

PROOF OF FORMULA 3.322.2

$$\int_0^{\infty} e^{-x^2/4b-cx} dx = \sqrt{\pi b} e^{bc^2} \left[1 - \operatorname{erf}(\sqrt{bc}) \right]$$

Formula 3.322.1 states that

$$\int_a^{\infty} e^{-x^2/4b-cx} dx = \sqrt{\pi b} e^{bc^2} \left[1 - \operatorname{erf}\left(\frac{a}{2\sqrt{b}} + \sqrt{bc}\right) \right]$$

Let $a \rightarrow 0$ to obtain the result.