

FORMULA 3.524.18

$$\int_0^{\infty} x^5 \frac{\cosh ax}{\sinh bx} dx = 8 \left(\frac{\pi}{2b} \sec \frac{\pi a}{2b} \right)^6 \left(15 - 15 \cos^2 \frac{\pi a}{2b} + 2 \cos^4 \frac{\pi a}{2b} \right)$$