

NEW FORMULA 3.512.1

The original formula is

$$\int_0^{\infty} \frac{\cosh 2\beta x}{(\cosh ax)^{2\nu}} dx = \frac{4^{\nu-1}}{a} B\left(\nu + \frac{\beta}{a}, \nu - \frac{\beta}{a}\right)$$

The change of variables $t = ax$ and replacing β/a by a gives the new formula (using x as the new variable of integration)

$$\int_0^{\infty} \frac{\cosh 2ax}{(\cosh x)^{2\nu}} dx = 4^{\nu-1} B(\nu + a, \nu - a)$$