DC Motor Speed Control Circuit

Table of component models used in the Design Kit

Code	Classification	Part No.	Manufacturer	SPEC
U1	IC TIMER	LM555	National Semiconductor	-
U2	DC Magnet Motor	RS-380PH	MABUCHI MOTOR	12V
U3	VOLTAGE REGULATOR	uPC7812A	NEC Electronics Corporation	12V (TYP.)
Q1	NPN-BJT	2SC1061	MOSPEC	50V / 3A
Q2	NPN-BJT	BC547	FAIRCHILD	45V / 0.1A
D1 ,D2	High-speed diodes	1N4148	PHILIPS	100V / 0.2A
D3,D4 ,D5, D6,D7	General Rectifier Diode	1N4001	EIC	50V / 1A

Simulation files are stored in folders, as shown in list below.

Simulations	**Folder name**
1. Transient Response at No Load (Model).....	\Simulations\Transient\Trans_NoLoad
2. Speed at No Load (Model).....	\Simulations\Transient\Speed_NoLoad
3. The Motor Steady-State Current Condition Setting (1/2)..	\Simulations\Transient\Steady State
4. The Motor Steady-State Current Condition Setting (2/2)..	\Simulations\Transient\Trans_1A1
5. Transient Response at Load 3.8A.....	\Simulations\Transient\Trans_3A8
6. LM555 DC Motor Speed Control Circuit (No Load).....	\Simulations\Trans_NoLoad
7. LM555 DC Motor Speed Control Circuit (Fan Load).....	\Simulations\Trans_FanLoad

※ Please copy the folder named “Simulations” to your PC. Library files (.lib) are added already.

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