Clarity™ Series
18, 26.5, and 40 GHz Test Cables

Applications:

- Research & Development Labs
- VNA Test Port Extension cables
- Scalar Analyzers
- High Volume Production Test
- System Level RF Connection
- Test Rack Interconnect
- Bench or Portable Test Equipment
- Antenna Ranges
- Anechoic Chambers
- RF Module Testing

When everything is important, Times new Clarity™ Series is the clear choice. Industry-leading performance and unparalleled value.

- Broad Frequency Response
- Ruggedness & Durability
- Wide Temperature Range
- Crush & Kink Resistance
- Torque Resistance
- Connector retention
- Low Attenuation
- RF stability with flexure
- Consistency
- Reliability
- Flexibility
- Ergonomics
- Aesthetics
- Lead Time
- Cost of ownership

Ordering Information:

**Clarity Series**

18 = 18 GHz
26 = 26.5 GHz
40 = 40 GHz

Every half foot or quarter meter
1.5 ft (0.50m) are shortest lengths

**CLXXX-XXXX-XX.XXX**

V = unarmored
S = steel armored

**Ex:** NMKF is correct,
KFN is incorrect

First Connector

**SM** = SMA male (18 or 26.5 GHz)
**SF** = SMA female (18 or 26.5 GHz)
**SMR** = SMA right angle (18 GHz)
**3SM** = 3.5mm male (26.5 GHz only)
**3SF** = 3.5mm female (26.5 GHz only)
**3RF** = 3.5mm ruggedized female (NMD) 26.5 GHz only
**NM** = Type N male (18 GHz)
**NMR** = Type N right angle (18 GHz only)
**KM** = 2.92mm male (40 GHz)
**KMR** = K (2.92mm) right angle (40 GHz)
**KF** = 2.92mm female (40 GHz)
**KRF** = K ruggedized female (40 GHz only)
**24M** = 2.4mm male (40 GHz only)
**24F** = 2.4mm female (40 GHz only)
**2RF** = 2.4mm ruggedized female (NMD) (40 GHz only)

Second Connector

**F** = feet
**M** = meters
Connectors & Strain Relief:

- Super-sharp stainless steel SureGrip™ knurled coupling nut
- Unique, elliptical-shaped, Sure-Grip™ injected molded strain relief (Armored version only)

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>in</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armored Diameter: armor/strain relief</td>
<td>0.29 / 0.50</td>
<td>7.95 / 12.70</td>
</tr>
<tr>
<td>Unarmored Diameter: cable/strain relief</td>
<td>0.190 / 0.425</td>
<td>5.5 / 10.8</td>
</tr>
<tr>
<td>Min bend radius, armored (max flex life)</td>
<td>1.5 (3.0)</td>
<td>38 (76)</td>
</tr>
<tr>
<td>Min bend radius, unarmored (max flex life)</td>
<td>1.0 (2.0)</td>
<td>25 (50)</td>
</tr>
<tr>
<td>Flex Life (unarmored/armored)</td>
<td>25,000 / 50,000</td>
<td></td>
</tr>
<tr>
<td>Crushing (armored version)</td>
<td>200 lbs/lin.in.</td>
<td></td>
</tr>
<tr>
<td>Mating life cycle</td>
<td>5000</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical Specifications @ Room Temperature

| Impedance | 50 ohms |
| Velocity of Propagation | 78% |
| Shielding Effectiveness | > 100 db |
| Capacitance | 26pf/ft (85pf/m) |
| VSWR (maximum) | 18 GHz: 1.20:1, 26.5 GHz: 1.25:1, 40 GHz: 1.35:1 |
| Phase Stability (degrees)* | typical: +/- 1.0, +/- 1.5, +/- 2.0 |
| Amplitude Stability (db)* | typical: +/- 0.02, +/- 0.035, +/- 0.04 |
| Attenuation, max @ 77°F (25°C) | |
| db/100 ft | 51, 63, 82 |
| db/100 m | (167), (206), (269) |

### Cable Power Handling (Cable Only)

| @77°F (25°C) sea level, watts (max) | 18, 15, 13 |

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1. As tested using Times’ flex testing methods. All long cable. Longer cables can have more total instability. Assumes test equipment is calibrated every 8 hours. New cables can have a break in period of several hundred flexes before optimum stability occurs. Contact your Times representative or the factory for a copy of this test procedure and/or actual test results.

2. SMA and Type N male only. Achieving or extending mating life requires the strict use of a calibrated torque wrench at all times and careful, deliberate mating so as not to damage center contacts.

3. 1.40:1 for 2.92mm right angle

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**Amplitude Stability while in motion**

4 ft assembly, 40 Ghz

**Phase Stability while in motion**

4 ft assembly, 40 Ghz

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**Always:**

- Inspect interfaces before every mate. Clean frequently
- Gently start the coupling nut. Fully thread & tighten w/ fingers first
- Use a calibrated torque wrench
- Cap connectors and protect the assembly when not in use
- Have replacements available in the event they are needed

**Never:**

- Force the cable beyond the recommended minimum bend radius
- Force two connectors. If any resistance is felt STOP and examine
- Mate 2.92mm to other than SMA or 3.5mm series
- Mate connectors that have non-concentric contacts
- Insert foreign or dirty objects into the interface