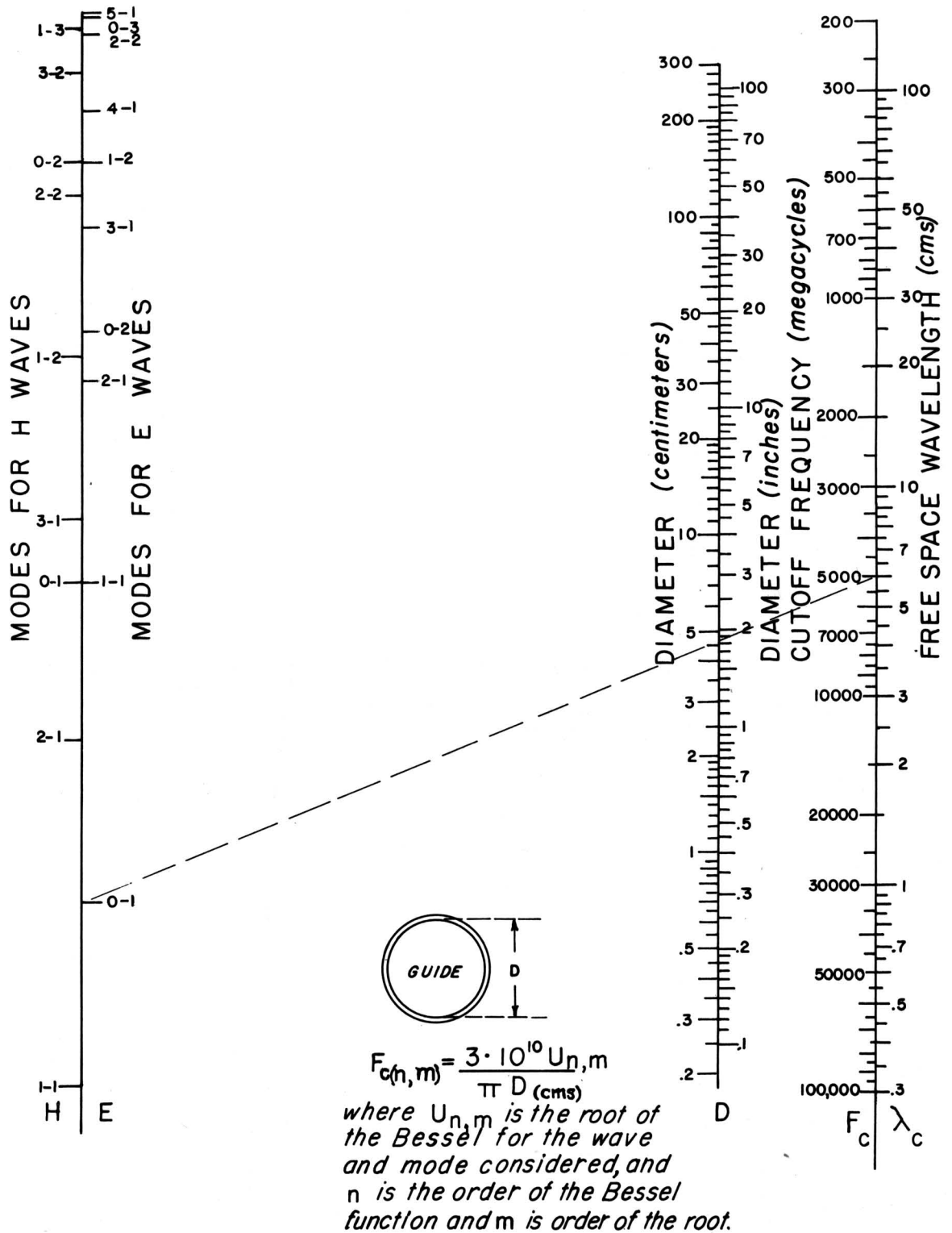




Technical data

CIRCULAR WAVE GUIDE CUTOFF FREQUENCIES



Copyright 1946 Federal Telephone and Radio Corporation



Federal Telephone and Radio Corporation

CIRCULAR WAVE GUIDE CUTOFF FREQUENCIES

The cutoff frequency for cylindrical wave guides is determined for any mode by a relation determined by the Bessel function for that mode. The cutoff frequency (and equivalent free-space wave-length) scales at right is aligned with the particular type of wave and mode selected on scale at left, and the diameter scale (inches and centimeters) in center. Example shown for the 0-1 mode of an E wave (TM wave) in a guide 1.82" in diameter a cut-off of 5,000 megacycles is found.