

$$\begin{aligned}
H_z &= A \cos\left(\frac{m\pi}{a}x\right) \cos\left(\frac{n\pi}{b}y\right) & z_{TE} &= \frac{\mu}{\sqrt{1 - \frac{k^2}{k_c^2}}} \\
E_z &= A \operatorname{sen}\left(\frac{m\pi}{a}x\right) \operatorname{sen}\left(\frac{n\pi}{b}y\right) & z_{TM} &= \mu \sqrt{1 - \frac{k_c^2}{k^2}}
\end{aligned}$$