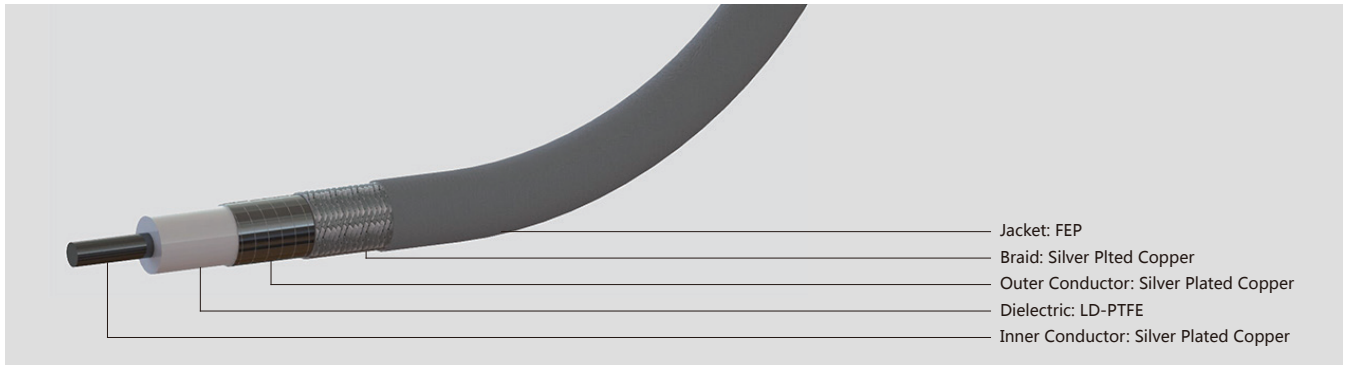


# PLEX Series Cable

ANOISON PLEX is a high frequency flexible coaxial cable series. Using special expanded PTFE tape dielectrics and combined with our broad range of RF/Microwave connectors PLEX cable series allows the creation of high performance assemblies with excellent Loss, VSWR and Phase Stability characteristics. ANOISON PLEX is the perfect answer for many applications including VNA test cables and radar systems.



### Mechanical Characteristics

| Cable Type               | PLEX-090    | PLEX-135    | PLEX-140    | PLEX-190    | PLEX-210    | PLEX-220    | PLEX-310    |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Dimensions               | MM INCH     | MM INCH     | MM INCH     | MM INCH     | MM INCH     | MM INCH     | MM INCH     |
| Inner Conductor          | 0.51 0.020  | 0.81 0.032  | 0.91 0.036  | 1.40 0.055  | 1.45 0.057  | 1.63 0.064  | 2.30 0.091  |
| Dielectric               | 1.43 0.056  | 2.25 0.089  | 2.50 0.098  | 3.80 0.150  | 4.00 0.157  | 4.36 0.172  | 6.20 0.244  |
| Outer Conductor          | 1.55 0.061  | 2.50 0.098  | 2.70 0.106  | 4.00 0.157  | 4.30 0.169  | 4.62 0.182  | 6.60 0.260  |
| Braid                    | 1.85 0.073  | 2.90 0.114  | 3.20 0.126  | 4.30 0.169  | 4.76 0.187  | 5.13 0.202  | 6.93 0.273  |
| Jacket                   | 2.20 0.087  | 3.50 0.138  | 3.60 0.142  | 4.80 0.189  | 5.20 0.205  | 5.68 0.224  | 7.80 0.307  |
| Min. Static Bend Radius  | 11.00 0.433 | 17.00 0.669 | 18.00 0.709 | 20.00 0.787 | 25.00 0.984 | 28.00 1.102 | 35.00 1.378 |
| Min. Dynamic Bend Radius | 22.00 0.866 | 35.00 1.378 | 36.00 1.417 | 50.00 1.97  | 52.00 2.05  | 56.00 2.205 | 80.00 3.150 |
| Weight                   | 18 g/m      | 33 g/m      | 33 g/m      | 52 g/m      | 56 g/m      | 95 g/m      | 130 g/m     |
| Temperature Range(°C)    | -65 to +125 | -65 to +165 | -65 to +165 | -65 to +165 | -65 to +165 | -65 to +165 | -65 to +165 |

### Electrical Characteristics

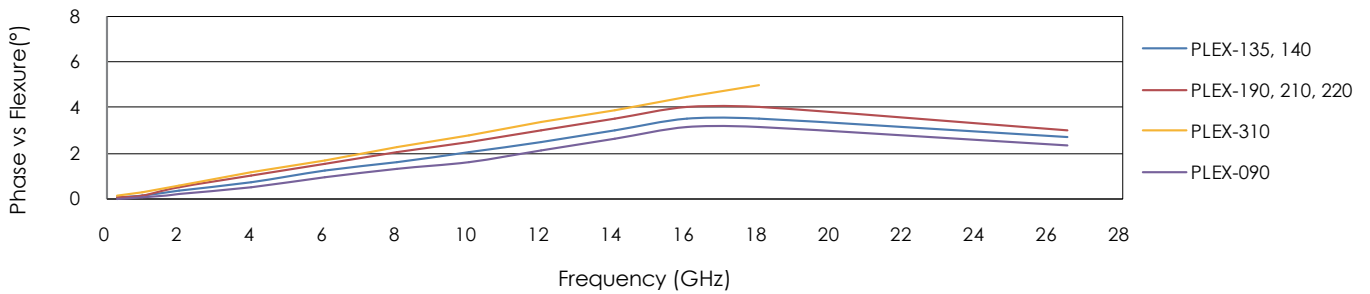
| Cable Type                      | PLEX-090  | PLEX-135  | PLEX-140  | PLEX-190  | PLEX-210  | PLEX-220  | PLEX-310  |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Impedance                       | 50 Ohms   | 50 Ohms   | 50 Ohms   | 50 Ohms   | 50 Ohms   | 50 Ohms   | 50 Ohms   |
| Velocity of Propagation         | 80%       | 83%       | 83%       | 83%       | 83%       | 83%       | 83%       |
| Shielding Effectiveness         | >90 dB    | >90 dB    | >90 dB    | >90 dB    | >90 dB    | >90 dB    | >90 dB    |
| Time Delay                      | 4.17 nS/m | 4.02 nS/m | 4.02 nS/m | 4.02 nS/m | 4.02 nS/m | 4.02 nS/m | 4.02 nS/m |
| Capacitance                     | 81.4 pF/m | 74 pF/m   | 80 pF/m   | 83 pF/m   | 80 pF/m   | 80 pF/m   | 80 pF/m   |
| Inductance                      | 0.20 uH/m | 0.31 uH/m | 0.31 uH/m | 0.31 uH/m | 0.31 uH/m | 0.31 uH/m | 0.31 uH/m |
| Cut-off Frequency               | 67 GHz    | 50 GHz    | 46 GHz    | 31 GHz    | 29 GHz    | 29 GHz    | 19 GHz    |
| Dielectric withstanding voltage | 500 VRMS  | 800 VRMS  | 1000 VRMS | 1300 VRMS | 1400 VRMS | 1500 VRMS | 2000 VRMS |
| Peak Power Rating               | 1.25KW    | 2.0 KW    | 2.5 KW    | 4.6 KW    | 5.0 KW    | 5.6 KW    | 10 KW     |

**Attenuation & Average Power Typical @ 25°C and Seal Level**

| Frequency (GHz) | PLEX-090 |      | PLEX-135 |      | PLEX-140 |      | PLEX-190 |      | PLEX-210 |      | PLEX-220 |      | PLEX-310 |      |
|-----------------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|
|                 | dB/100m  | CW   | dB/100m  | CW   | dB/100m  | CW   | dB/100m  | CW   | dB/100m  | CW   | dB/100m  | CW   | dB/100m  | CW   |
| 0.3             | 34.2     | 500  | 21.0     | 2989 | 20.4     | 2989 | 13.8     | 1608 | 12.5     | 1608 | 11.7     | 2290 | 8.4      | 3300 |
| 1               | 63.3     | 277  | 39.0     | 450  | 36.0     | 500  | 24.0     | 876  | 22.96    | 875  | 20.0     | 1100 | 14.5     | 1900 |
| 2               | 90.3     | 194  | 55.0     | 300  | 51.0     | 370  | 34.1     | 616  | 32.66    | 615  | 28.5     | 800  | 20.6     | 1350 |
| 4               | 129.3    | 135  | 80.0     | 225  | 73.0     | 260  | 48.6     | 432  | 46.58    | 431  | 41.0     | 520  | 29.5     | 900  |
| 6               | 159.8    | 110  | 99.0     | 175  | 90.0     | 210  | 59.9     | 351  | 57.4     | 350  | 50.8     | 450  | 36.5     | 750  |
| 8               | 185.9    | 94   | 116.0    | 150  | 104.0    | 180  | 69.5     | 303  | 66.64    | 302  | 59.0     | 380  | 42.5     | 650  |
| 10              | 209.3    | 84   | 132.0    | 140  | 117.0    | 160  | 78.0     | 270  | 74.85    | 268  | 66.6     | 350  | 47.9     | 600  |
| 12              | 230.7    | 76   | 146.0    | 120  | 129.0    | 150  | 85.8     | 245  | 82.34    | 244  | 73.5     | 310  | 52.8     | 580  |
| 14              | 250.5    | 70   | 159.0    | 110  | 140.0    | 140  | 92.9     | 226  | 89.27    | 225  | 80.0     | 300  | 57.4     | 550  |
| 16              | 269.2    | 65   | 172.0    | 105  | 150.0    | 125  | 99.7     | 211  | 95.78    | 210  | 86.3     | 280  | 61.7     | 525  |
| 18              | 286.9    | 61   | 183.0    | 100  | 160.0    | 120  | 106.0    | 198  | 101.92   | 197  | 91.8     | 270  | 65.7     | 450  |
| 20              | 304.8    | 59   | 195.0    | 95   | 169.0    | 115  | 112.1    | 186  | 107.77   | 185  | 97.4     | 250  | ----     | ---- |
| 22              | 321.1    | 57   | 206.0    | 90   | 178.0    | 110  | 117.8    | 176  | 113.37   | 175  | 102.7    | 230  | ----     | ---- |
| 24              | 336.9    | 55   | 216.0    | 85   | 186.0    | 105  | 123.4    | 171  | 118.75   | 169  | 107.9    | 220  | ----     | ---- |
| 25              | 344.6    | 54   | 222.4    | 82   | 198.5    | 102  | 126.1    | 166  | 121.36   | 164  | 110.2    | 215  | ----     | ---- |
| 26              | 352.1    | 53   | 227.0    | 80   | 194.0    | 100  | 128.7    | 164  | 123.93   | 162  | 117.8    | 212  | ----     | ---- |
| 26.5            | 355.9    | 52.5 | 230.0    | 79   | 204.8    | 99.5 | 130.0    | 162  | 125.2    | 160  | 113.8    | 210  | ----     | ---- |
| 28              | 366.9    | 51   | 237.0    | 75   | 202.0    | 99   | 133.9    | 160  | ----     | ---- | ----     | ---- | ----     | ---- |
| 30              | 381.3    | 49   | 246.0    | 73   | 210.0    | 97   | 138.9    | 158  | ----     | ---- | ----     | ---- | ----     | ---- |
| 31              | 388.3    | 48   | 252.0    | 72   | 222.8    | 96   | 141.4    | 156  | ----     | ---- | ----     | ---- | ----     | ---- |
| 32              | 395.2    | 47   | 256.0    | 71   | 217.0    | 95   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 34              | 408.9    | 45   | 265.0    | 70   | 225.0    | 90   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 36              | 422.2    | 43   | 274.0    | 68   | 232.0    | 85   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 38              | 435.2    | 41   | 283.0    | 65   | 239.0    | 80   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 40              | 445.2    | 39   | 292.0    | 60   | 246.0    | 75   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 50              | 508.5    | 34   | 334.0    | 50   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |
| 67              | 534.6    | 28   | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- | ----     | ---- |

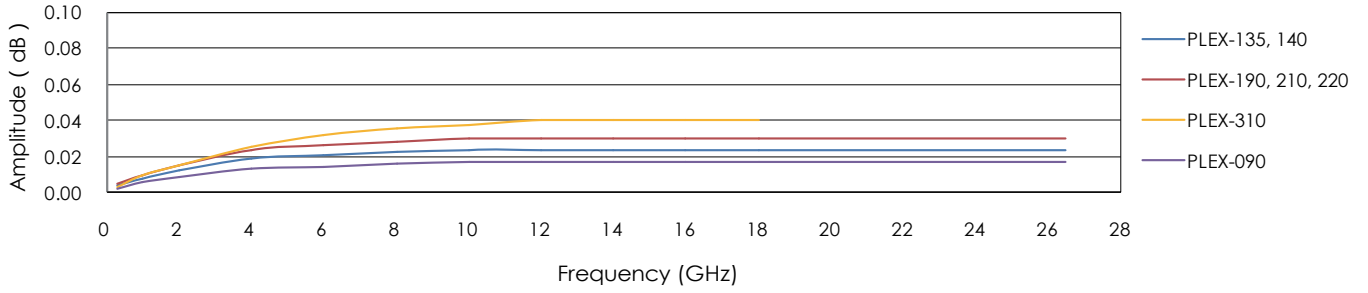
**Phase Stability vs Flexure**

Bent 360° @ Minimum Static Bending Radius

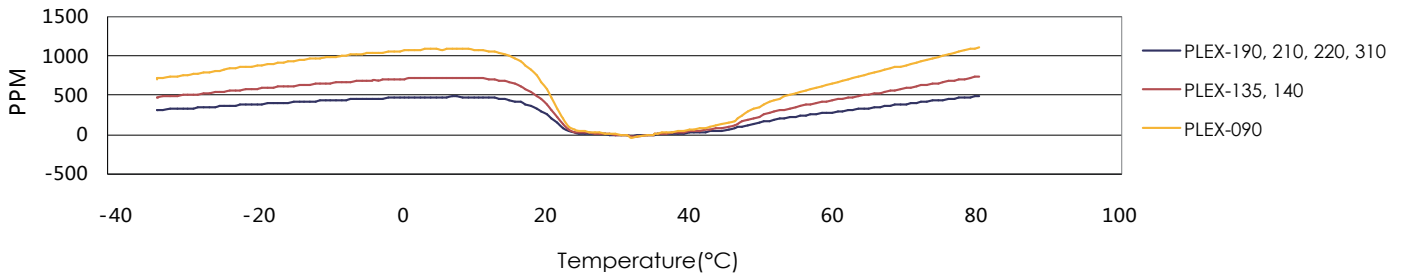


### Amplitude Stability

Bent 360° @ Minimum Static Bending Radius



### Phase Stability vs Temperature (PPM)



### Competitors Cross Reference

| GORE | IW   | MCC     | TIMES | HARBOUR | ANOISON  |
|------|------|---------|-------|---------|----------|
| 3506 | 1251 | UFB088D | ----  | ----    | PLEX-090 |
| ---- | 1401 | ----    | ----  | ----    | PLEX-135 |
| 3507 | 1501 | UFB142A | HF130 | ----    | PLEX-140 |
| 3449 | ---- | ----    | ----  | ----    | PLEX-190 |
| ---- | 1801 | UFB205A | ----  | ----    | PLEX-210 |
| ---- | 2301 | ----    | ----  | ----    | PLEX-220 |
| 3450 | 2801 | UFB311A | HF290 | LLS290  | PLEX-310 |