TABLE 8-1 Ratio of cutoff frequency of TE^z_{mn} mode to that of TE^z_{10}

$$R_{mn} = \frac{(f_c)^{TE^z}_{mn}}{(f_c)^{TE^z}_{10}} = \sqrt{m^2 + \left(\frac{na}{b}\right)^2} \qquad \begin{array}{c} m = 0, 1, 2, \ldots \\ n = 0, 1, 2, \ldots \\ m \text{ and } n \text{ not zero simultaneously} \end{array}$$

a/b	10	5	2.25	2	1
m, n	1,0	1,0	1,0	1,0	1,0; 0,1
R_{mn}	1	1	1	1	1
m, n	2,0	2,0	2,0	2,0;0,1	1,1
R_{mn}	2	2	2	2	1.414
m, n	3,0	3,0	0,1	1,1	2,0
R_{mn}	3	3	2.25	2.236	2
m, n	4,0	4,0	1,1	2,1	2,1;1,2
R_{mn}	4	4	2.462	2.828	2.236
m, n	5,0	5,0;0,1	3,0	3,0	2,2
R_{mn}	5	5	3	3	2.828
m, n	6,0	1,1	2,1	3,1	3,0;0,3
R_{mn}	6	5.099	3.010	3.606	3
m, n	7,0	2,1	3,1	4,0;0,2	3,1;1,3
R_{mn}	7	5.385	3.75	4	3.162
m, n	8,0	3,1	4,0	1,2	3,2;2,3
R_{mn}	8	5.831	4	4.123	3.606
m, n	9,0	6,0	0,2	4,1;2,2	4,0;0,4
R_{mn}	9	6	4.5	4.472	4
m, n	10,0;0,1	4,1	4,1	5,0;3,2	4,1;1,4
R_{mn}	10	6.403	4.589	5	4.123

Advanced Engineering Electromagnetics (Second Edition), Balanis, Wiley, 2012, ISBN-10: 0470589485, ISBN-13: 978-0470589489.