

**FORMULA 3.261.4**

$$\int_0^1 \frac{x^{\mu-1}}{1+2ax \cos t + a^2x^2} \cdot \frac{dx}{(1-x)^\mu} = \frac{\pi \operatorname{cosec} t \operatorname{cosec} \mu\pi}{(1+2a \cos t + a^2)^{\mu/2}} \sin \left( t - \mu \arctan \frac{a \sin t}{1+a \cos t} \right)$$

for  $a > 0, 0 < \operatorname{Re} \mu < 1$ .