

# Bill of Material

Sales code: <b>STEVAL-IHM023V1</b>	Project code:
Company: <b>STMicroelectronics</b>	Project name: <b>1kW 3-phase motor control evaluation board featuring L6390 drivers and STGP10NC60KD IGBT</b>

Index	Quantity	Reference	Value / Generic Part Number	Package / Class	Supplier	Supplier's ordering code
1	2	C1, C5	2n2/Y1	Y1 safety CAP - 2n2	Semic Trade	5SB222KT402A97
2	2	C2, C3	220u/450V	elyt. capacitor, RM10mm, 25*50, 105°C	Semic Trade	E=220M/450V HU4 25*50
3	1	C13	nc			
4	1	C14	220n/16V	capacitor, SMD 0805	any	
5	1	C15	150n/X2	Foil X2 capacitor, RM 15mm	EPCOS	B32922C3154M
6	1	C16	1u/50V	elyt. capacitor, SMD 4*4	Semic Trade	E=1M/50V LZ SMD 4x5.5
7	1	C19	100u/25V	elyt. capacitor, SMD 8*8	Semic Trade	E=220M/25V HT SMD 8x10.5
8	5	C20, C26, C24, C27, C28	100n	capacitor, SMD 0805	any	
9	3	C21, C22, C23	10p	capacitor, SMD 0805	any	
10	1	C25	4.7u/25V	elyt. capacitor, SMD 4*4	Semic Trade	E=4.7M/25V LZ SMD 4x5.5
11	1	C29	2n2	capacitor, SMD 0805	any	
12	1	C30	4.7n	capacitor, SMD 0805	any	
13	3	C31, C42, C53	330p	capacitor, SMD 0805	any	
14	6	C32, C33, C43, C44, C54, C55	1u/50V	capacitor, SMD 1206; 50V	any	12065C105KAT2A
15	6	C34, C35, C45, C46, C58, C59	10p	capacitor, SMD 0805	any	
16	3	C36, C47, C60	1n	capacitor, SMD 0805	any	
17	3	C37, C48, C61	470n/16V	capacitor, SMD 0805	any	
18	3	C39, C50, C62	100p	capacitor, SMD 0805	any	
19	1	C4	330n/X2	Foil X2 capacitor, RM 15mm	EPCOS	B32922C3334K
20	3	C40, C49, C63	2n2	capacitor, SMD 0805	any	
21	3	C41, C51, C64	33p	capacitor, SMD 0805	any	
22	1	C52	330p	capacitor, SMD 0805	any	
23	1	C65	100p	capacitor, SMD 0805	any	
24	1	C56	100n	capacitor, SMD 0805	any	
25	1	C57	220p	capacitor, SMD 0805	any	
26	1	C12	47n	capacitor, SMD 0805	any	
27	7	C6, C7, C17, C18, C10, C11	100n	capacitor, SMD 0805	any	
28	1	C8	22u/6.3V	elyt. capacitor, SMD 4*4	Semic Trade	E=22M/6.3V LZ SMD 4x5.5

29	2	C9, C38	10n	capacitor, SMD 0805	any	
30	1	RT1	10k	NTC	EPCOS	B57703M 103G 40
31	1	VR1	10R	NTC	EPCOS	B57364S 100M
32	3	R1, R3, R6	100k	resistor, SMD 1206	any	
33	1	R10	13k	resistor, SMD 0805, 1%	any	
34	1	R11	3k9	resistor, SMD 0805	any	
35	1	R12	nc		any	
36	1	R13	160R	resistor, SMD 1206	any	
37	3	R14, R15, R16	4k7	resistor, SMD 0805	any	
38	1	R18	6.8k	resistor, SMD 0805	any	
39	2	R19, R108	nc			
40	4	R2, R4, R23, R24	470K	resistor, SMD 1206, 1%	any	
41	3	R21, R107, R106	220R	resistor, SMD 0805	any	
42	6	R22, R27, R20, R33, R74, R17	10k	resistor, SMD 0805	any	
43	1	R25	560R	resistor, SMD 0805	any	
44	1	R32	9k1	resistor, SMD 0805, 1%	any	
45	1	R26	1k	resistor, SMD 0805, 1%	any	
46	1	R28	2k2	resistor, SMD 0805	any	
47	1	R29	100R	resistor, SMD 0805	any	
48	1	R30	15k	resistor, SMD 0805	any	
49	1	R31	27k	resistor, SMD 0805, 1%	any	
50	1	R34	12k	resistor, SMD 0805, 1%	any	
51	4	R35, R36, R57, R82	100k	resistor, SMD 0805	any	
52	4	R37, R41, R58, R62	10R	resistor, SMD 0805	any	
53	6	R38, R59, R85, R40, R61, R87	1k0	resistor, SMD 0805, 1%	any	
54	4	R39, R45, R60, R65	120R	resistor, SMD 0805	any	
55	3	R42, R63, R89	3k3	resistor, SMD 0805	any	
56	3	R43, R64, R90	47k	resistor, SMD 0805, 1%	any	
57	1	R44	3k6	resistor, SMD 0805, 1%	any	
58	3	R46, R66, R92	3k3	resistor, SMD 0805, 1%	any	
59	1	R49	nc			
60	2	R5, R9	120R	resistor, SMD 0805	any	
61	3	R52, R97, R78	3k3	resistor, SMD 0805, 1%	any	
62	3	R54, R76, R100	820R	resistor, SMD 0805, 1%	any	
63	3	R55, R71, R101	0R15	resistor, SMD 2512, 1%, 2W	Farnell	940-3230
64	3	R56, R68, R102	nc			
65	6	R67, R70, R75, R79, R50, R53	1k0	resistor, SMD 0805, 1%	any	
66	1	R69	680R	resistor, SMD 0805, 1%	any	
67	1	R7	7k5	resistor, SMD 0805, 1%	any	
68	6	R72, R48, R47, R77, R51, R98	1k	resistor, SMD 0805, 1%	any	
69	1	R73	nc			
70	1	R8	51k	resistor, SMD 0805, 1%	any	
71	1	R80	2k2	resistor, SMD 0805, 1%	any	
72	1	R81	33R	resistor, SMD 0805, 1%	any	
73	2	R83, R88	10R	resistor, SMD 0805	any	

74	1	R104	68k	resistor, SMD 0805	any	
75	1	R84	2k2	resistor, SMD 0805	any	
76	2	R86, R91	120R	resistor, SMD 0805	any	
77	5	R93, R95, R99, R94, R103	1k	resistor, SMD 0805, 1%	any	
78	1	R96	nc			
79	1	R105	220k	resistor, SMD 0805, 1%	any	
80	1	L1	47uH	SMD choke, 0.5A	Wurth	74455147
81	1	L2	2.2mH	SMD choke, 0.25A	Wurth	74456322
82	1	D1	KBU6K	Diode bridge, 250VAC, 8A	GM	227-048
83	7	D11, D12, D15, D16, D19, D20, D2	BAT48JFILM	Diode, SMD, SOD-323	STMicroelectronics	
84	8	D13, D5, D14, D17, D18, D21, D22, D10	1N4148	Universal diode, SMD, SOD80C	GM	917-001
85	2	D25, D26	BZX84B13V	Zener diode, SOT23, 13V	RS	484-3328
86	2	D23, D24	BAT48JFILM	Diode, SMD, SOD-323	STMicroelectronics	
87	1	D3	STPS1150A	Schottky diode, DO-241AC (SMA)	STMicroelectronics	
88	1	D4	SM6T36A	Transil, JEDEC DO-214AA	STMicroelectronics	
89	2	D6, D8	STTH1L06A	HV diode, SMA	STMicroelectronics	
90	1	D7	LED RED	Universal LED 3mm, 2mA	any	
91	1	D9	BZV55C18SMD	Zener diode, SOD80, 18V	GM	919-007
92	6	Q1, Q4, Q5, Q12, Q13, Q14	BC847A	NPN transistor, SOT23	GM	912-015
93	7	Q10, Q11, Q3, Q6, Q7, Q8, Q9	STGP10NC60KD	N channel IGBT, TO220	STMicroelectronics	
94	1	Q2	BC857B	PNP transistor, SOT23	GM	912-021
95	1	F1	Holder	Fuse holder 5x20mm, KS21 SW	GM	829-051
96	1	F1	6.25A	Fuse 6.25A Slov, FST06.3, 5x20mm	GM	633-116
97	1	LS1	FINDER 4031-12	Relay 12VDC	GM	634-077
98	1	U1	L78L33ACD13TR	Linear regulator 3.3V, SO-8	STMicroelectronics	
99	1	U2	L7815ACV	Linear regulator 15V, TO-220	STMicroelectronics	
100	1	U3	VIPer16LD	Smart PWM driver, SO-16	STMicroelectronics	
101	2	U4, U8	TS3911LT	Voltage comparator, SOT23-5	STMicroelectronics	
102	3	U5, U6, U7	L6390D	HV low&high side driver, SO-16	STMicroelectronics	
103	1	U9	TL431ACD	Voltage reference, SO-8	STMicroelectronics	
104	3	TP1, TP2, TP3	nc			
105	18	TP4 - TP21	PCB Terminal 1MM	Test pin	RS	262-2179
106	1+1	J1	Connector 4P	Connector RM5mm, 4-pole male&female	Semic	BU96 4P & ST14 4P
107	1+1	J2	Connector 3P	Connector RM5mm, 3-pole male&female	Semic	BU96 3P & ST14 3P
108	1	J3	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	Semic	X128V-A 2P
109	1+1	J4	Con 5mm, 2P+3P	Connector RM 5mm, 2-pole & 3-pole, screw	Semic	X128V-A 2P & X128V-A 3P
110	1	J5	MLW34G	MLW connector 34pins	GM	800-053
111	1	J6	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	Semic	X128V-A 2P
112	1	J7	BL815G	Pins RM2.54mm, (12 pins from 15 pins way)	GM	832-052
113	1	J8	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	Semic	X128V-A 2P

114	1	W1	Jumper 2.54	Two pins of break way + jumper	any	
115	1	W10	Jumper 2.54	Two pins of break way + jumper	any	
116	1	W11	Jumper 2.54	Three pins of break way + jumper in position A	any	
117	1	W12	Wire jumper	Not assembled		
118	1	W13	Wire jumper	Wire	any	
119	1	W2	Wire jumper	Wire	any	
120	1	W3	Wire jumper	Not assembled		
121	1	W4	Jumper 2.54	Two pins of break way + jumper	any	
122	1	W5	Jumper 2.54	Three pins of break way + jumper in position A	any	
123	1	W6	Jumper 2.54	Two pins of break way	any	
124	1	W7	Jumper 2.54	Two pins of break way	any	
125	1	W8	Wire jumper	Not assembled		
126	1	W9	Wire jumper	Wire	any	
127	150mm	Het 1	Heatsink	150 mm of AL profile 8693	Semic	Heasy 8693
128	1	Het 2	Heatsink	Heatsink for TO-220 with montage pin	Semic	8205/19/ST Vert
129	7		Clip for het	montage clip PADA 7704, TO-220, 10mm	Semic	Heasy Clip 7704
130	1		Clip for het	montage clip PADA 7703, TO-220, 15mm	Semic	Heasy Clip 7703
131	130mm		Isolation tape	Isolation tape, 24mm wide; apr. 130mm long, self adhesive	Semic	I+W 24-15GHR/AD
132	2		Plexi cover	Plexi cover 14695	MK Plexi	order nr. 14695
133	5		Distance	Distance M3, 20mm long, Messing with screw	GM	623-022
134	5		Distance	Distance M3, 40mm long, Messing with screw	GM	623-034
135	5		Distance	Distance M3, 10mm long, Messing with screw	GM	623-020
136	5		Distance	Distance M3, 5mm long, Messing with screw	GM	623-019
137	5		Spur 3mm	3mm spur (under screw)	any	
138	10		Screw 3mm	Screw 3mm	any	
139	1		CD/DVD burning			
140	1		CD/DVD Label			
141	1		Box Label			