# High Performance VNA Test Cable – VN Series

**Best Performance** – R&D Lab • Highest Precision • Compare Price vs. OEMs

## Available Connectors

1.85mm, 2.4mm, 2.92mm, 3.5mm, 7mm, SMA, TNC, Type N

## VN Series Insertion Loss$_{dB}$

= (Attenuation)(Length) + 2(Connector Loss)

| Frequency GHz | Frequency Band | Part No. | Attenuation dB/ft | Attenuation dB/m | Conn. Loss dB | SWR |
|---|---|---|---|---|---|---|
| 0.512 | UHF | VN4 | 0.08 | 0.27 | 0.02 | 1.04:1 |
| 0.900 | | | 0.11 | 0.36 | 0.02 | 1.05:1 |
| 1.000 | L | | 0.12 | 0.39 | 0.02 | |
| 1.900 | | | 0.17 | 0.56 | 0.03 | 1.10:1 |
| 2.000 | S | | 0.17 | 0.57 | 0.03 | |
| 3.000 | | | 0.22 | 0.73 | 0.04 | |
| 4.000 | C | | 0.26 | 0.86 | 0.04 | 1.20:1 |
| 6.000 | | VN8 | 0.34 | 1.10 | 0.06 | |
| 8.000 | X | | 0.40 | 1.31 | 0.07 | 1.25:1 |
| 10.000 | | VN18 | 0.46 | 1.50 | 0.08 | |
| 12.400 | | | 0.53 | 1.74 | 0.08 | |
| 14.000 | Ku | | 0.58 | 1.89 | 0.09 | 1.30:1 |
| 18.000 | | | 0.69 | 2.26 | 0.11 | |
| 20.000 | K | VN26 | 0.74 | 2.44 | 0.12 | |
| 22.000 | | | 0.79 | 2.61 | 0.13 | |
| 26.500 | | | 0.91 | 2.99 | 0.15 | 1.35:1 |
| 28.000 | Ka | VN40 | 0.95 | 3.11 | 0.16 | |
| 30.000 | | | 1.00 | 3.27 | 0.17 | 1.40:1 |
| 32.000 | | | 1.05 | 3.43 | 0.18 | |
| 38.000 | | | 1.19 | 3.90 | 0.22 | 1.45:1 |
| 40.000 | | | 1.24 | 4.06 | 0.25 | |
| 50.000 | mm | VN50 | 1.47 | 4.82 | 0.37 | 1.50:1 |

## VN Series Electrical Data

| | |
|---|---|
| Maximum Frequency | 50 GHz |
| Impedance | 50 Ω nominal |
| Propagation Velocity | 69% nominal |
| Time Delay | 1.47 ns/ft (4.82 ns/m) |
| Capacitance | 29.0 pF/ft (95.1 pF/m) |

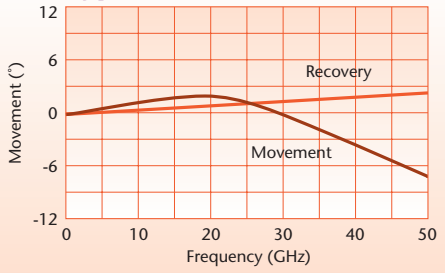
## VN Series Mechanical Data

| | |
|---|---|
| Jacketed Outer Diameter | 0.625 in (15.88 mm) |
| Bend Radius | 1.500 in (38.10 mm) |
| Operating Temperature Range | -76 to 250˚F (-60 to +121˚C) |
| Weight | 0.175 lbs/ft (0.26 kg/m) |
| Flexibility Rating – Highest = 5.0 | 4.0 |

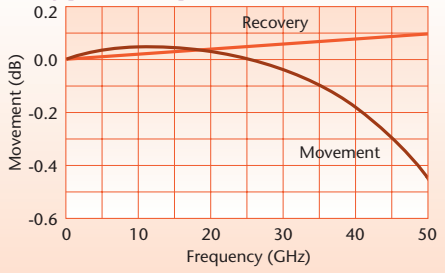
## VN Series Cable Construction

| | |
|---|---|
| Inner Conductor | Solid Ag-plated Cu |
| Dielectric | PTFE |
| Outer Conductor | Cu GrooveTube® |
| Ruggedization | Metal Braid over Metal Armor |
| Outer Jacket | PET Braid |

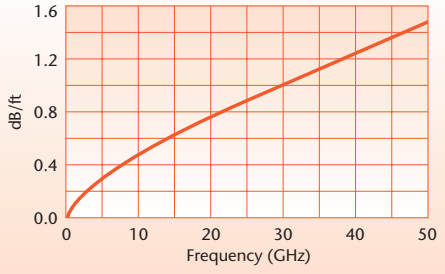
## Typical Phase vs. Flexure




## Typical Amplitude vs. Flexure




## Cable Attenuation @ STP

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