

1 Package Distance Calculations

$$F_X(x) = 1 - e^{-\frac{1}{2}\alpha^2 x^2}$$

$$1 - F = e^{-\frac{1}{2}\alpha^2 x^2}$$

$$\ln(1 - F) = -\frac{1}{2}\alpha^2 x^2$$

$$x^2 = -\frac{2\ln(1 - F)}{\alpha^2}$$

$$x(F) = \sqrt{-\frac{2\ln(1 - F)}{\alpha^2}}$$