

SECONDARY CONSTANTS OF LOADED CABLE
26 GAUGE BST
H88 LOADING

at 68° F. *

| Freq. Hertz | Propagation Constant per Mile | | | Mid-Section Impedance | | | |
|----------------|-------------------------------|-------|-----------------------------------|-----------------------|---------------------|-----------|----------------------------|
| | Attenuation | | Phase Shift β Radians | R Ohms | X Ohms (neg.) | Z Ohms | Angle Degrees (neg.) |
| | α Nepers | dB | | | | | |
| 1 | .01143 | .099 | .00977 | 22631 | 19308 | 29748 | 40.5 |
| 50 | .07278 | .632 | .07662 | 3086 | 2909 | 4241 | 43.3 |
| 100 | .1000 | .869 | .1114 | 2242 | 2004 | 3007 | 41.8 |
| 200 | .1339 | 1.163 | .1664 | 1676 | 1343 | 2148 | 38.7 |
| 300 | .1555 | 1.351 | .2150 | 1445 | 1042 | 1781 | 35.8 |
| 500 | .1813 | 1.575 | .3073 | 1245 | 732 | 1444 | 30.5 |
| 800 | .2000 | 1.737 | .4463 | 1143 | 510 | 1251 | 24.1 |
| 1000 | .2062 | 1.791 | .5419 | 1121 | 425 | 1199 | 20.8 |
| 1200 | .2098 | 1.822 | .6403 | 1118 | 366 | 1177 | 18.1 |
| 1400 | .2119 | 1.840 | .7418 | 1128 | 323 | 1173 | 16.0 |
| 1600 | .2130 | 1.850 | .8467 | 1148 | 292 | 1185 | 14.3 |
| 1800 | .2135 | 1.854 | .9557 | 1179 | 270 | 1210 | 12.9 |
| 2000 | .2137 | 1.856 | 1.0693 | 1221 | 255 | 1247 | 11.8 |
| 2200 | .2139 | 1.857 | 1.1886 | 1277 | 248 | 1300 | 11.0 |
| 2400 | .2144 | 1.862 | 1.3150 | 1350 | 249 | 1373 | 10.4 |
| 2500 | .2150 | 1.867 | 1.3814 | 1396 | 254 | 1418 | 10.3 |
| 2600 | .2159 | 1.875 | 1.4505 | 1449 | 262 | 1472 | 10.3 |
| 2700 | .2172 | 1.887 | 1.5225 | 1511 | 276 | 1536 | 10.3 |
| 2750 | .2182 | 1.895 | 1.5598 | 1546 | 285 | 1572 | 10.4 |
| 2800 | .2193 | 1.905 | 1.5981 | 1585 | 296 | 1612 | 10.6 |
| 3000 | .2268 | 1.970 | 1.7628 | 1782 | 371 | 1820 | 11.8 |
| 3200 | .2441 | 2.120 | 1.9533 | 2086 | 555 | 2159 | 14.9 |
| 3500 | .3436 | 2.984 | 2.3189 | 2593 | 1789 | 3150 | 34.6 |

* temperature variation per degree F.

| Hz | dB | rad. | R | X |
|------|-------|--------|------|--------|
| 300 | .0021 | .00021 | .860 | -1.317 |
| 1000 | .0036 | .00026 | .174 | -.743 |
| 3000 | .0044 | .00058 | .340 | -1.112 |

Notes: nominal cutoff frequency = 3550 Hz.
phase delay = 86.24×10^{-6} seconds/mile at 1000 Hz.
velocity of propagation = 11.60×10^3 miles/second at 1000 Hz.

END-SECTION IMPEDANCE

| Frequency (Hz) End Section | 300 | | 500 | | 1000 | | 1600 | |
|-------------------------------|------|-------|------|------|------|------|------|------|
| | R | X | R | X | R | X | R | X |
| 0 (Full Coil) | 1440 | - 951 | 1226 | -578 | 1039 | -112 | 927 | +220 |
| .1 | 1443 | - 970 | 1235 | -611 | 1073 | -173 | 1009 | +139 |
| .2 | 1445 | - 989 | 1241 | -643 | 1098 | -237 | 1076 | + 43 |
| .3 | 1446 | -1007 | 1244 | -674 | 1114 | -301 | 1124 | - 66 |
| .4 | 1446 | -1025 | 1246 | -704 | 1122 | -364 | 1148 | -180 |
| .5 (Mid Section) | 1445 | -1042 | 1245 | -732 | 1121 | -425 | 1148 | -292 |
| .6 | 1444 | -1058 | 1243 | -760 | 1114 | -483 | 1127 | -397 |
| .7 | 1441 | -1074 | 1238 | -786 | 1100 | -537 | 1088 | -489 |
| .8 | 1439 | -1089 | 1233 | -810 | 1080 | -585 | 1037 | -564 |
| .9 | 1435 | -1103 | 1226 | -834 | 1057 | -628 | 978 | -622 |
| 1.0 (Full Section) | 1431 | -1117 | 1217 | -855 | 1031 | -665 | 918 | -665 |

| Frequency (Hz) End Section | 2000 | | 2500 | | 2750 | | 3000 | |
|-------------------------------|------|------|------|------|------|------|------|------|
| | R | X | R | X | R | X | R | X |
| 0 (Full Coil) | 851 | +399 | 732 | +607 | 657 | +710 | 566 | +817 |
| .1 | 975 | +321 | 919 | +562 | 873 | +700 | 810 | -860 |
| .2 | 1087 | +210 | 1116 | +454 | 1129 | +615 | 1138 | +824 |
| .3 | 1173 | + 69 | 1290 | +270 | 1381 | +413 | 1517 | +618 |
| .4 | 1220 | - 92 | 1394 | + 19 | 1545 | + 89 | 1797 | +177 |
| .5 (Mid Section) | 1221 | -255 | 1396 | -254 | 1546 | -285 | 1782 | -371 |
| .6 | 1181 | -404 | 1302 | -490 | 1391 | -589 | 1503 | -771 |
| .7 | 1110 | -526 | 1152 | -653 | 1168 | -768 | 1162 | -939 |
| .8 | 1022 | -616 | 990 | -742 | 953 | -837 | 884 | -957 |
| .9 | 929 | -674 | 843 | -776 | 778 | -840 | 688 | -909 |
| 1.0 (Full Section) | 842 | -706 | 722 | -774 | 647 | -810 | 555 | -841 |