

**FORMULA 3.524.10**

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