Poles and zeros MB3 sensor (pressure output)

Applicable within the frequency range : 0.01 – 20 Hz

The poles and zeros are given in the following form :

$$H = A\frac{\prod_{i=1}^{n}(j\omega - z_i)}{\prod_{k=1}^{p}(j\omega - p_k)}$$

Where :

- H is the transfer function,
- A is the normalization factor so that amplitude is 1 in the passband : |H|=1 (0 dB).
- z_i are the n zeros, p_k are the p poles and ω=2πf (angular frequency).

For MB3 sensor :

A = 80500

Zeros :

z_1=0
z_2=-887.7

Poles :

p_1= -0.062834
p_2=-178.57
p_3=-85.71 - 626.62j
p_4=-85.71 + 626.62j

If you want to get the transfer response in V/Pa, it is necessary to multiply the A coefficient by the sensor sensitivity of 0.02V/Pa.

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