

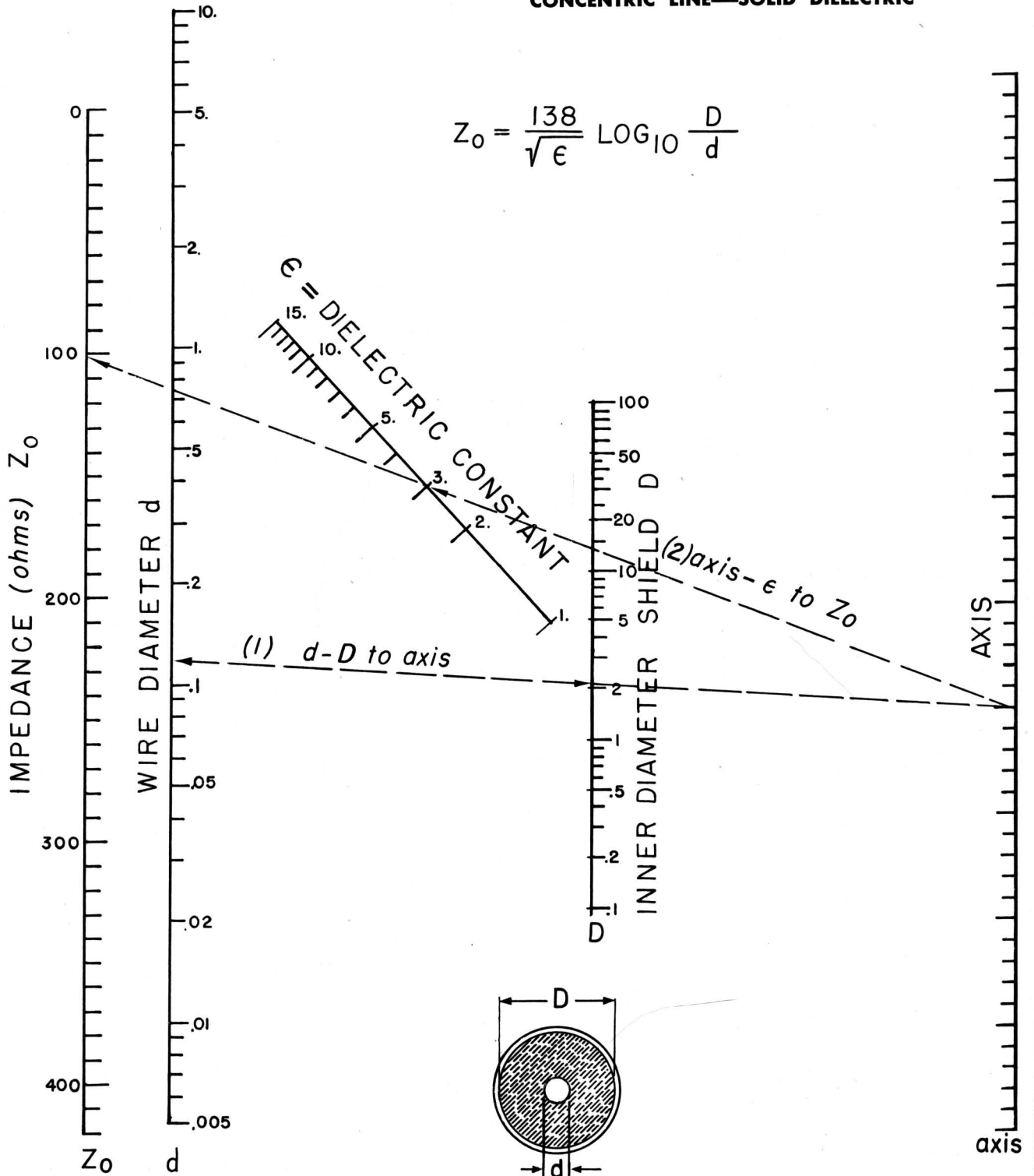


Technical data

CHARACTERISTIC IMPEDANCE OF LINES

CONCENTRIC LINE—SOLID DIELECTRIC

$$Z_0 = \frac{138}{\sqrt{\epsilon}} \text{LOG}_{10} \frac{D}{d}$$



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This chart gives theoretically exact values for any scale of dimensions, if lossless dielectric is assumed (filling completely the space between conductors), and perfect conductors. Line from d and D scales extends to the axis. From latter point a line through ϵ scale will intersect Z_0 scale at resulting value.

Example: $d = 0.12$ cm $D = 2.1$ cm $\epsilon = 3.0$
 $Z_0 = 102$ ohms