

TABLE 14.3

Summary of Bode straight-line magnitude and phase plots.

Factor	Magnitude	Phase
K	$20 \log_{10} K$	0°
$(j\omega)^N$	$20N \text{ dB/decade}$	$90N^\circ$
$\frac{1}{(j\omega)^N}$	$-20N \text{ dB/decade}$	$-90N^\circ$
$\left(1 + \frac{j\omega}{z}\right)^N$	$20N \text{ dB/decade}$	$0^\circ, 90N^\circ$
$\frac{1}{(1 + j\omega/p)^N}$	$-20N \text{ dB/decade}$	$0^\circ, -90N^\circ$
$\left[1 + \frac{2j\omega\zeta}{\omega_n} + \left(\frac{j\omega}{\omega_n}\right)^2\right]^N$	$40N \text{ dB/decade}$	$0^\circ, 180N^\circ$
$\frac{1}{[1 + 2j\omega\zeta/\omega_k + (j\omega/\omega_k)^2]^N}$	$-40N \text{ dB/decade}$	$0^\circ, -180N^\circ$