NEW FORMULA 4.132.3

The original formula is

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

let $t = \gamma x$ and replace a/γ by a and β/γ by b to obtain

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