

# Microbend

High performance/high pull strength microwave coaxial cable assembly

## Product description

Microbend assemblies provide you with a standard preassembled and tested high performance, cost-effective truly flexible alternative to 0.047 inch custom semi-rigid cable assemblies, eliminating the need for predefined custom lengths and bend configurations. Microbend features include 35 % lower loss than 0.047 inch semi-rigid cable, a minimum bend radius of 1.52 mm (0.060 inch) and triple shielding for high isolation. Microbend assemblies are available with a wide range of connector interfaces. All Microbend assemblies are available only in a ruggedised version.



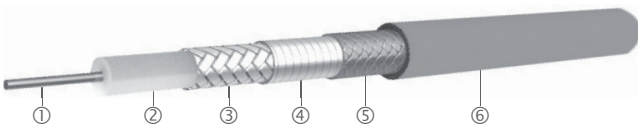
## Product features

- Impedance 50 Ω
- Applicable up to 67 GHz
- Stock delivery on standard lengths
- 35 % lower insertion loss than 0.047 inch semi-rigid cables

## Recommended connectors

|           |                                           |
|-----------|-------------------------------------------|
| Microbend | SMA, SSMA, SK, SMP, SMPM, SMPM-T, 1.85 mm |
|           | Other connectors available on request     |

## Construction



| Cable | Inner conductor<br>① | Dielectric<br>② | Outer conductor<br>③ | Barrier<br>④                 | Outer braid<br>⑤ | Jacket<br>⑥ | Outer diameter<br>mm |
|-------|----------------------|-----------------|----------------------|------------------------------|------------------|-------------|----------------------|
| 32041 | CuAg wire            | PTFE            | CuAg flat wire braid | aluminium/<br>polyimide tape | stainless steel  | FEP         | 2.0                  |

## Technical data

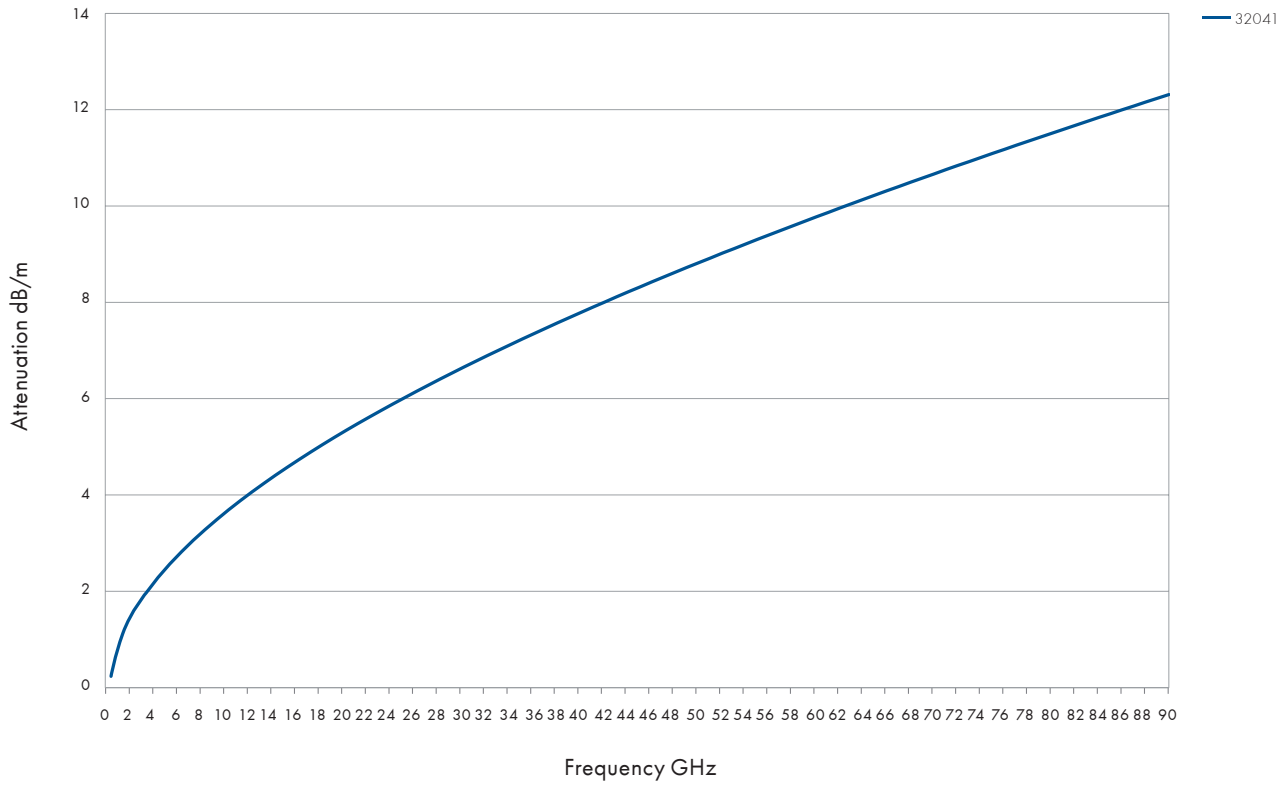
| Cable | Operating frequency<br>GHz | Velocity<br>% | Weight<br>g/m | Min. bending radius for<br>± 180°<br>mm | Temperature range<br>° C |
|-------|----------------------------|---------------|---------------|-----------------------------------------|--------------------------|
| 32041 | 90                         | 70.3          | 11.9          | 1.50                                    | -55 to +200              |

| Assembly    | Microbend R | Microbend AR | Microbend KR | Microbend KMR | Microbend KMTR | Microbend KV                 | Microbend MR |
|-------------|-------------|--------------|--------------|---------------|----------------|------------------------------|--------------|
| Connector A | SMA (m)     | SSMA (m)     | SK (m)       | SK (m)        | SK (m)         | SK (m)                       | SMA (m)      |
| Connector B | SMA (m)     | SSMA (m)     | SK (m)       | SMPM (f)      | SMPM-T(f)      | 1.85 mm (m) gold plated BeCu | SMPM (f)     |

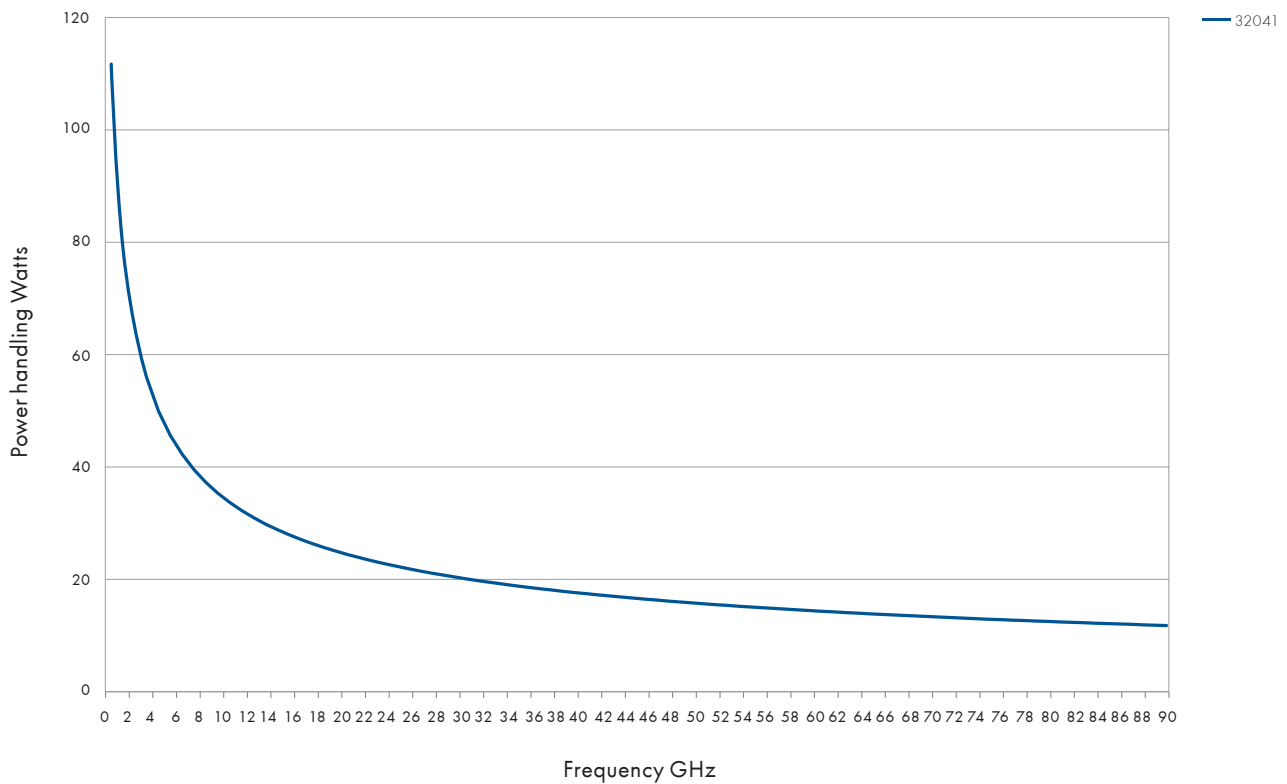
| Assembly    | Microbend 2MR | Microbend MTR | Microbend 2MTR | Microbend MVR                | Microbend SR | Microbend 2SR | Microbend V                  |
|-------------|---------------|---------------|----------------|------------------------------|--------------|---------------|------------------------------|
| Connector A | SMPM (f)      | SMA (m)       | SMPM-T(f)      | SMPM (f)                     | SMA (m)      | SMP (f)       | 1.85 mm (m) gold plated BeCu |
| Connector B | SMPM (f)      | SMPM-T(f)     | SMPM-T(f)      | 1.85 mm (m) gold plated BeCu | SMP (f)      | SMP (f)       | 1.85 mm (m) gold plated BeCu |

# Microbend

Attenuation (nominal values at +25 °C ambient temperature)



Power handling (maximum values at 25 °C ambient temperature and sea level)

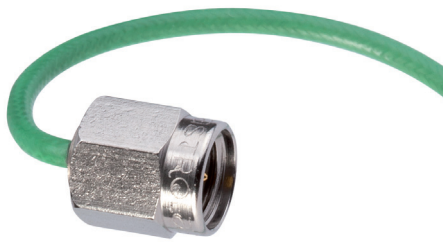


Low profile assemblies

# Microbend R

Microbend R eliminates the need for predefined custom lengths and bend configurations. Microbend R was designed for use as internal point-to-point interconnections between modules in microwave and fiber optic switching systems. Microbend R features include lower loss than 0.047 inch semi-rigid cable and a minimum bend radius of 1.52 mm (0.060 inch).

- Frequency range up to 26.5 GHz
- Precision stainless steel SMA plug connectors
- Automatically ruggedised by design



| Length<br>mm | Microbend R     | Item no. |
|--------------|-----------------|----------|
| 63.5         | microbend R-2.5 | 80336652 |
| 76.2         | microbend R-3   | 80336654 |
| 88.9         | microbend R-3.5 | 80336655 |
| 101.6        | microbend R-4   | 80336658 |
| 114.3        | microbend R-4.5 | 80336659 |
| 127          | microbend R-5   | 80336662 |
| 139.7        | microbend R-5.5 | 80336664 |
| 152.4        | microbend R-6   | 80336665 |
| 165.1        | microbend R-6.5 | 80363961 |
| 177.8        | microbend R-7   | 80336667 |
| 203.2        | microbend R-8   | 80336668 |
| 228.6        | microbend R-9   | 80336669 |
| 254          | microbend R-10  | 80336646 |
| 279.4        | microbend R-11  | 80336648 |
| 304.8        | microbend R-12  | 80336649 |

# Microbend AR

Microbend AR is the SSMA plug version of the of the Microbend. Microbend AR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible coax cable in standard lengths.

- Frequency range up to 40 GHz
- Precision stainless steel SSMA plug connectors
- Automatically ruggedised by design



| Length<br>mm | Microbend AR     | Item no. |
|--------------|------------------|----------|
| 63.5         | microbend AR-2.5 | 80370830 |
| 76.2         | microbend AR-3   | 80370831 |
| 88.9         | microbend AR-3.5 | 80370832 |
| 101.6        | microbend AR-4   | 80336531 |
| 114.3        | microbend AR-4.5 | 80370833 |
| 127          | microbend AR-5   | 80363838 |
| 139.7        | microbend AR-5.5 | 80370834 |
| 152.4        | microbend AR-6   | 80336532 |
| 165.1        | microbend AR-6.5 | 80370835 |
| 177.8        | microbend AR-7   | 80370836 |
| 203.2        | microbend AR-8   | 80336533 |
| 228.6        | microbend AR-9   | 80370837 |
| 254          | microbend AR-10  | 80336529 |
| 279.4        | microbend AR-11  | 80370838 |
| 304.8        | microbend AR-12  | 80362731 |

# Microbend KR

Microbend KR offers all the benefits of the Microbend cable assembly but with a solderless SK plug connector on each end for performance up to 40 GHz. Microbend KR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with standard length, truly flexible coax cable for use as internal interconnections between RF modules in communications and high bandwidth switching systems.

- Frequency range up to 40 GHz
- Precision stainless steel SK plug connectors
- Automatically ruggedised by design



| Length<br>mm | Microbend KR     | Item no. |
|--------------|------------------|----------|
| 63.5         | microbend KR-2.5 | 80336568 |
| 76.2         | microbend KR-3   | 80336570 |
| 88.9         | microbend KR-3.5 | 80336571 |
| 101.6        | microbend KR-4   | 80336573 |
| 114.3        | microbend KR-4.5 | 80360390 |
| 127          | microbend KR-5   | 80336574 |
| 139.7        | microbend KR-5.5 | 80336575 |
| 152.4        | microbend KR-6   | 80336576 |
| 165.1        | microbend KR-6.5 | 80367544 |
| 177.8        | microbend KR-7   | 80336578 |
| 203.2        | microbend KR-8   | 80336579 |
| 228.6        | microbend KR-9   | 80336580 |
| 254          | microbend KR-10  | 80336562 |
| 279.4        | microbend KR-11  | 80336563 |
| 304.8        | microbend KR-12  | 80336564 |

# Microbend KMR

Microbend KMR offers all the benefits of the Microbend but with a solderless SK plug on one end and an SMPM female connector compliant with MIL-STD-348 on the other. Microbend KMR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with standard length truly flexible coax cable.

- Frequency range up to 40 GHz
- Precision stainless steel SK plug connector
- Precision SMPM female connector mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend KMR     | Item no. |
|--------------|-------------------|----------|
| 63.5         | microbend KMR-2.5 | 80336550 |
| 76.2         | microbend KMR-3   | 80336552 |
| 88.9         | microbend KMR-3.5 | 80336553 |
| 101.6        | microbend KMR-4   | 80336554 |
| 114.3        | microbend KMR-4.5 | 80336555 |
| 127          | microbend KMR-5   | 80336556 |
| 139.7        | microbend KMR-5.5 | 80336557 |
| 152.4        | microbend KMR-6   | 80336558 |
| 165.1        | microbend KMR-6.5 | 80362862 |
| 177.8        | microbend KMR-7   | 80336559 |
| 203.2        | microbend KMR-8   | 80336560 |
| 228.6        | microbend KMR-9   | 80336561 |
| 254          | microbend KMR-10  | 80336545 |
| 279.4        | microbend KMR-11  | 80336546 |
| 304.8        | microbend KMR-12  | 80336547 |

## Microbend KMTR

Microbend KMTR offers all the benefits of the Microbend in a 40 GHz, high bandwidth cable assembly that features an SMPM-T female connector compliant with MIL-STD-348 on one end and a SK plug connector on the other. Microbend KMTR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length coax cable for use as internal interconnections between modules in microwave and optical fiber switching. It is also used extensively in space applications.

- Frequency range up to 40 GHz
- Precision stainless steel SK plug connector
- Precision SMPM-T female connector mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend KMTR     | Item no. |
|--------------|--------------------|----------|
| 63.5         | microbend KMTR-2.5 | 80370885 |
| 76.2         | microbend KMTR-3   | 80370886 |
| 88.9         | microbend KMTR-3.5 | 80370887 |
| 101.6        | microbend KMTR-4   | 80370312 |
| 114.3        | microbend KMTR-4.5 | 80370888 |
| 127          | microbend KMTR-5   | 80371852 |
| 139.7        | microbend KMTR-5.5 | 80370889 |
| 152.4        | microbend KMTR-6   | 80362186 |
| 165.1        | microbend KMTR-6.5 | 80370890 |
| 177.8        | microbend KMTR-7   | 80370891 |
| 203.2        | microbend KMTR-8   | 80365259 |
| 228.6        | microbend KMTR-9   | 80370892 |
| 254          | microbend KMTR-10  | 80369837 |
| 279.4        | microbend KMTR-11  | 80370893 |
| 304.8        | microbend KMTR-12  | 80362144 |

## Microbend KV

Microbend KV offers all the benefits of the Microbend in a 40 GHz, high bandwidth cable assembly with an SK plug connector on one end and a 1.85 mm plug connector containing a gold plated BeCu contact for those applications that require repeated mates/demates of the interface, on the other. Microbend KV replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length coax cable for use as internal interconnections between modules in microwave and optical fiber switching systems.

- Frequency range up to 40 GHz
- 1.85 mm plug connector
- Precision stainless steel SK plug connector
- Automatically ruggedised by design



| Length<br>mm | Microbend KV     | Item no. |
|--------------|------------------|----------|
| 63.5         | microbend KV-2.5 | 80336581 |
| 76.2         | microbend KV-3   | 80370869 |
| 88.9         | microbend KV-3.5 | 80370870 |
| 101.6        | microbend KV-4   | 80363709 |
| 114.3        | microbend KV-4.5 | 80370871 |
| 127          | microbend KV-5   | 80370872 |
| 139.7        | microbend KV-5.5 | 80370873 |
| 152.4        | microbend KV-6   | 80336582 |
| 165.1        | microbend KV-6.5 | 80370874 |
| 177.8        | microbend KV-7   | 80370875 |
| 203.2        | microbend KV-8   | 80370876 |
| 228.6        | microbend KV-9   | 80370877 |
| 254          | microbend KV-10  | 80370878 |
| 279.4        | microbend KV-11  | 80370879 |
| 304.8        | microbend KV-12  | 80369706 |

# Microbend MR

Microbend MR offers the benefits of the Microbend but with an SMA plug connector on one end and an SMPM female connector compliant with MIL-STD-348 on the other. Microbend MR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length cable.

- Frequency range up to 26.5 GHz
- Precision stainless steel SMA plug connector
- Precision SMPM female connector mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



# Microbend 2MR

Microbend 2MR offers all the benefits of the Microbend but with SMPM female connectors on each end that are fully compliant with MIL-STD-348. Microbend 2MR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible coax cable in standard lengths.

- Frequency range up to 65 GHz
- Precision SMPM female connectors mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



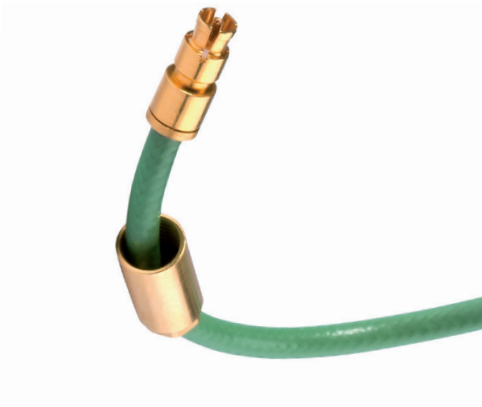
| Length<br>mm | Microbend MR     | Item no. |
|--------------|------------------|----------|
| 63.5         | microbend MR-2.5 | 80336593 |
| 76.2         | microbend MR-3   | 80336595 |
| 88.9         | microbend MR-3.5 | 80336596 |
| 101.6        | microbend MR-4   | 80336598 |
| 114.3        | microbend MR-4.5 | 80370842 |
| 127          | microbend MR-5   | 80336599 |
| 139.7        | microbend MR-5.5 | 80336600 |
| 152.4        | microbend MR-6   | 80336603 |
| 165.1        | microbend MR-6.5 | 80370843 |
| 177.8        | microbend MR-7   | 80365284 |
| 203.2        | microbend MR-8   | 80336605 |
| 228.6        | microbend MR-9   | 80365285 |
| 254          | microbend MR-10  | 80360212 |
| 279.4        | microbend MR-11  | 80336588 |
| 304.8        | microbend MR-12  | 80336590 |

| Length<br>mm | Microbend 2MR     | Item no. |
|--------------|-------------------|----------|
| 63.5         | microbend 2MR-2.5 | 80336485 |
| 76.2         | microbend 2MR-3   | 80336490 |
| 88.9         | microbend 2MR-3.5 | 80362597 |
| 101.6        | microbend 2MR-4   | 80336496 |
| 114.3        | microbend 2MR-4.5 | 80370033 |
| 127          | microbend 2MR-5   | 80336500 |
| 139.7        | microbend 2MR-5.5 | 80370844 |
| 152.4        | microbend 2MR-6   | 80336501 |
| 165.1        | microbend 2MR-6.5 | 80370845 |
| 177.8        | microbend 2MR-7   | 80362973 |
| 203.2        | microbend 2MR-8   | 80336507 |
| 228.6        | microbend 2MR-9   | 80336509 |
| 254          | microbend 2MR-10  | 80336477 |
| 279.4        | microbend 2MR-11  | 80336478 |
| 304.8        | microbend 2MR-12  | 80336480 |

## Microbend MTR

Microbend MTR offers all the benefits of the Microbend in a 26.5 GHz, high bandwidth cable assembly that features an SMPM-T female connector compliant with MIL-STD-348 on one end and a SMA plug connector on the other. Microbend MTR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length coax cable for use as internal interconnections between modules in microwave and optical fiber switching. It is also used extensively in space applications.

- Frequency range up to 26.5 GHz
- Precision stainless steel SMA plug connector
- Precision SMPM-T female connector mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend MTR     | Item no. |
|--------------|-------------------|----------|
| 63.5         | microbend MTR-2.5 | 80370846 |
| 76.2         | microbend MTR-3   | 80371995 |
| 88.9         | microbend MTR-3.5 | 80370847 |
| 101.6        | microbend MTR-4   | 80366736 |
| 114.3        | microbend MTR-4.5 | 80370848 |
| 127          | microbend MTR-5   | 80366725 |
| 139.7        | microbend MTR-5.5 | 80370849 |
| 152.4        | microbend MTR-6   | 80361103 |
| 165.1        | microbend MTR-6.5 | 80370850 |
| 177.8        | microbend MTR-7   | 80366726 |
| 203.2        | microbend MTR-8   | 80396610 |
| 228.6        | microbend MTR-9   | 80362047 |
| 254          | microbend MTR-10  | 80366737 |
| 279.4        | microbend MTR-11  | 80370851 |
| 304.8        | microbend MTR-12  | 80362145 |

## Microbend 2MTR

Microbend 2MTR offers all the benefits of the Microbend MTR in a 40 GHz, high bandwidth cable assembly that features an SMPM-T female connector compliant with MIL-STD-348 on each side. Microbend 2MTR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length coax cable for use as internal interconnections between modules in microwave and optical fiber switching. It is also used extensively in space applications.

- Frequency range up to 65 GHz
- Precision SMPM-T female connectors mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend 2MTR     | Item no. |
|--------------|--------------------|----------|
| 63.5         | microbend 2MTR-2.5 | 80370855 |
| 76.2         | microbend 2MTR-3   | 80366641 |
| 88.9         | microbend 2MTR-3.5 | 80367802 |
| 101.6        | microbend 2MTR-4   | 80370856 |
| 114.3        | microbend 2MTR-4.5 | 80366674 |
| 127          | microbend 2MTR-5   | 80367803 |
| 139.7        | microbend 2MTR-5.5 | 80370857 |
| 152.4        | microbend 2MTR-6   | 80365945 |
| 165.1        | microbend 2MTR-6.5 | 80370858 |
| 177.8        | microbend 2MTR-7   | 80367804 |
| 203.2        | microbend 2MTR-8   | 80360654 |
| 228.6        | microbend 2MTR-9   | 80367805 |
| 254          | microbend 2MTR-10  | 80367172 |
| 279.4        | microbend 2MTR-11  | 80370859 |
| 304.8        | microbend 2MTR-12  | 80362560 |

# Microbend MVR

Microbend MVR offers all the benefits of the Microbend in a 65 GHz, high bandwidth cable assembly that features an SMPM female connector compliant with MIL-STD-348 on one end and a 1.85 mm plug connector containing a gold plated BeCu contact for those applications that require repeated mates/demates of the interface on the other. Microbend MVR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length coax cable for use as internal interconnections between modules in microwave and optical fiber switching systems.

- Frequency range up to 65 GHz
- 1.85 mm plug connector
- Precision SMPM female connector mateable with Corning Gilbert GPPO®
- Automatically ruggedised by design



# Microbend SR

Microbend SR offers the benefits of the standard Microbend with an SMA plug connector on one end and a DSCC and MIL-STD-348 compliant SMP female connector on the other. Microbend SR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, cost-effective, standard length coax cables for use as internal interconnections between RF modules of communications systems.

- Frequency range up to 26.5 GHz
- Precision stainless steel SMA plug connector
- Precision SMP female connector mateable with Corning Gilbert GPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend MVR     | Item no. |
|--------------|-------------------|----------|
| 63.5         | microbend MVR-2.5 | 80336620 |
| 76.2         | microbend MVR-3   | 80336623 |
| 88.9         | microbend MVR-3.5 | 80336626 |
| 101.6        | microbend MVR-4   | 80336633 |
| 114.3        | microbend MVR-4.5 | 80370862 |
| 127          | microbend MVR-5   | 80336638 |
| 139.7        | microbend MVR-5.5 | 80370863 |
| 152.4        | microbend MVR-6   | 80336640 |
| 165.1        | microbend MVR-6.5 | 80370864 |
| 177.8        | microbend MVR-7   | 80336641 |
| 203.2        | microbend MVR-8   | 80336643 |
| 228.6        | microbend MVR-9   | 80336645 |
| 254          | microbend MVR-10  | 80336613 |
| 279.4        | microbend MVR-11  | 80370865 |
| 304.8        | microbend MVR-12  | 80336614 |

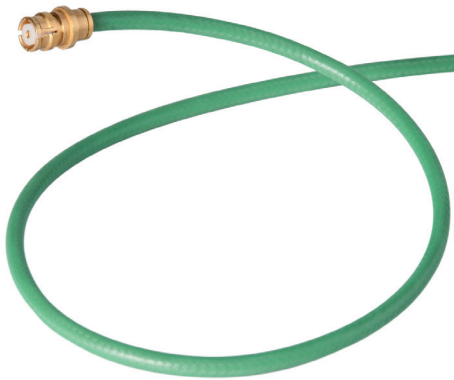
| Length<br>mm | Microbend SR     | Item no. |
|--------------|------------------|----------|
| 63.5         | microbend SR-2.5 | 80336674 |
| 76.2         | microbend SR-3   | 80366686 |
| 88.9         | microbend SR-3.5 | 80336676 |
| 101.6        | microbend SR-4   | 80336677 |
| 114.3        | microbend SR-4.5 | 80363639 |
| 127          | microbend SR-5   | 80336679 |
| 139.7        | microbend SR-5.5 | 80363701 |
| 152.4        | microbend SR-6   | 80336681 |
| 165.1        | microbend SR-6.5 | 80366676 |
| 177.8        | microbend SR-7   | 80336684 |
| 203.2        | microbend SR-8   | 80336685 |
| 228.6        | microbend SR-9   | 80336686 |
| 254          | microbend SR-10  | 80370899 |
| 279.4        | microbend SR-11  | 80370900 |
| 304.8        | microbend SR-12  | 80336671 |



# Microbend 2SR

Microbend 2SR offers all of the benefits of the standard Microbend but with DSCC and MIL-STD-348 compliant SMP female connectors on each end. Microbend 2SR replaces custom length, predefined bend configuration 0.047 inch semi-rigid cable with truly flexible, standard length, cost-effective coax cable for use as internal interconnections between RF modules in communications systems.

- Frequency range up to 40 GHz
- Precision SMP female connectors mateable with Corning Gilbert GPO®
- Automatically ruggedised by design



| Length<br>mm | Microbend 2SR     | Item no. |
|--------------|-------------------|----------|
| 63.5         | microbend 2SR-2.5 | 80336515 |
| 76.2         | microbend 2SR-3   | 80336518 |
| 88.9         | microbend 2SR-3.5 | 80365453 |
| 101.6        | microbend 2SR-4   | 80336521 |
| 114.3        | microbend 2SR-4.5 | 80366525 |
| 127          | microbend 2SR-5   | 80336522 |
| 139.7        | microbend 2SR-5.5 | 80336523 |
| 152.4        | microbend 2SR-6   | 80336524 |
| 165.1        | microbend 2SR-6.5 | 80365939 |
| 177.8        | microbend 2SR-7   | 80365452 |
| 203.2        | microbend 2SR-8   | 80336525 |
| 228.6        | microbend 2SR-9   | 80365455 |
| 254          | microbend 2SR-10  | 80363819 |
| 279.4        | microbend 2SR-11  | 80365454 |
| 304.8        | microbend 2SR-12  | 80362685 |

# Microbend V

Microbend V is the millimeter wave version of the Microbend and was designed for use in high-speed (40 Gb/sec.) switching applications such as in fiber optic communications. Microbend V has precision 1.85 mm plug connectors on each end that contain a gold plated BeCu contact for applications that require repeated mates/demates of the interface. Microbend V replaces custom length, predefined bend configuration 0.047 inch semi-rigid cables with truly flexible, cost-effective, standard lengths.

- Frequency range up to 65 GHz
- Precision 1.85 mm compatible plug connectors
- Automatically ruggedised by design



| Length<br>mm | Microbend V     | Item no. |
|--------------|-----------------|----------|
| 63.5         | microbend V-2.5 | 80336690 |
| 76.2         | microbend V-3   | 80336692 |
| 88.9         | microbend V-3.5 | 80336693 |
| 101.6        | microbend V-4   | 80336695 |
| 114.3        | microbend V-4.5 | 80336696 |
| 127          | microbend V-5   | 80366545 |
| 139.7        | microbend V-5.5 | 80365644 |
| 152.4        | microbend V-6   | 80336700 |
| 165.1        | microbend V-6.5 | 80370906 |
| 177.8        | microbend V-7   | 80370907 |
| 203.2        | microbend V-8   | 80366953 |
| 228.6        | microbend V-9   | 80365792 |
| 254          | microbend V-10  | 80336689 |
| 279.4        | microbend V-11  | 80370908 |
| 304.8        | microbend V-12  | 80362488 |