

## NH160

Flexible, Alternate to semi-rigid cable

### Features:

- \* Phase Stability
- \* Low PIM

### Applications:

- \* Phased-array Radar
- \* Interconnection in and between equipment

### Electrical

|                          |           |
|--------------------------|-----------|
| Frequency:               | DC~18GHz  |
| Cut-off Frequency:       | 110GHz    |
| Impedance:               | 50Ω       |
| Velocity of Propagation: | 70%       |
| Shielding Effectiveness: | 90dB min. |
| Voltage Withstand:       | 300V DC   |

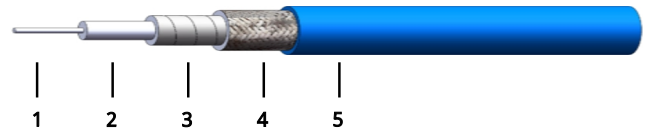
### Mechanical

|                             |        |
|-----------------------------|--------|
| Bend Radius (installation): | 6.0mm  |
| Bend Radius (repeated):     | 16.0mm |
| Weight:                     | 5g/m   |

### Environmental

Temperature: -55~+165°C

### Construction



| No. | Name            | Size (mm) | Material                   |
|-----|-----------------|-----------|----------------------------|
| 1   | Inner Conductor | 0.30      | Silver-plated copper       |
| 2   | Dielectric      | 0.95      | PTFE                       |
| 3   | Inner Shield    | 1.10      | Silver-plated copper tape  |
| 4   | Outer Shield    | 1.35      | Silver-plated copper braid |
| 5   | Jacket          | 1.60      | PFA                        |

### Attenuation & Power Handling

|                                     |      |      |       |       |       |       |       |       |
|-------------------------------------|------|------|-------|-------|-------|-------|-------|-------|
| Frequency (GHz)                     | 0.3  | 0.5  | 1     | 3     | 6     | 10    | 12.4  | 18    |
| Attenuation* <sup>1</sup> (dB/100m) | 73.8 | 95.4 | 135.2 | 235.1 | 334.0 | 433.0 | 483.2 | 584.7 |
| Average Power* <sup>2</sup> (W)     | 150  | 116  | 82    | 47    | 33    | 26    | 23    | 19    |

[1] VSWR:1.0; Ambient: +25°C (77°F)

[2] VSWR:1.0; Ambient: +40°C (104°F); Sea level

Calculate Cable Attenuation: Attenuation (dB/100m) =  $4.248276 * \sqrt{F} \text{ (MHz)} + 0.000820 * F \text{ (MHz)}$

Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F} \text{ (GHz)}$

### How To Order

#### NH160-X-Y-Z

X: Frequency in GHz

Y: Connector type

Z: Length in meters

#### Examples:

To order a NH160 cable assembly, DC-18GHz, SMA male to SMA female, 0.5 meter, specify NH160-18-SSF-0.5.

#### Connector naming rules:

G - Mini-SMP (mateable with GPPO & SSMP, 18GHz, VSWR 1.3)

P - SMP (18GHz, VSWR 1.3)

S - SMA (18GHz, VSWR 1.25)

X - MMCX (6GHz, VSWR 1.3)

M - MCX (6GHz, VSWR 1.3)

Female Connector - Add 'F' after connector name

Right Angle - Add 'R' after connector name (VSWR increase 0.1)

### Mating Connector

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**NCV-MG-047-1**

1.85mm male, Stainless steel

**NC2-MG-047-1**

2.4mm male, Stainless steel

**NCG-MB-047-1**

SSMP male, Beryllium copper

**NCG-MRB-047-1**

SSMP male, Right angle, Beryllium copper

**NCK-MG-047-1**

2.92mm male, Stainless steel

**NCP-FB-047-1**

SMP female, Beryllium brass

**NCA-FL2B-047-1**

SSMA female, Beryllium copper

**NCS-MG-047-1**

SMA male, Stainless steel

**NCS-MRG-047-1**

SMA male, Right angle, Stainless steel

**NCS-FG-047-1**

SMA female, Stainless steel

