

Formula Sheet Additions

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1 Butterworth Formulae

Transfer Function of a Butterworth Filter:

$$|H(s)| = \frac{G_0}{\sqrt{1 + (\frac{\omega}{\omega_c})^{2n}}}$$

Order Calculation from Pass and Stop Band Values:

$$n = \log \frac{10^{-\frac{G_s}{10}} - 1}{10^{-\frac{G_p}{10}} - 1} \div 2 \log \frac{\omega_s}{\omega_p}$$