

Bill of Material for the STK984-190-EGEVB Evaluation Board

ON Semiconductor®



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
IPM1	1	MOSFET Module			DIP-38	ON Semiconductor	STK984-190-E	No	Yes
U1	1	BLDC Motor Driver			SQFP48	ON Semiconductor	LV8907UW	No	Yes
J1	1	High-Current Connector	4 pins		Pitch 5.07mm	OMRON	XW4E-04C1-V1	Yes	Yes
J2	1	Gate and Source signal	14 pins		Pitch 2.54mm	USECONN	PH-1x14SG	Yes	Yes
J3	1	EXT-Thermister	2 pins		Pitch 2.54mm	USECONN	PH-1x2SG	Yes	Yes
J4	1	ENable control for LV8907	3 pins		Pitch 2.54mm	USECONN	PH-1x3SG	Yes	Yes
Socket1	2	Socket for Arduino MICRO	17 pins		Pitch 2.54mm	USECONN	FHU-1x17SG	Yes	Yes
U, V, W, VB1, VB2, GND PG	7	Faston terminal (TAB)			Through-hole	RSPRO	534-834	Yes	Yes
RF2	1	Sense Resistance	3mΩ	1%	SMD 5025	Vishay	WSLP20103L000FEA	Yes	Yes
T8	1	NPN Transistor			SOT-23	ON Semiconductor	BC846ALT1G	Yes	Yes
D7	1	Switching Diode			SOD-123	ON Semiconductor	SMMSD914T1G	Yes	Yes
D8	1	Zener Diode	18V		SOT-23	ON Semiconductor	SZBZX84B18LT1G	Yes	Yes
C27	1	VB2 Bypass Capacitor	2200uF/35V	±20%	φ16x35.5mm	Rubycon	35RX302200M***16x35.5	Yes	Yes
C8 C11-12	3	VCC Bypass capacitor	4.7uF/50V	±10%	SMD 3225	MURATA	GRM32ER71H475KA	Yes	Yes
C9-10	2	Charge pump capacitor	1uF/50V	±10%	SMD 3216	MURATA	GRM31MB31H105K	Yes	Yes
C7, C14	2	RF signal LPF capacitor	0.01uF/50V	±10%	SMD 1608	MURATA	GRM188B11H103K	Yes	Yes
C29	1	VB2 Bypass capacitor	10uF/50V	±10%	SMD 3225	MURATA	GRM32ER71H106KA	Yes	Yes
R1-3 R7-9	6	MOSFET Gate register	30Ω/0.1W	±5%	SMD 1608	KOA	RK73B1JT300J	Yes	Yes
R4-6, R10-12	6	MOSFET Gate leak register	100kΩ/0.1W	±5%	SMD 1608	KOA	RK73B1JT104J	Yes	Yes
R13-15	3	Chip register	1kΩ/0.1W	±5%	SMD 1608	KOA	RK73B1JT102J	Yes	Yes
R17	1	RF signal LPF register	100Ω/0.1W	±5%	SMD 1608	KOA	RK73B1JT101J	Yes	Yes
R21-25 R28-29	7	Signal pull-up Register	5.1kΩ/0.1W	±5%	SMD 1608	KOA	RK73B1JT512J	Yes	Yes
R26	1	Chip register	22kΩ/0.1W	±5%	SMD 1608	KOA	RK73B1JT223J	Yes	Yes
R27	1	Chip register	47kΩ/0.1W	±5%	SMD 1608	KOA	RK73B1JT473J	Yes	Yes
R18	1	Divide register for Thermister	1kΩ/0.1W	±1%	SMD 1608	KOA	RK73B1JT1001F	Yes	Yes
VB1, VB2, U, V, W, PG, GND	9	Test pin			Through-hole	MAC8	ST-1-3	Yes	Yes
Jumper	1	Short pin for ENable (JP4)			-	RSPRO	334-561	Yes	-
MCU board	0	Communication interface	Optional		DIP-34	Arduino.org	Arduino MICRO	No	-