



Bill of Materials for the LV8824QAGEVK Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
U1	1	PWM Motor driver			VQFN32U	ON Semiconductor	LV8824QA	No	Yes
U2	1	Speed controler			SSOP16	ON Semiconductor	LB8503V	No	Yes
U3	1	Analog switch			TSSOP-14	ON Semiconductor	MC14066BDTR2G	Yes	Yes
U4	1	12V Regulator			SOIC-8 EP	ON Semiconductor	NCV47700PDAJR2G	Yes	Yes
U5	1	Level shifter			TSSOP-16	ON Semiconductor	MC14504BDTR2G	Yes	Yes
U6-8	3	N-Channel Power MOSFET			ECH8	ON Semiconductor	ECH8657	Yes	Yes
J1	1	Motor winding connector			Pitch 2.54mm	TE connectivity	282834-3	Yes	Yes
J2	1	DC power supply connector			Pitch 2.54mm	TE connectivity	282834-2	Yes	Yes
J3	1	Hall sensor connector			Pitch 2.54mm	TE connectivity	282834-4 x2	Yes	Yes
J4	1	Monitor connector			Pitch 2.54mm	TE connectivity	282834-4	Yes	Yes
CN-A1-2	2	Female socket			Pitch 2.54mm	USECONN	FH-2x20	Yes	Yes
CN-B	1	Female socket			Pitch 2.54mm	USECONN	FH-1x20	Yes	Yes
T1-6	6	Nch Power MOSFET			TP-FA	ON Semiconductor	SFT1450-TL-H	Yes	---
T7	1	NPN Transisor			PCP	ON Semiconductor	2SC3646T	Yes	Yes
T8	1	Digital Transisor (47kΩ)			SOT-23	ON Semiconductor	SMMUN2213LT3G	Yes	Yes
SPD_CTL	1	LED	GREEN		1608 BIG	STANLEY	YBG1111C-TR	Yes	Yes
JP1	1	Switch for SPD-CTL			Pitch 2.54mm	USECONN	PH-1x03SG	Yes	Yes
C1	1	VCC Bypass Capacitor	10u, 50V	±10%	3225	MURATA	GRM32ER71H106K	Yes	Yes
C2-3 C5 C11 C24-26	7	Capacitor	0.1u, 50V	±10%	1608	MURATA	GRM188B31H104K	Yes	Yes
C4	1	Capacitor	0.47u, 50V	±10%	3225	MURATA	GRM32BM11H474K	Yes	Yes
C6	1	Capacitor	2200p, 50V	±10%	1608	MURATA	GRM188B11H222K	Yes	Yes
C7	1	Capacitor	0.022u, 50V	±10%	1608	MURATA	GRM188B11H223K	Yes	Yes
C8 C18 C20 C22	4	Capacitor	0.01u, 50V	±10%	1608	MURATA	GRM188B11H103K	Yes	Yes
C9-10 C30-32 C34-36 C38-40	10	Capacitor	0.1u, 50V	±10%	1608 BIG	MURATA	GRM188B11H104K	Yes	Yes
C12-14	3	Capacitor for Hall sensor	6800p, 50V	±10%	1608	MURATA	GRM188B11H682K	Yes	Yes
C15-17	3	Capacitor for Hall IC	5600p, 50V	±10%	1608	MURATA	GRM188B11H562K	Yes	---
C19 C21 C23 C27	4	Capacitor	1000p, 50V	±10%	1608	MURATA	GRM188B11H102K	Yes	Yes
C28 C37	2	Capacitor	10u, 25V	±10%	3216 BIG	MURATA	GRM31CR71E106K	Yes	Yes

C29	1	Capacitor	1u, 50V	±10%	2012 BIG	MURATA	GRM21BR71H105K	Yes	Yes
C33	1	Capacitor	0.01u, 50V	±10%	1608 BIG	MURATA	GRM188B11H103K	Yes	Yes
C38 C50	2	Capacitor	1u, 25V	±10%	1608 BIG	MURATA	GRM188B31E105K	Yes	Yes
C41-43	3	Capacitor for large current FET	0.01u, 50V	±10%	1608 BIG	MURATA	GRM188B11H103K	Yes	---
C44-46	3	Capacitor for large current FET	1000p, 50V	±10%	1608 BIG	MURATA	GRM188B11H102K	Yes	---
C47-49	3	Capacitor for large current FET	0.1u, 50V	±10%	1608 BIG	MURATA	GRM188B11H104K	Yes	---
R1-1-2	2	Sense resistor	0.1, 0.5W	±1%	3216 BIG	SUSUMU	RL1632R-R100-F	Yes	Yes
R5 R7-8 R11 R34 R36	6	Resistor	***	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	---
R6 R10 R35	3	Resistor	0, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R9	1	Resistor	330, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	Yes
R12-14	3	Resistor for Hall IC	0, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	---
R15-17	3	Resistor for Hall IC	10k, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	---
R18-19	2	Resistor for Hall IC	22k, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	---
R20-25	6	Resistor	100, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	Yes
R26-28	3	Resistor	100k, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	Yes
R29	1	Resistor	1k, 0.1W	±5%	1608	KOA	RK73B1JTxxxJ	Yes	Yes
R30	1	Resistor	1.8k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R31	1	Resistor	100, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R32	1	Resistor	15k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R33 R38	2	Resistor	51k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R37 R43	2	Resistor	10k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R39 R42	2	Resistor	0, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	---
R40	1	Resistor	27k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R41	1	Resistor	100k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
R44-49	6	Resistor for large current FET	100, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	---
R50-52	3	Resistor for large current FET	100k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	---
R53	1	Resistor	1.5k, 0.1W	±5%	1608 BIG	KOA	RK73B1JTxxxJ	Yes	Yes
RO1-3	3	Solder JP			4030			Yes	---