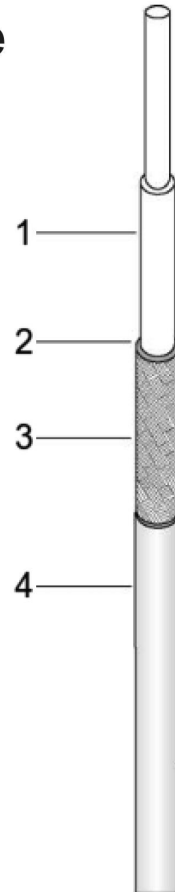


CFX2-141 Low Loss Semi-Flexible Cable Assemblies

Construction

| Structure | Material | Diameter |
|--------------------|------------------------------------|----------|
| 1) Inner Conductor | Copper Wrapped Silver Plated Steel | 0.93 mm |
| 2) Insulator | PTFE | 3.00 mm |
| 3) Outer Conductor | Tinned Copper Braid | 3.52 mm |
| 4) Jacket | FEP | 4.15 mm |



Electrical Specifications

| | |
|---------------------------------|------------|
| Frequency | DC-18 GHz |
| Capacitance | 95.1 pF/m |
| Impedance | 50 Ω |
| Velocity of Propagation | 70 % |
| Delay | 4.7 ns/m |
| Dialectric Withstanding Voltage | 1900 V |
| Shielding Effectiveness | 100 dB |
| Connector Loss | 0.2 dB Typ |

Mechanical/Environmental Specifications

| | |
|--------------------------|----------------|
| Bend Radius (Static) | 8 mm |
| Bend Radius (Repetitive) | 40 mm |
| Operating Temperature | -55°C - +125°C |

Attenuation and Power vs. Frequency

| Frequency (GHz) | Attenuation (dB/m) | Average Power (W) |
|-----------------|--------------------|-------------------|
| 0.5 | 0.26 | 436.5 |
| 1.0 | 0.39 | 303.4 |
| 3.0 | 0.84 | 169.0 |
| 5.0 | 0.92 | 126.7 |
| 10.0 | 1.38 | 85.5 |
| 18.0 | 2.10 | 56.6 |

CFX2-085 Low Loss Semi-Flexible Cable Assemblies

Construction

| Structure | Material |
|--------------------|------------------------------------|
| 1) Inner Conductor | Copper Wrapped Silver Plated Steel |
| 2) Insulator | PTFE |
| 3) Outer Conductor | Tinned Copper Braid |
| 4) Jacket | FEP |

Electrical Specifications

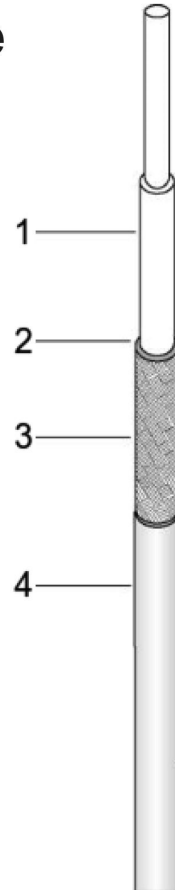
| | |
|---------------------------------|-------------|
| Frequency | DC-18 GHz |
| Capacitance | 94.75 pF/m |
| Impedance | 50 Ω |
| VSWR | 1.3:1 Max |
| Velocity of Propagation | 70 % |
| Delay | 4.7 ns/m |
| Dielectric Withstanding Voltage | 1900 V |
| Shielding Effectiveness | 100 dB |
| Connector Loss | 0.2 dB Typ |

Mechanical/Environmental Specifications

| | |
|--------------------------|----------------|
| Bend Radius (Static) | 8 mm |
| Bend Radius (Repetitive) | 40 mm |
| Operating Temperature | -55°C - +125°C |

Attenuation and Power vs. Frequency

| Frequency (GHz) | Attenuation (dB/m) | Average Power (W) |
|-----------------|--------------------|-------------------|
| 0.5 | 0.135 | 232 |
| 1.0 | 0.192 | 162.4 |
| 3.0 | 0.378 | 86.4 |
| 5.0 | 0.453 | 69.8 |
| 10.0 | 0.666 | 47.9 |
| 18.0 | 0.987 | 32.6 |



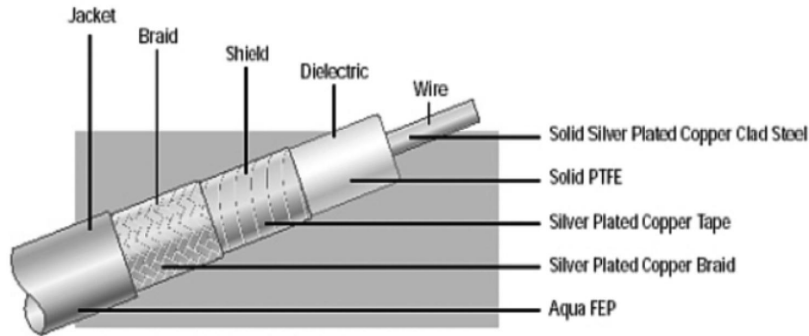
Low Loss Flexible Cables

CFC Series

| CABLE TYPE | CFCF46-50-4-51 CTL-01 | CFCG-50-5 CTL-02 | CFCJP-50-7 CTL-03 |
|--------------------------|--------------------------|---------------------|----------------------|
| Outer Diameter (mm.Typ.) | 5.5 | 7.5 | 10.5 |
| Center Conductor Type | Solid | Stranded | Stranded |
| Weight (g/m max) | 60 | 80 | 150 |
| Bend Radius (mm min.) | 30 | 35 | 55 |

| CABLE TYPE | CFCF46-50-4-51 CTL-01 | CFCG-50-5 CTL-02 | CFCJP-50-7 CTL-03 |
|---------------------------|--------------------------|---------------------|----------------------|
| Operating Frequency(max.) | 18GHz | 18GHz | 15GHz |
| Impedance (Ω) | 50 | 50 | 50 |
| Propagation Velocity | 84% | 84% | 84% |
| Capacitance (pf/m) | 80 | 88 | 83 |
| Insertion Loss dB/m | 1GHz | 0.30 | 0.19 |
| | 3GHz | 0.55 | 0.36 |
| | 6 GHz | 0.80 | 0.53 |
| | 10 GHz | 1.05 | 0.71 |
| | 15 GHz | 1.25 | 0.92 |
| | 18 GHz | 1.6 | 1.15 |
| VSWR | <1.40 | <1.40 | <1.40 |
| Temperature range | -65 °C to 200 °C | -55 °C to 150 °C | -55 °C to 85 °C |

160D Series Low Loss Flexible Cable Assemblies

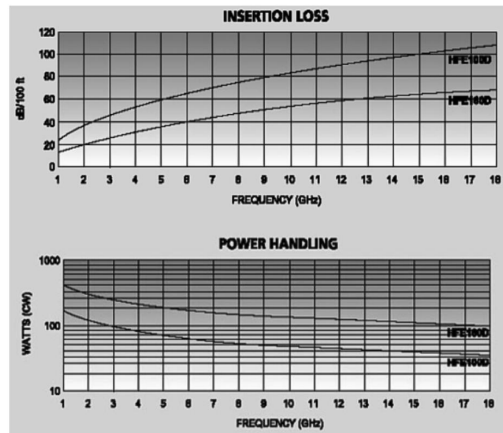


Construction

| Structure | Material | Diameter in inches (mm) |
|------------------|----------------------------|-------------------------|
| Center Conductor | Silver Plated Copper Wire | 0.036 (0.914) |
| Dielectric | PTFE | 0.120 (3.048) |
| Outer Shield | Silver Plated Copper Tape | 0.140 (3.560) |
| Outer Conductor | Silver Plated Copper Braid | |
| Jacket | FEP | 0.162 (4.115) |

Specifications

| | |
|---------------------------------|-----------------|
| Frequency | 18 GHz |
| Insulation Resistance | 5000MΩ |
| Impedance | 50Ω |
| Dialectric Withstanding Voltage | 2000V |
| Shielding Effectiveness @ 1GHz | 90dB Min |
| Velocity | 70.5% |
| Capacitance, pF/ft. (pF/meter) | 29.3 (96.1) |
| Power | See Graph |
| Bend Radius, in (mm) | 0.500 (12.700) |
| Weight, grams/ft. (grams/meter) | 13.180 (43.250) |
| Operating Temperature | -65°C - +125°C |



Attenuation vs. Frequency

| Frequency (GHz) | Attenuation dB/ft (dB/m) |
|-----------------|--------------------------|
| 0.5 | 0.090 (0.295) |
| 1.0 | 0.120 (0.394) |
| 10.0 | 0.450 (1.476) |
| 18.0 | 0.650 (2.133) |

CMILFLEX



| Features | Applications |
|---|--|
| Operating frequency up to 26.5GHz | Avionics |
| Low loss | EW |
| High power | High-power transmission |
| Lower PIM:-155dBc | Wireless communication base station interconnect |
| Superior shielding effectiveness:>-90dB | RF, microwave device test |
| Operating temperature range: -55 C~ +200 °C | |
| High performance cost ratio | |

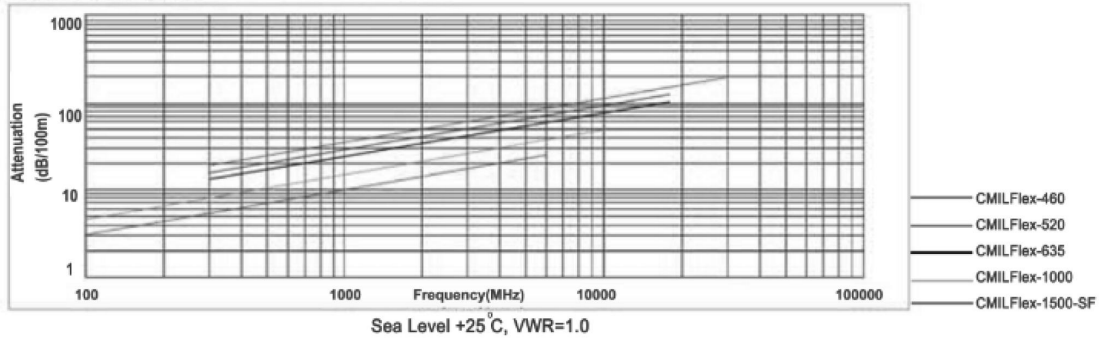
Construction(mm)

| Structure | Material | CMILFlex-460 | CMILFlex-520 | CMILFlex-635 | CMILFlex-1000 | CMILFlex-1500-SF |
|------------------|---------------------------|--------------|--------------|--------------|---------------|------------------|
| Center Conductor | Silver Plated Copper | 1.02 | 1.29 | 1.57 | 2.44 | 4.4(7 pcs) |
| Dielectric | LD PTFE | 3.07 | 3.91 | 4.72 | 7.24 | 12.50 |
| Outer Conductor | Silver Plated Copper Tape | 3.27 | 4.15 | 4.96 | 7.48 | 12.82 |
| Interlayer | Aluminum Tape | 3.43 | 4.28 | 5.10 | 7.61 | 12.95 |
| Overall Braid | Silver Plated Coper Braid | 3.94 | 4.73 | 5.66 | 8.19 | 13.67 |
| Jacket | FEP | 4.60 | 5.20 | 6.35 | 9.30 | 15.30 |

Specifications

| Specifications | CMILFlex-460 | CMILFlex-520 | CMILFlex-635 | CMILFlex-1000 | CMILFlex-1500-SF |
|----------------------------------|--------------|--------------|--------------|---------------|------------------|
| Operating Frequency Range(GHz) | 26.5 | 18 | 18 | 10 | 6 |
| Impedance(Ohm) | 50 | 50 | 50 | 50 | 50 |
| Vp(%) | 76 | 76 | 76 | 76 | 76 |
| Shielding Effectiveness(dB) | >100 | >100 | >100 | >100 | >100 |
| Voltage Withstand(V.DC) | 1000 | 1000 | 2000 | 2500 | 4000 |
| Bend Radius:(mm) | 18.40 | 20.80 | 25.40 | 51.00 | 76.00 |
| Bend Radius:repetitive(mm) | 46.00 | 52.00 | 63.50 | 100.00 | 150.00 |
| Weight(kg/m) | 0.05 | 0.06 | 0.10 | 0.19 | 0.40 |
| Operating Temperature Range (°C) | -55~+200 | -55~+200 | -55~+200 | -55~+200 | -55~+200 |

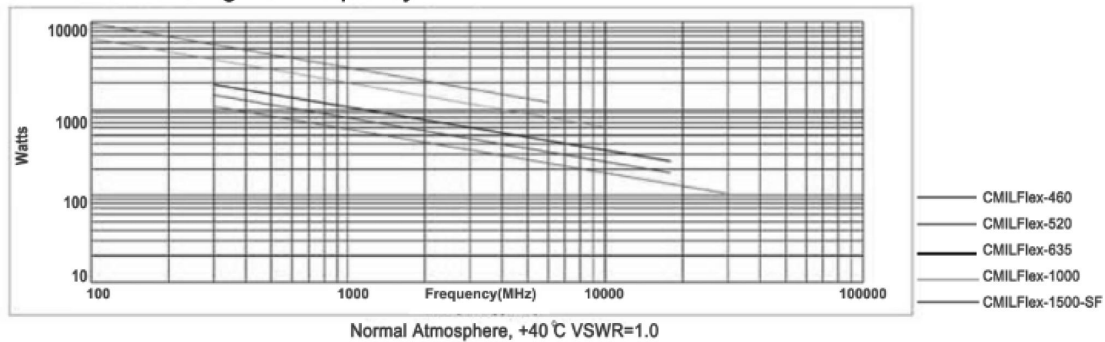
Attenuation VS. Frequency



Attenuation VS. Frequency(dB/100m)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 10000 | 12400 | 18000 | 26500 |
|------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| CMILFlex-460 | 19.22 | 24.89 | 35.37 | 62.03 | 88.78 | 103.16 | 115.97 | 129.90 | 158.35 | 194.93 |
| CMILFlex-520 | 15.01 | 19.44 | 27.67 | 48.67 | 69.87 | 81.31 | 91.53 | 102.67 | 125.51 | - |
| CMILFlex-635 | 12.00 | 15.56 | 22.18 | 39.17 | 56.43 | 65.79 | 74.18 | 83.35 | 102.23 | - |
| CMILFlex-1000 | 7.91 | 10.27 | 14.71 | 26.23 | 38.15 | 44.70 | 59.61 | - | - | - |
| CMILFlex-1500-SF | 5.45 | 7.10 | 10.21 | 18.43 | 27.11 | - | - | - | - | - |

CW Power Handling VS. Frequency



CW Power Handling VS. Frequency(KW)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 10000 | 12400 | 18000 | 26500 |
|------------------|------|------|------|------|------|------|-------|-------|-------|-------|
| CMILFlex-460 | 1.05 | 0.81 | 0.57 | 0.32 | 0.23 | 0.20 | 0.17 | 0.16 | 0.13 | 0.10 |
| CMILFlex-520 | 1.38 | 1.07 | 0.75 | 0.43 | 0.30 | 0.26 | 0.23 | 0.20 | 0.17 | - |
| CMILFlex-635 | 1.88 | 1.45 | 1.02 | 0.58 | 0.40 | 0.34 | 0.31 | 0.27 | 0.22 | - |
| CMILFlex-1000 | 3.42 | 2.63 | 1.84 | 1.03 | 0.71 | 0.61 | 0.53 | - | - | - |
| CMILFlex-1500-SF | 5.89 | 4.52 | 3.14 | 1.74 | 1.18 | - | - | - | - | - |

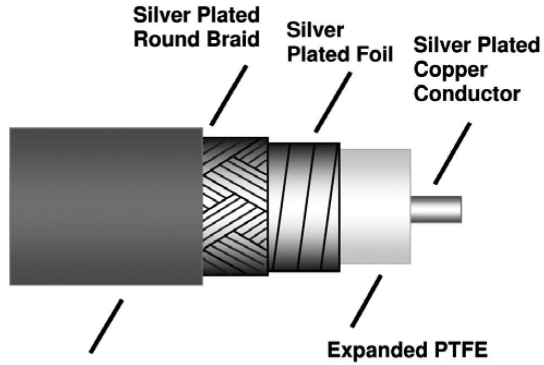
Connectors

| Cable | SMA-M | N-M | N-M90 | TNC-M | TNC-M90 | BNC-M | L16-M | L16-M90 | 7/16-M | 7/16-M90 | 7/16-F |
|------------------|-------|-----|-------|-------|---------|-------|-------|---------|--------|----------|--------|
| CMILFlex-460 | x | x | - | x | - | - | - | - | - | - | - |
| CMILFlex-520 | x | x | x | x | x | x | - | - | - | - | - |
| CMILFlex-635 | x | x | x | x | x | x | x | x | - | - | - |
| CMILFlex-1000 | - | x | - | - | - | - | - | - | x | - | x |
| CMILFlex-1500-SF | - | - | - | - | - | - | - | - | x | x | - |

| Electrical Properties (Cable Only) | |
|------------------------------------|----------|
| Impedance (ohms) | 50 |
| Velocity of Propagation (%) | 85% |
| Min. Shielding Effectiveness (dB) | 100 |
| Phase vs. Flexure | Figure 3 |
| Phase vs. Temperature | Figure 4 |
| Min. Breakdown Voltage (KV) | 7 |
| Capacitance (pF/ft) | 24 |
| Inductance (nH/ft) | 61 |
| Max Operating Freq (GHz) | 40.0 |
| Max Structural VSWR | 1.25:1 |

| Physical Properties (Cable Only) | |
|-----------------------------------|------------|
| Maximum Temperature (deg C) | -65 / +200 |
| Recommended Temperature (deg C) | -65 / +165 |
| Outdoor Jacket Option (in) | 0.192 |
| High Temp. Jacket Option (in) | 0.172 |
| Round Braid O.D. (in) | 0.154 |
| Helical Foil O.D. (in) | 0.116 |
| Dielectric O.D. (in) | 0.109 |
| Solid Center Conductor (in) | 0.040 |
| Inside Min. Bend Radius (in) | 0.9 |
| Flexure Life (3x min bend radius) | >1,000 |
| Connector Retention (lbs) | >TBD |
| Axial Torque Resistance (lb-in) | >TBD |
| Weight (lbs/ft) | 0.034 |
| Crush Resistance (lbs/in) | >TBD |
| Kink Resistance (lbs) | >TBD |

K Series K501-240



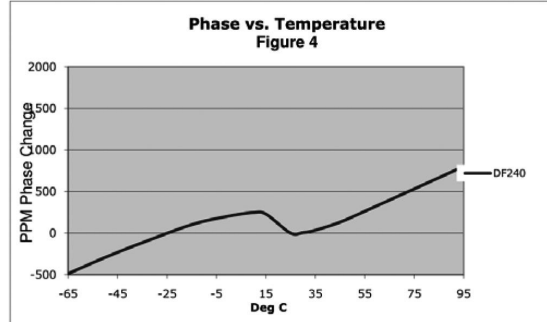
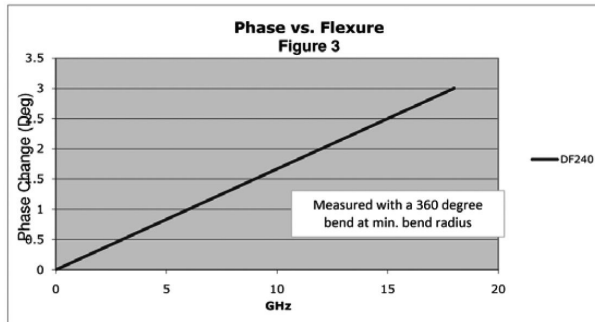
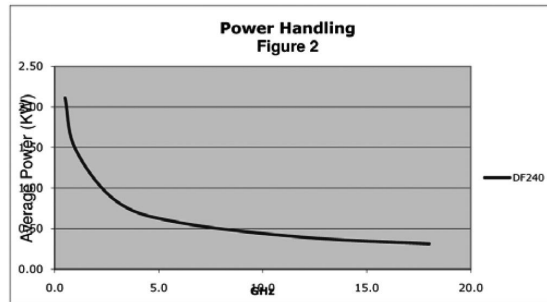
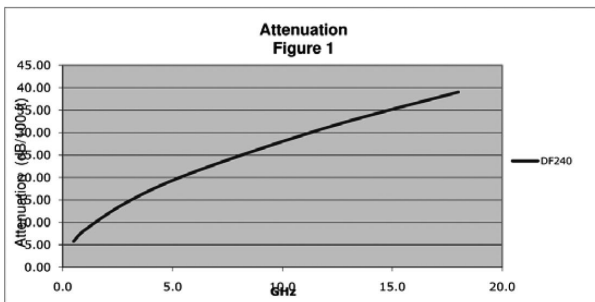
Jacket Options:

- High Temp, ETFE (-65C / +165C)
- Outdoor, Polyurethane (-65C / +85C)

| Attenuation (dB/100ft) @ 25 deg C | | |
|-----------------------------------|-----------|---------|
| Frequency (GHz) | dB/100 ft | K Watts |
| 0.5 | 6.45 | 2.11 |
| 1.0 | 9.21 | 1.48 |
| 3.0 | 16.35 | 0.83 |
| 6.0 | 23.66 | 0.58 |
| 12.0 | 34.55 | 0.39 |
| 18.0 | 43.34 | 0.31 |
| 26.0 | 53.44 | 0.25 |
| 32.0 | 60.27 | 0.22 |
| 40.0 | 68.69 | 0.20 |
| K1 | 8.90 | |
| K2 | 0.31 | |

(200 Series cable series are constructed in accordance with MIL-DTL-17)

- Center Conductor:** Silver Plated Copper per ASTM B298
- Dielectric:** Type F per ASTM D4894 or D4895, Semisolid PTFE (proprietary)
- Primary Shield:** Silver Plated copper per ASTM B298
- Secondary Shield:** Silver Plated Copper per ASTM B298
- High Temp Jacket:** Type X per ASTM D3159, ETFE [Flame Resistance & Smoke = UL94 V-0]
- Outdoor Jacket:** Type XII Polyurethane (optional) [Zero Halogen, Flame Resistance & Smoke = UL94 V-0]



CWS1

Construction

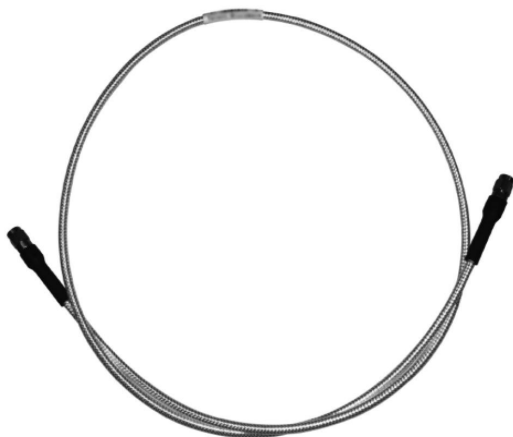
| Item | Dimension(mm) | Material |
|------------------|---------------|--------------------------------|
| Center conductor | 1.02 | silver-plated copper |
| Dielectric | 3.07 | Low Density PTFE |
| Inner shield | 3.27 | silver-plated copper shield |
| Middleshield | 3.43 | High temperature aluminum thin |
| Outershield | 3.94 | silver-plated copper braid |
| Jacket | 4.60 | MFA |

Electrical Specification

| | |
|--|---|
| Frequency(GHz) | 26.5 |
| Cutoff Frequency(GHz) | 35 |
| Impedence(Ohms) | 50 |
| Velocity | 76% |
| Shielding Effectiveness(dB) | 100 |
| Operating Voltage(V,DC) | 1000 |
| Mechanical Phase (°) | 2°@6GHz/ 5.5°@18GHz (360 degree wrap around repeat bend radius) |
| Phase Change vs . Temp (PPM @-55°C-85°C) | 1200 |

Mechanical Specification

| | |
|-----------------|----------|
| Bend Radius(mm) | 18.4 |
| Weight (Kg/M) | 0.050 |
| Temperature(°C) | -55~+225 |



Attenuation and Power Handling

@+25°C and sea level

| Frequency MHz | dB/100m | Power kW |
|---------------|---------|----------|
| 500 | 24.89 | 0.809 |
| 1000 | 35.37 | 0.569 |
| 2400 | 55.31 | 0.364 |
| 3000 | 62.03 | 0.330 |
| 6000 | 88.78 | 0.230 |
| 8000 | 103.16 | 0.195 |
| 10000 | 115.97 | 0.174 |
| 12400 | 129.70 | 0.155 |
| 18000 | 154.35 | 0.129 |
| 26500 | 194.93 | 0.103 |

CWA40

Construction

| Structure | Material |
|------------------------|----------------------------|
| Center Contact | Gold Plated Brass |
| Insulator | PEI |
| Connector Coupling Nut | Passivated Stainless Steel |
| Jacket | FEP |

Electrical Specifications

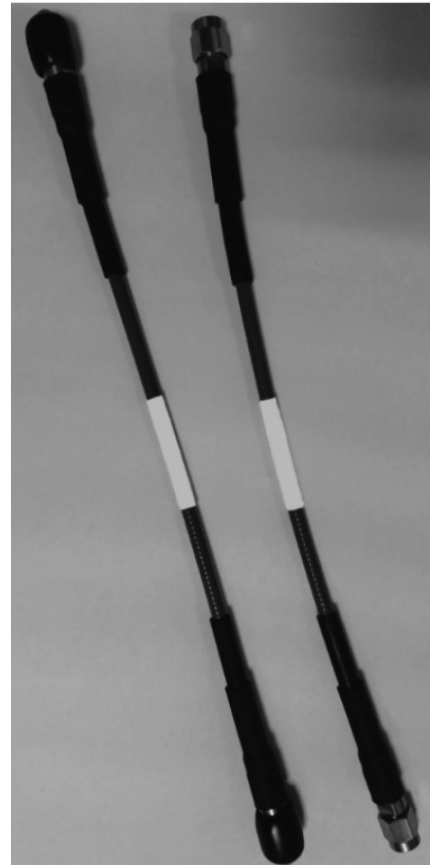
| | |
|---------------------------------|----------------|
| Frequency | 40 GHz |
| Insulation Resistance | 5000MΩ |
| Impedance | 50Ω |
| Dielectric Withstanding Voltage | 1000V |
| VSWR | 1.25:1 @ 40GHz |
| Shielding Effectiveness | 90dB |
| Velocity | 83% |
| Phase Stability vs. Flexure | ±2° @ 18GHz |
| Power | 75W CW @ 40GHz |

Mechanical Specifications

| | |
|-----------------------|----------------|
| Bend Radius (Static) | 18 mm |
| Cable Diameter | 3.6mm |
| Operating Temperature | -55°C - +125°C |

Attenuation vs. Frequency

| Length | 18GHz | 26.5GHz | 32GHz | 40GHz |
|---------------|--------------|----------------|--------------|--------------|
| 8 inches | 0.54dB | 0.66dB | 0.77dB | 0.87dB |
| 20 inches | 1.04dB | 1.28dB | 1.46dB | 1.63dB |
| 40 inches | 1.87dB | 2.3dB | 2.61dB | 2.91dB |
| 60 inches | 2.71dB | 3.33dB | 3.76dB | 4.19dB |
| 80 inches | 3.54dB | 4.35dB | 4.91dB | 5.47dB |
| 120 inches | 5.21dB | 6.4dB | 7.2dB | 7.93dB |
| 200 inches | 8.55dB | 10.5dB | 11.91dB | 13.15dB |



CMILX



| Features | Applications |
|---|--|
| Operating frequency up to 40GHz | Phased array radar |
| Ultra Low loss | Avionics |
| Stable phase(<550PPM@55°C - +85°C) | EW |
| High power | Any low loss, phase stable application |
| Lower PIM:-155dBc | |
| Superior shielding effectiveness:>-90dB | |
| Light weight | |

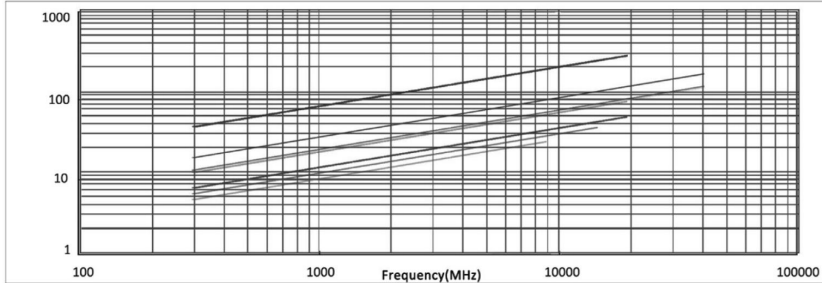
Construction(mm)

| Structure | Material | CMilx-220 | CMilx-360 | CMilx-500 | CMilx-520 | CMilx-550 | CMilx-800 | CMilx-1000 | CMilx-1200 |
|------------------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| Center Conductor | Silver Plated Copper | 0.51 | 0.91 | 1.38 | 1.45 | 1.60 | 2.24 | 3.00 | 3.80 |
| Dielectric | LD PTFE | 1.38 | 2.50 | 3.71 | 3.99 | 4.30 | 6.10 | 8.30 | 10.40 |
| Outer Conductor | Helical Silver Plated Copper Tape | 1.58 | 2.66 | 3.91 | 4.19 | 4.50 | 6.30 | 8.54 | |
| Overall Braid | Silver Plated Coper Braid | 1.90 | 3.11 | 4.37 | 4.50 | 4.85 | 6.81 | 9.20 | 11.35 |
| Jacket | FEP | 2.20 | 3.60 | 4.88 | 5.10 | 5.40 | 7.65 | 10.00 | 12.00 |
| | PVC | | | | | | | 11.20 | |

Specifications

| Specifications | CMilx-220 | CMilx-360 | CMilx-500 | CMilx-520 | CMilx-550 | CMilx-800 | CMilx-1000 | CMilx-1200 |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| Operating Frequency Range(GHz) | 18 | 40 | 26.5 | 26.5 | 20 | 18 | 13.5 | 8 |
| Impedance(Ohm) | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Vp(%) | 82% | 83% | 83% | 83% | 83% | 83% | 83% | 83% |
| Shielding Effectiveness(dB) | >90 | >90 | >90 | >90 | >90 | >90 | >90 | >90 |
| Voltage Withstand(V.DC) | 400 | 50 | 1000 | 1000 | 1000 | 2000 | 2900 | 4000 |
| Bend Radius:(mm) | 8.80 | 15.00 | 25.40 | 25.00 | 27.00 | 38.25 | 40.00 | 60.00 |
| Bend Radius:repetitive(mm) | 22.00 | 36.00 | 48.80 | 51.0 | 54.00 | 76.50 | 100.00 | 110.00 |
| Weight(kg/m) | 0.016 | 0.033 | 0.06 | 0.067 | 0.093 | 0.137 | 0.200 | 0.28 |
| Operating Temperature Range (°C) | -55~+125 | -55~+165 | -55~+165 | -55~+165 | -55~+165 | -55~+165 | -55~+90 | -55~+90 |

Attenuation VS. Frequency



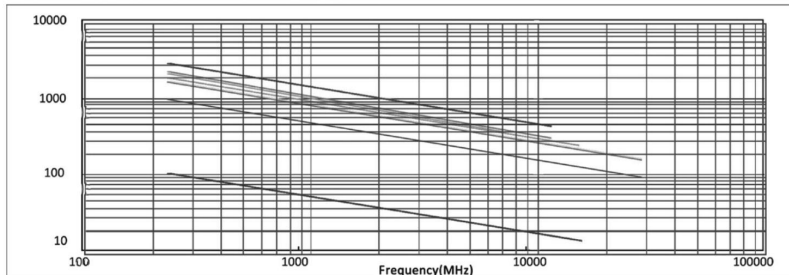
- CMilx220
- CMilx360
- CMilx500
- CMilx520
- CMilx550
- CMilx800
- CMilx1000
- CMilx1200

Sea Level +25°C, VWR=1.0

Attenuation VS. Frequency(dB/100m)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 10000 | 12400 | 13500 | 18000 | 26500 | 40000 |
|------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| CMilx-220 | 34.60 | 44.80 | 63.70 | 111.90 | 160.40 | 186.50 | 209.80 | 235.20 | 246.10 | 287.10 | - | - |
| CMilx-360 | 20.40 | 26.40 | 37.50 | 65.65 | 93.81 | 108.91 | 122.35 | 136.94 | 143.19 | 166.67 | 204.79 | 255.69 |
| CMilx-500 | 13.20 | 17.09 | 24.30 | 42.65 | 61.09 | 71.01 | 79.86 | 89.48 | 93.61 | 109.15 | 134.49 | - |
| CMilx-520 | 12.74 | 16.49 | 23.41 | 40.97 | 58.51 | 67.92 | 76.28 | 85.36 | 89.25 | 103.84 | - | - |
| CMilx-550 | 12.30 | 15.90 | 22.60 | 39.70 | 57.00 | 66.30 | 74.50 | 83.60 | 87.40 | 102.00 | - | - |
| CMilx-800 | 7.63 | 9.90 | 14.13 | 25.04 | 36.18 | 42.25 | 47.70 | 53.68 | 56.25 | 66.02 | - | - |
| CMilx-1000 | 6.40 | 8.32 | 11.95 | 21.46 | 31.41 | 36.92 | 41.91 | 47.43 | 49.83 | - | - | - |
| CMilx-1200 | 5.33 | 6.94 | 9.98 | 17.96 | 26.34 | 30.99 | - | - | - | - | - | - |

CW Power Handling VS. Frequency



- CMilx220
- CMilx360
- CMilx500
- CMilx520
- CMilx550
- CMilx800
- CMilx1000
- CMilx1200

Normal Atmosphere, +40°C VSWR=1.0

CW Power Handling VS. Frequency(KW)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 10000 | 12400 | 13500 | 18000 | 26500 | 40000 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| CMilx-220 | 0.102 | 0.079 | 0.056 | 0.032 | 0.022 | 0.019 | 0.017 | 0.015 | 0.014 | 0.012 | - | - |
| CMilx-360 | 0.94 | 0.72 | 0.51 | 0.29 | 0.20 | 0.18 | 0.16 | 0.14 | 0.13 | 0.12 | 0.09 | - |
| CMilx-500 | 1.61 | 1.24 | 0.87 | 0.50 | 0.35 | 0.30 | 0.27 | 0.24 | 0.23 | 0.19 | 0.16 | 1.087 |
| CMilx-520 | 1.68 | 1.31 | 0.92 | 0.53 | 0.37 | 0.32 | 0.28 | 0.25 | 0.24 | 0.21 | - | - |
| CMilx-550 | 1.87 | 1.44 | 1.01 | 0.58 | 0.402 | 0.35 | 0.31 | 0.27 | 0.26 | 0.22 | - | - |
| CMilx-800 | 3.33 | 2.57 | 1.80 | 1.02 | 0.70 | 0.60 | 0.53 | 0.47 | 0.45 | 0.39 | - | - |
| CMilx-1000 | 3.18 | 2.44 | 1.70 | 0.95 | 0.65 | 0.55 | 0.49 | 0.43 | 0.41 | - | - | - |
| CMilx-1200 | 3.14 | 2.41 | 1.68 | 0.93 | 0.64 | 0.54 | - | - | - | - | - | - |

Connectors

| Cable | SMA-M | SMA-M90 | N-M | N-M90 | TNC-M | TNC-M90 | SSMA-M | BNC-M | N-F | 7/16-M90 | SC-M | SMP-F | SMP-F90 | 2.92mm |
|------------|-------|---------|-----|-------|-------|---------|--------|-------|-----|----------|------|-------|---------|--------|
| CMilx-220 | x | - | - | - | - | - | - | - | - | - | - | - | - | x |
| CMilx-360 | x | x | x | - | - | - | x | - | - | - | - | - | - | x |
| CMilx-500 | x | x | x | x | x | x | x | x | - | - | - | - | - | - |
| CMilx-800 | x | x | x | x | x | - | - | - | - | - | - | - | - | - |
| CMilx-1000 | - | - | x | x | x | - | - | - | - | x | x | - | - | - |
| CMilx-1200 | - | - | x | - | - | - | - | - | - | - | - | - | - | - |

CWA22

Construction

| Item | Dimension(mm) | Material |
|------------------|---------------|-----------------------------|
| Center conductor | 0.50 | silver-plated copper |
| Dielectric | | ePTFE |
| Shield | 2.00 | silver-plated copper shield |
| Jacket | 2.20 | FEP |

Electrical Specification

| | |
|---|---|
| Frequency(GHz) | 65 |
| Impedance(Ohms) | 50 |
| Velocity | 82% |
| Shielding effectiveness(dB) | 90 |
| Operation Voltage(V,DC) | 1000 |
| Mechanical Phase (°) | 1°@6GHz/ 3°@18GHz (360 degree wrap around repeat bend radius) |
| Phase Change vs . Temp (PPM @-55°C-85°C) | 500 |

Mechanical Specification

| | |
|------------------|----------|
| Bend Radius (mm) | 11 |
| weight (g/M) | 160 |
| Temperature(°C) | -55~+165 |

Attenuation and Power Handling

@+25°C and sea level

| Frequency MHz | dB/100m | Power kW |
|---------------|---------|----------|
| 4000 | 129.1 | 0.132 |
| 6000 | 159.7 | 0.107 |
| 8000 | 186.0 | 0.092 |
| 10000 | 209.5 | 0.082 |
| 12000 | 231.0 | 0.074 |
| 14000 | 251.0 | 0.068 |
| 18000 | 287.7 | 0.040 |
| 26500 | 370.0 | 0.022 |
| 40000 | 498.0 | 0.018 |
| 50000 | 576.0 | 0.013 |
| 65000 | 640.1 | 0.010 |



CZFLEX



| Features | Applications |
|---|----------------------------------|
| Operating frequency up to 40GHz | Missile |
| Strand conductor super flexible | Vehicle&shipboard communication |
| Superior shielding effectiveness(>90dB) | Military/commercial antenna |
| Resistant to harsh environment | Military/commercial base station |
| | Any small or complex space |

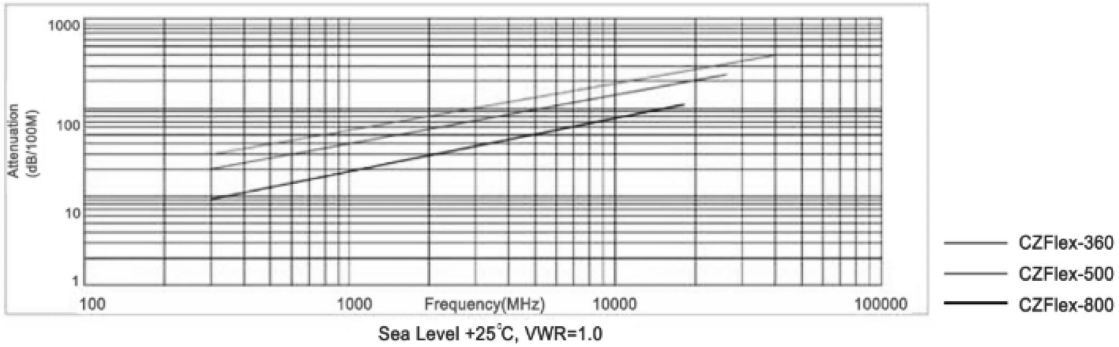
Construction

| Structure | Material | CZFflex-360 | CZFflex-500 | CZFflex-800 |
|----------------------|---------------------------|-------------|-------------|-------------|
| Center Conductor(mm) | Silver Plated Copper | 0.72 | 1.02 | 1.88 |
| Dielectric (mm) | LD PTFE | 2.10 | 3.07 | 5.50 |
| Outer Conductor(mm) | Silver Plated Copper Tape | 2.26 | 3.27 | 5.74 |
| Overall Braid(mm) | Silver Plated Coper Braid | 2.71 | 3.78 | 6.31 |
| Jacket (mm) | Blue PUR | 3.60 | 5.00 | 8.00 |

Specifications

| Specifications | CZFflex-360 | CZFLEX-500 | CZFLEX-800 |
|--------------------------------|-------------|------------|------------|
| Operating Frequency Range(GHz) | 40 | 26.5 | 18 |
| Impedance(Ohm) | 50 | 50 | 50 |
| Vp(%) | 76 | 76 | 76 |
| Shlelding Effectiveness(dB) | >90 | >90 | >90 |
| Voltage Rating(V.DC) | 500 | 1000 | 1700 |
| Bend Radius:(mm) | 14.40 | 20.00 | 32.00 |
| Bend Radius:repetitive(mm) | 36.00 | 50.00 | 80.00 |
| Weight(kg/m) | 0.03 | 0.05 | 0.13 |
| Operating Temperature(°C) | -55 ~ +85 | -55 ~ +85 | -55 ~ +85 |

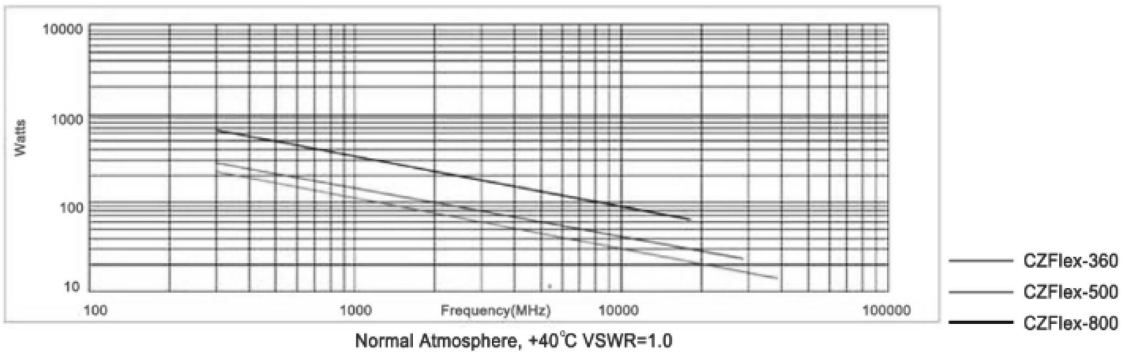
Attenuation VS. Frequency



Attenuation VS. Frequency(dB/100m)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 12400 | 18000 | 26500 | 35000 | 40000 |
|------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| CZFlex-360 | 27.96 | 36.30 | 51.86 | 92.12 | 133.45 | 156.03 | 198.66 | 244.88 | 305.54 | 359.35 | 388.83 |
| CZFlex-500 | 20.45 | 26.68 | 38.47 | 69.84 | 103.22 | 121.90 | 157.94 | 198.03 | 252.07 | | |
| CZFlex-800 | 9.50 | 12.45 | 18.16 | 33.75 | 50.91 | 60.72 | 80.00 | 101.91 | | | |

CW Power Handling VS. Frequency



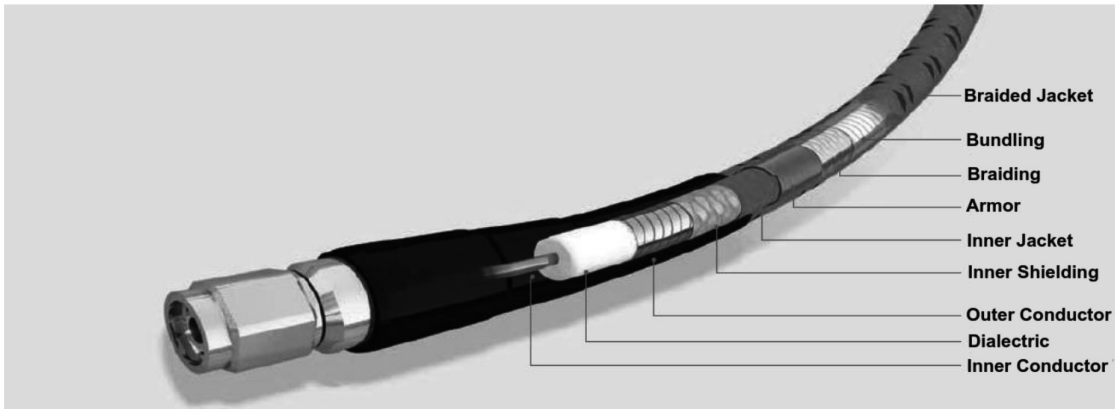
CW Power Handling VS. Frequency(KW)

| Frequency | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 12400 | 18000 | 26500 | 35000 | 40000 |
|------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| CZFlex-360 | 0.22 | 0.17 | 0.12 | 0.07 | 0.05 | 0.04 | 0.03 | 0.03 | 0.02 | 0.017 | 0.016 |
| CZFlex-500 | 0.28 | 0.22 | 0.15 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 | | |
| CZFlex-800 | 0.63 | 0.48 | 0.33 | 0.18 | 0.12 | 0.10 | 0.07 | 0.06 | | | |

Connectors

| Cable | SMA-M | SMA-M 90 | N-M | N-M 90 | TNC-M | SSMA-M | N-F | SMA-F | SMP-F |
|------------|-------|----------|-----|--------|-------|--------|-----|-------|-------|
| CZFlex-360 | x | x | x | - | x | x | x | - | x |
| CZFlex-500 | x | x | x | - | - | - | - | - | - |
| CZFlex-800 | x | - | x | x | x | - | - | x | - |

CWPL26 Low Loss, Phase & Amplitude Stable Flexible Cable Assemblies



Electrical Specifications

| | |
|---------------------------------|---------|
| Frequency | 26.5GHz |
| Impedance | 50Ω |
| Dialectric Withstanding Voltage | 1000V |
| Shielding Effectiveness | 100dB |
| Velocity | 83% |

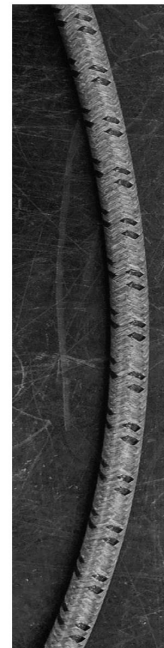


Mechanical Specifications

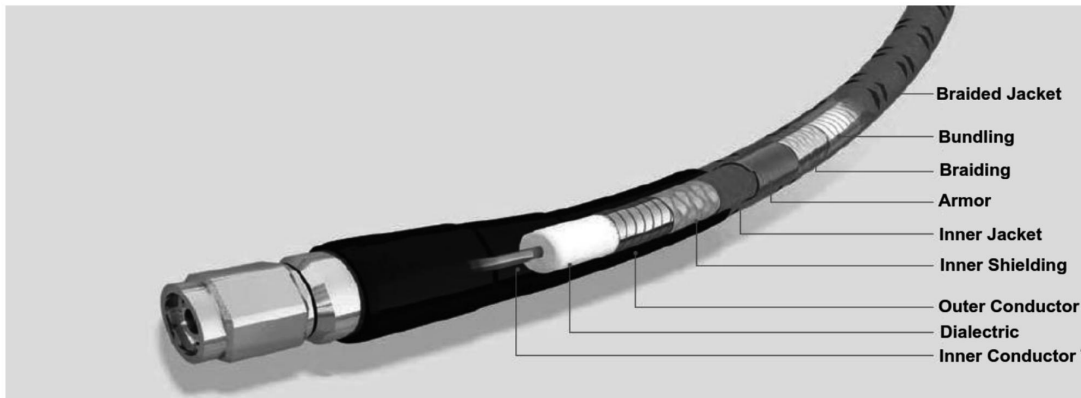
| | |
|-----------------------|---------------------|
| Bend Radius (Static) | 2 inches (50.8mm) |
| Retention Force | 175lbs Min |
| Cable Diameter | 0.35 inches (8.8mm) |
| Operating Temperature | -40°C - +85°C |

Attenuation, Amp/Phase Stab, VSWR, Power

| Frequency | Attenuation per 100ft | Amplitude Stability | Phase Stability | VSWR | Power |
|-----------|--------------------------|------------------------|--------------------|--------|-------|
| 2GHz | 12.19dB | ±0.02dB | ±1° | 1.15:1 | 350W |
| 6GHz | 22.80dB | ±0.02dB | ±1° | 1.15:1 | 260W |
| 10GHz | 30.00dB | ±0.02dB | ±2° | 1.15:1 | 143W |
| 18GHz | 44.00dB | ±0.02dB | ±2° | 1.20:1 | 102W |
| 26.5GHz | 53.90dB | ±0.025dB | ±4° | 1.30:1 | 80W |



CWPL40 Low Loss, Phase & Amplitude Stable Flexible Cable Assemblies



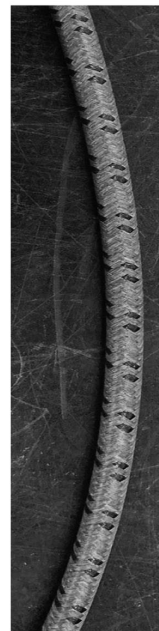
Electrical Specifications

| | |
|---------------------------------|-------|
| Frequency | 40GHz |
| Impedance | 50Ω |
| Dielectric Withstanding Voltage | 1000V |
| Shielding Effectiveness | 100dB |
| Velocity | 83% |



Mechanical Specifications

| | |
|-----------------------|---------------------|
| Bend Radius (Static) | 1 inch (25.4mm) |
| Retention Force | 175lbs Min |
| Cable Diameter | 0.25 inches (6.4mm) |
| Operating Temperature | -40°C - +85°C |



Attenuation, Amp/Phase Stab, VSWR, Power

| Frequency | Attenuation per 100ft | Amplitude Stability | Phase Stability | VSWR | Power |
|-----------|--------------------------|------------------------|--------------------|-------|-------|
| 2GHz | 18.29dB | ±0.02dB | ±2° | 1.1:1 | 290W |
| 6GHz | 29.20dB | ±0.02dB | ±2° | 1.1:1 | 170W |
| 10GHz | 41.15dB | ±0.02dB | ±2° | 1.1:1 | 130W |
| 18GHz | 54.80dB | ±0.02dB | ±2° | 1.1:1 | 95W |
| 26.5GHz | 69.80dB | ±0.025dB | ±3° | 1.2:1 | 79W |
| 40GHz | 84.12dB | ±0.04dB | ±5° | 1.3:1 | 65W |

CWM5

| Electrical & Mechanical Characteristics | |
|---|---------------|
| Impedance(Ohm) | 50 |
| Insulation Resistance (MΩ) | 5000 |
| Operating Frequency(GHz) | 110 |
| Dielectric Withstanding Voltage(V) | 500 |
| VSWR | 1.50:1@110GHz |
| Shielding Effectiveness(dB) | 90 |
| Min. Bending Radius (mm) | 3.5 |
| Operating Temperature(°C) | -55~+125 |
| Cable Diameter (mm) | 2.54 |

| Material&Coat-Plating | |
|-----------------------|-------------------------------|
| Cable Jacket | Blue Polyolefin Over FEP |
| Outer Contact | Ag Plated Copper Tape/Braid |
| Dielectric | Laminated PTFE |
| Inner Conductor | Solid Ag-Plated Cu Clad Steel |
| Connector Body | Stainless Steel, Passivated |

| Part Number | Max Insertion Loss ≤ (dB) | | | |
|--------------------|---------------------------|-------|-------|--------|
| | 40GHz | 60GHz | 80GHz | 110GHz |
| CWM5-1.0M1.0M-0.1M | 1.22 | 1.76 | 2.15 | 2.68 |
| CWM5-1.0M1.0M-0.2M | 2.09 | 2.87 | 3.47 | 4.30 |
| CWM5-1.0M1.0M-0.5M | 4.68 | 6.19 | 7.45 | 9.17 |
| CWM5-1.0M1.0M-1.0M | 9.01 | 11.73 | 14.07 | 17.29 |
| CWM5-1.0M1.0M-1.5M | 13.34 | 17.27 | 20.70 | 25.40 |
| CWM5-1.0M1.0M-2.0M | 17.67 | 22.80 | 27.32 | 33.52 |
| CWM5-1.0M1.0M-3.0M | 26.32 | 33.88 | 40.57 | 49.75 |