

## Junkosha Microwave/mmWave Coaxial Cable Assembly

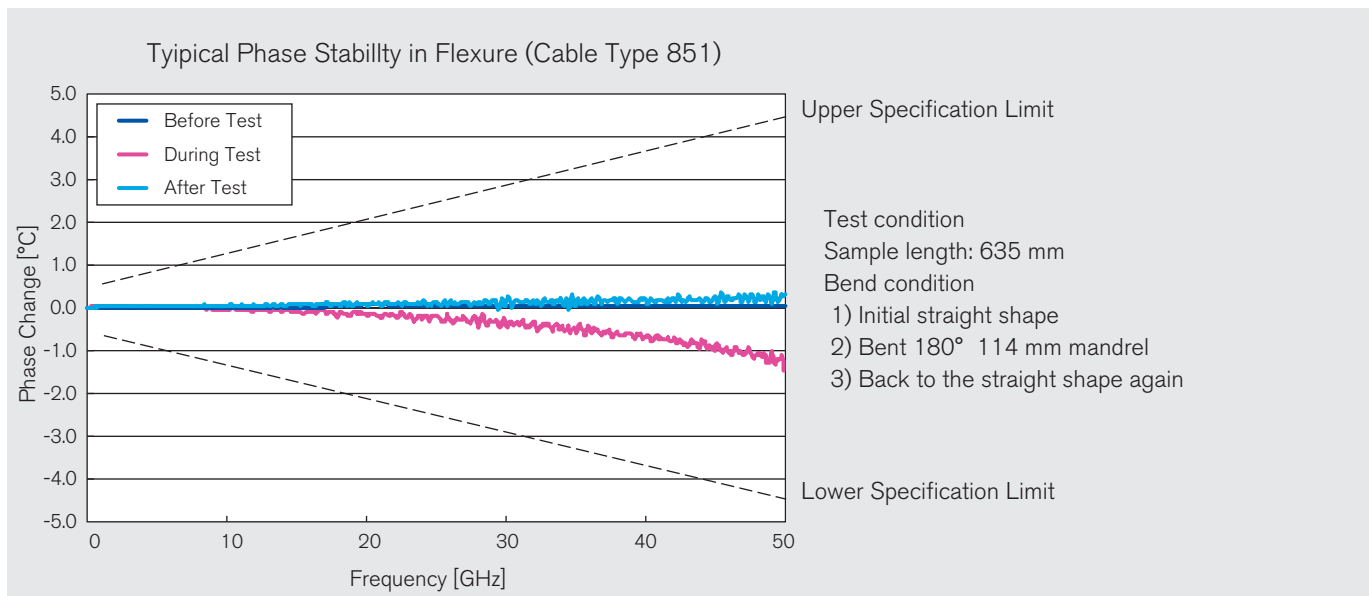
### 8 Series VNA Test Assemblies



#### Junkosha Launches Metrology Grade mmWave VNA Test Cable Assembly

Junkosha's new mmWave VNA Test Cable Assembly exhibits excellent phase (within  $\pm 4.5^\circ$  at 50 GHz), and amplitude (within  $\pm 0.08$  dB at 50 GHz) stability in flexure alongside strong phase stability in temperature through its 50 GHz bandwidth, available with NMD connector.

The assembly also displays impressive performance durability, surpassing 40,000 tick tock cycles during testing. The cable is bent  $180^\circ$  on a 2.25" radius mandrel with ease, demonstrating superior flexibility and no spring back. A ruggedized port side NMD connector is also available to ensure reliable connections to the VNA.



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SH2406\_00K\_04

## Cable Property

| Cable Type                                  | 821         |          | 851         |          | 871*        |          |
|---|-------------|----------|-------------|----------|-------------|----------|
| Frequency [GHz]                             | 26.5        |          | 50.0        |          | 70.0        |          |
| Assembly Length [inch (mm)]                 | 25 (635)    | 38 (965) | 25 (635)    | 38 (965) | 25 (635)    | 38 (965) |
| Max. Operating Frequency [GHz]              | 26.5        | 26.5     | 50          | 50       | 70          | 70       |
| Characteristic Impedance Nom. [ $\Omega$ ]  | 50          | 50       | 50          | 50       | 50          | 50       |
| Max. Phase Stability (@Max. Freq.) [degree] | 3.9         | 7.1      | 4.5         | 9.0      | 8.9         | 11.0     |
| Max. Amplitude Stability (@Max. Freq.) [dB] | 0.08        | 0.15     | 0.08        | 0.15     | 0.10        | 0.15     |
| Nominal Velocity of Propagation [%]         | 79          | 79       | 79          | 79       | 79          | 79       |
| Typical Insertion loss (@Max. Freq.) [dB]   | 1.75        | 2.45     | 3.6         | 5.1      | 5.9         | 8.3      |
| Max. Insertion loss (@Max. Freq.) [dB]      | 2.1         | 2.8      | 4.5         | 6.2      | 7.5         | 10.3     |
| Typical VSWR                                | 1.29:1      |          | 1.43:1      |          | 1.50:1      |          |
| Shielding Effectiveness to 18GHz [dB]       | > 90        |          | > 90        |          | > 90        |          |
| Cable Outer Diameter [inch (mm)]            | 0.56 (14.2) |          | 0.56 (14.2) |          | 0.56 (14.2) |          |
| Min. Bending Radius [inch (mm)]             | 2.25 (57)   |          | 2.25 (57)   |          | 2.25 (57)   |          |
| Typical Cable Mass [oz/ft (g/m)]            | 2.58 (240)  |          | 2.26 (210)  |          | 2.15 (200)  |          |
| Operating Temperature Range [°C]            | 23+/-5      |          | 23+/-5      |          | 23+/-5      |          |

\*871: Under development

## Connector

|  |  |  |   |  |
|--|--|--|---|--|
| <p>821<br/>NMD 3.5mm (f) / Code: DFD</p> <p>Max. Operating Frequency: 26.5 GHz<br/>Mass: 51g</p>       | <p>821<br/>NMD 3.5mm (m) / Code: DMD</p> <p>Max. Operating Frequency: 26.5 GHz<br/>Mass: 50 g</p>  | <p>821<br/>3.5mm (f) Straight / Code: DFS</p> <p>Max. Operating Frequency: 26.5 GHz<br/>Mass: 37 g</p> | <p>851<br/>NMD 2.4mm (f) / Code: LFD</p> <p>Max. Operating Frequency: 50.0 GHz<br/>Mass: 51 g</p>       | <p>851<br/>NMD 2.4mm (m) / Code:LMD</p> <p>Max. Operating Frequency: 50.0 GHz<br/>Mass: 43 g</p> |
| <p>851<br/>2.4mm (f) Straight / Code: LFS</p> <p>Max. Operating Frequency: 50.0 GHz<br/>Mass: 37 g</p> | <p>871<br/>NMD 1.85mm (f) / Code: VFD</p> <p>Max. Operating Frequency: 70.0 GHz<br/>Mass: 51 g</p> | <p>871<br/>NMD 1.85mm (m) / Code: VMD</p> <p>Max. Operating Frequency: 70.0 GHz<br/>Mass: 43 g</p>     | <p>871<br/>1.85mm (f) Straight / Code: VFS</p> <p>Max. Operating Frequency: 70.0 GHz<br/>Mass: 37 g</p> |  |

## Order Form Example

Please provide the following information when placing an order.

### Example

Cable: 821  
 Assembly Length : 635mm  
 Connector I: NMD 3.5mm (f)  
 Connector II: NMD 3.5mm (m)

### Catalogue Number

MWX821-00635DFDDMD/B  
 a b c d e

a: Cable      b: Assembly Length  
 c: Connector I      d: Connector II  
 e: Armor