

FORMULA 3.247.1

$$\int_0^1 \frac{x^{a-1}(1-x)^{n-1}}{1-\xi x^b} dx = (n-1)! \sum_{k=0}^{\infty} \frac{\xi^k}{(a+bk)(a+bk+1)\cdots(a+bk+n-1)}$$