FORMULA 4.132.4

$$\int_0^\infty \frac{\cos ax \, \sinh \beta x}{e^{\gamma x} - 1} \, dx = \frac{\beta}{2(a^2 + \beta^2)} - \frac{\pi}{2\gamma} \frac{\sin \frac{2\pi\beta}{\gamma}}{\cosh \frac{2a\pi}{\gamma} - \cos \frac{2\beta\pi}{\gamma}}$$