Resistance</b>                                | ≤ 1.8 mΩ @ 1 A DC.   |  | IEC 61169-1  |             |
| <b>Amp. Rating</b>   | ≤ 4 A @ 60 V.  |  |  |             |
| <b>Dielectric Strength</b>                                       | ≥ 2 kV.  |  | IEC 61169-1  |             |
| <b>Insulation Resistance</b>                                     | ≥ 29.99 GΩ @ 500 V.  |  | IEC 61169-1  |             |

#### Environmental

|                                       | Specification             | Standard      |
|---------------------------------------|---------------------------|---------------|
| <b>Temperature range Operating</b>    | -40°C to +65°C            |               |
| <b>Temperature range Installation</b> | -5°C to +50°C             |               |
| <b>Sealing Test</b>                   | IPX8 – 1 meter / 24 hours | IEC 60529     |
| <b>Corrosion Protection</b>           |                           | ASTM B 117-94 |

#### Mechanical

|                                  | Specification        | Standard     |
|----------------------------------|----------------------|--------------|
| <b>Interface</b>                 | F                    | IEC 61169-24 |
| <b>Cable Retention</b>           | ≥ 140 kgf            | ANSI/SCTE 99 |
| <b>Approved compression tool</b> | Cablematic JCST860QR |              |

#### Material and Finish

|                         | Specification             | Standard  |
|-------------------------|---------------------------|-----------|
| <b>Housing</b>          | NiSn (NITIN) plated Brass | ASTM B605 |
| <b>Inner conductor</b>  | NiSn (NITIN) plated Brass | ASTM B605 |
| <b>Compression ring</b> | NiSn (NITIN) plated Brass | ASTM B605 |
| <b>O'ring</b>           | EPDM                      |           |
| <b>Insulator</b>        | Polycarbonate/Teflon      |           |

In order to continue to supply the best products, PPC reserves the right to change the products and specifications at any time without prior notice.

### Measurement setup:

Nm-Ff, **M054-FM** – Cable – **M054-FM**, Nm-Ff.

All measurements are done with Alcatel ACW4PTC 860 cable, length 1.0 meter.

All results are the worst case result of measurement of 5 assemblies.

All tests are performed using instruments calibrated in accordance to our ISO 9001 certification.

Return Loss, Insertion Loss and Shielding are measured with Rohde & Schwarz ZNB8 Network Analyzer, according to IEC standards.

CPD (Common Path Distortion) are measured with hp Spectrum Analyzer hp 8591E, according to SCTE standard.

In case of over current ( $\geq 4$  A.) there is a risk for high temperature inside the connector, which can cause damage of the insulator, and / or the cable.

Further test reports, technical specifications and installation instructions can be obtained on request.

