# F4TNR-HC

## Type N Male Right Angle for 1/2 in FSJ4-50B cable

OBSOLETE

This product was discontinued on: February 16, 2016

Replaced By:

| | |
|---|---|
| F4PNR-HC | Type N Male Right Angle for 1/2 in FSJ4-50B cable |

## Product Classification

| | |
|---|---|
| **Product Type** | Wireless and radiating connector |
| **Product Brand** | HELIAX® |

## General Specifications

| | |
|---|---|
| **Body Style** | Right angle |
| **Cable Family** | FSJ4-50B |
| **Inner Contact Attachment Method** | Captivated |
| **Inner Contact Plating** | Gold |
| **Interface** | N Male |
| **Mounting Angle** | Right angle |
| **Outer Contact Attachment Method** | Crush-flare |
| **Outer Contact Plating** | Trimetal |
| **Pressurizable** | No |

## Dimensions

| | |
|---|---|
| **Width** | 25.4 mm \| 1 in |
| **Length** | 72.14 mm \| 2.84 in |
| **Right Angle Length** | 40.64 mm \| 1.6 in |
| **Diameter** | 25.91 mm \| 1.02 in |
| **Nominal Size** | 1/2 in |

## Electrical Specifications

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|---|---|
| **3rd Order IMD at Frequency** | -120 dBm @ 910 MHz |
| **3rd Order IMD Test Method** | Two +43 dBm carriers |

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| | |
|---|---|
| **Insertion Loss Coefficient, typical** | 0.05 |
| **Average Power at Frequency** | 0.6 kW @ 900 MHz |
| **Cable Impedance** | 50 ohm |
| **Connector Impedance** | 50 ohm |
| **dc Test Voltage** | 2000 V |
| **Inner Contact Resistance, maximum** | 2 mOhm |
| **Insulation Resistance, minimum** | 5000 MOhm |
| **Operating Frequency Band** | 0 – 4500 MHz |
| **Outer Contact Resistance, maximum** | 0.3 mOhm |
| **Peak Power, maximum** | 10 kW |
| **RF Operating Voltage, maximum (vrms)** | 707 V |
| **Shielding Effectiveness** | -110 dB |

## VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|---|---|---|
| **0–1200 MHz** | 1.023 | 38.89 |
| **1200–1500 MHz** | 1.058 | 31 |
| **1500–2000 MHz** | 1.083 | 27.99 |
| **2000–4500 MHz** | 1.135 | 23.98 |

## Mechanical Specifications

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|---|---|
| **Attachment Durability** | 25 cycles |
| **Connector Retention Tensile Force** | 889.64 N \| 200 lbf |
| **Connector Retention Torque** | 5.42 N-m \| 47.998 in lb |
| **Coupling Nut Proof Torque** | 4.52 N-m \| 39.997 in lb |
| **Coupling Nut Retention Force** | 444.82 N \| 100 lbf |
| **Coupling Nut Retention Force Method** | MIL-C-39012C-3.25, 4.6.22 |
| **Insertion Force** | 66.72 N \| 15 lbf |
| **Insertion Force Method** | MIL-C-39012C-3.12, 4.6.9 |
| **Interface Durability** | 500 cycles |
| **Interface Durability Method** | IEC 61169-16:9.5 |
| **Mechanical Shock Test Method** | MIL-STD-202F, Method 213B, Test Condition C |

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## Environmental Specifications

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|---|---|
| **Operating Temperature** | -55 °C to +85 °C (-67 °F to +185 °F) |
| **Storage Temperature** | -70 °C to +150 °C (-94 °F to +302 °F) |
| **Attenuation, Ambient Temperature** | 20 °C \| 68 °F |
| **Average Power, Ambient Temperature** | 40 °C \| 104 °F |
| **Corrosion Test Method** | MIL-STD-1344A, Method 1001.1, Test Condition A |
| **Immersion Depth** | 1 m |
| **Immersion Test Mating** | Mated |
| **Immersion Test Method** | IEC 60529:2001, IP68 |
| **Moisture Resistance Test Method** | MIL-STD-202F, Method 106F |
| **Thermal Shock Test Method** | MIL-STD-202F, Method 107G, Test Condition A-1, Low Temperature -55 °C |
| **Vibration Test Method** | IEC 60068-2-6 |
| **Water Jetting Test Mating** | Mated |
| **Water Jetting Test Method** | IEC 60529:2001, IP66 |

## Packaging and Weights

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|---|---|
| **Weight, net** | 186 g \| 0.41 lb |

## * Footnotes

| | |
|---|---|
| **Insertion Loss Coefficient, typical** | 0.05√¯freq (GHz) (not applicable for elliptical waveguide) |
| **Immersion Depth** | Immersion at specified depth for 24 hours |