

FORMULA 3.524.22

$$\int_0^{\infty} x^6 \frac{\cosh ax}{\cosh bx} dx = \left(\frac{\pi}{2b} \sec \frac{\pi a}{2b} \right)^7 \left(720 - 840 \cos^2 \frac{\pi a}{2b} + 182 \cos^4 \frac{\pi a}{2b} - \cos^6 \frac{\pi a}{2b} \right)$$