

Table (5.1): Simulation results of the compensated BLDC drive system for various specifications

Case	Desired Specifications for the design of compensator		Locations of pole and zero of the designed compensator		Simulation result of the compensated system				
	Gain Margin (db)	Phase Margin (deg)	Compensating Zero (-Z _c)	Compensating pole (-P _c)	%Peak Overshoot	Rise time (mesc)	Settling time (mesc)	Gain margin (db)	Phase margin (deg)
	$K_v=305 \text{ sec}^{-1}$								
1	≥8	74	-2.63	-1.05	1.27	8.69	25	10	74.4
2	≥7	68	-3.48	-1.8	7.45	6.04	31	7.58	68

3	≥ 12	84	-1.05	-0.18	1.48	35	60.2	17.2	83.1
4	≥ 4	50	-5.4	-3.91	27.2	4. 52 5	59.6	4.66	50