

Sales code: STEVAL-IHM028V2	Project code:
Company: STMicroelectronics	Project name: 2kW 3-phase motor control evaluation board featuring IGBT intelligent power module STGIPS20K60

Index	Quantity	Reference	Value / Generic Part Number	Package / Class	Manufacturer	Manufacturer's ordering code / Orderable Part Number
1	2	C1,C6	4n7/Y2	Y2 safety CAP - 4n7	Murata/Any	
2	4	C2,C3,C4,C75	1500u/250V	Elyt 35x50	Kendeil	
3	1	C5	150n/X2	X2 cap; 6x15x26,5	Epcos	B32923C3154M
4	2	C7,C72	10n	capacitor, SMD 0805	any (AVX,...)	
5	23	C8,C9,C11,C12,C14,C19,C22,C23,C24,C25,C26,C27,C29,C30,C34,C35,C36,C38,C41,C64,C66,C70,C73	100n	capacitor, SMD 0805	any (AVX,...)	
6	2	C10,C13	47u/4V	elyt. capacitor, SMD 4*4	any	
7	2	C28, C65	22u/6.3V	elyt. capacitor, SMD 4*4	any	
8	0	C15	n.c.			
9	1	C16	220n	capacitor, SMD 0805	any (AVX,...)	
10	1	C17	3.3u/450V	elyt. capacitor, 10x20	any	
11	1	C18	1u/50V	elyt. capacitor, SMD 4*4	any	
12	1	C20	100u/25V	elyt. capacitor, SMD 8*8	any	
13	2	C21, C40	4u7/35V	elyt. capacitor, SMD 4*4	any	
14	9	C31,C32,C33,C44,C45,C51,C52,C54,C55	10p	capacitor, SMD 0805	any (AVX,...)	
15	2	C37,C56	2n2	capacitor, SMD 0805	any (AVX,...)	
16	1	C39	470p	capacitor, SMD 0805	any (AVX,...)	
17	1	C42	4n7	capacitor, SMD 0805	any (AVX,...)	
18	5	C43,C60,C63,C69,C74	100p	capacitor, SMD 0805	any (AVX,...)	
19	6	C46,C47,C48,C49,C50,C53	1u	capacitor, SMD 1206; 50V	AVX	12065C105KAT2A
20	2	C57,C71	330p	capacitor, SMD 0805	any (AVX,...)	
21	6	C58,C59,C61,C62,C67,C68	47p	capacitor, SMD 0805	any (AVX,...)	
22	1	RT1	10k	NTC, 10k, handle under screw	Epcos	B57703M 103G 40
23	3	R1, R4, R7	100k	resistor, SMD 1206	Vishay	
24	3	R53,R57,R61	100k	resistor, SMD 0805, 1%	Vishay	
25	4	R2,R5,R40,R41	470k	resistor, SMD 1206	Vishay	
26	1	R3	10R	NTC resistor 10R, trough hole	Epcos	B57464S0100M
27	2	R6,R10	120R	resistor, SMD 0805, 1%	Vishay	
28	2	R8, R111	7k5	resistor, SMD 0805, 1%	Vishay	
29	3	R9,R91,R106	51k	resistor, SMD 0805, 1%	Vishay	
30	1	R11	13k	resistor, SMD 0805, 1%	Vishay	
31	4	R12,R16,R31,R37	5k6	resistor, SMD 0805, 1%	Vishay	
32	1	R13	160R	resistor, SMD 1206	Vishay	
33	20	R14,R36,R44,R79,R86,R95,R103, R54,R55,R58,R59,R62,R63,R72, R78, R80, R85, R87, R94, R97	1k0	resistor, SMD 0805, 1%	Vishay	
34	7	R15,R27,R28,R29,R50,R76,R93	10k	resistor, SMD 0805, 1%	Vishay	
35	9	R17,R18,R19,R20,R21,R22,R23,R24,R25	4k7	resistor, SMD 0805, 1%	Vishay	
36	0	R26, R43	nc			
37	1	R30	100R	resistor, SMD 0805, 1%	Vishay	
38	8	R32,R98, R77, R83, R84, R90, R92, R100	8k2	resistor, SMD 0805, 1%	Vishay	
39	4	R33,R49,R51,R114	15k	resistor, SMD 0805, 1%	Vishay	
40	1	R34	6.8k	resistor, SMD 0805, 1%	Vishay	
41	2	R35, R109	910R	resistor, SMD 0805, 1%	Vishay	
42	2	R47,R96	220R	resistor, SMD 0805, 1%	Vishay	
43	1	R38	22R	resistor, SMD 0805, 1%	Vishay	
44	1	R39	68k	resistor, SMD 0805, 1%	Vishay	
45	1	R42	560R	resistor, SMD 0805, 1%	Vishay	
46	4	R45,R108,R110,R117	2k2	resistor, SMD 0805, 1%	Vishay	
47	1	R115	4k3	resistor, SMD 0805, 1%	Vishay	

48	1	R46	220k	resistor, SMD 0805, 1%	Vishay	
49	2	R48,R52	27k	resistor, SMD 0805, 1%	Vishay	
50	5	R56,R60,R65,R116, R73	3k3	resistor, SMD 0805, 1%	Vishay	
51	1	R64	16k	resistor, SMD 0805, 1%	Vishay	
52	8	R66,R67,R68,R69,R70,R71,R74,R75	0R05	resistor, SMD 2512, 1%, 2W	Welwyn	LR2512-R05FW
53	6	R81,R82,R88,R89,R99,R101	3k9	resistor, SMD 0805, 1%	Vishay	
54	2	R102,R105	3k0	resistor, SMD 0805, 1%	Vishay	
55	1	R104	2k7	resistor, SMD 0805, 1%	Vishay	
56	1	R107	180R	resistor, SMD 0805, 1%	Vishay	
57	1	R112	1k2	resistor, SMD 0805, 1%	Vishay	
58	1	R113	120k	resistor, SMD 0805, 1%	Vishay	
59	1	R118	1k8	resistor, SMD 0805, 1%	Vishay	
60	1	D1	GBPC3510W	Diode bridge 28.5x28.5x7.5; wire legs, 35A	Any	GBPC3510W
61	8	D2,D8,D11,D12,D15,D16,D17,D18	BAT48JFILM	diode SMD	STMicroelectronics	
62	3	D3,D9,D19	1N4148	diode SMD, MINI-MELF	any	
63	2	D4,D6	STTH1L06A	Diode SMD, SMA	STMicroelectronics	
64	1	D13	LED Red	LED 3mm, 2mA, universal	any	
65	1	D7	BZV55C18SMD	zener diode 18V, MINI-MELF	any	BZV55C18SMD
66	1	D10	LED Yellow	LED 3mm, 2mA, universal	any	
67	1	D5	LED Green	LED 3mm, 2mA, universal	any	
68	1	D14	BZX84B13V	Zener diode, SOT23, 13V; 2%	NXP	
69	10	Q1,Q2,Q3,Q4,Q5,Q7,Q9,Q10,Q11,Q12	BC847A	NPN transistor, SOT23	Fairchild	
70	1	Q6	BC857B	PNP transistor, SOT23	Fairchild	
71	1	Q8	STGW35NB60SD	TO-247	STMicroelectronics	
72	1	Q13	BC807-25 SMD	PNP transistor 45V/0.5A, SOT23	Fairchild	
73	1	L1	330uH	inductive choke RM 5mm	Coilcraft	RFB0810-331L
74	1	L2	1.5mH	SMD choke, 1.5mH/1.5A	Coilcraft	DO5040H-145KLB
75	1	U1	LF33ABDT-TR	Linear regulator DPAK	STMicroelectronics	
76	1	U2	VIPer26LD	PWM smatr driver, SO-16	STMicroelectronics	
77	1	U3	L78M05AB	Linear regulator DPAK	STMicroelectronics	
78	1	U4	M74HC14R	CMOS logic, SO-14	STMicroelectronics	
79	2	U5,U10	TS3431BILT	voltage reference, SOT23	STMicroelectronics	
80	1	U6	TS391ILT	op amp, SOT23-5	STMicroelectronics	
81	1	U7	STGIPS20C60	IPM IGBT module	STMicroelectronics	
82	1	U8	TSV994IDT	op amp, SO-14	STMicroelectronics	
83	1	U9	TS372ID	dual comparator, SO-8	STMicroelectronics	
84	0	TP1, TP3, TP5	nc			
85	19	TP2,TP4,TP6,TP7,TP8,TP9,TP10,TP11,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20,TP21,TP22	PCB Terminal 1MM	Test pin		
86		W1	Jumper 2.54	Three pins of pin header + jumper in position A		
87		W2	Jumper 2.54	Three pins of pin header + jumper in position A		
88		W3	Jumper 2.54	Two pins of pin header		
89		W4	Jumper 2.54	Two pins of pin header		
90		W5	Jumper 2.54	Two pins of pin header + jumper		
91		W6	Jumper 2.54	Three pins of pin header + jumper in position A		
92		W7	Jumper 2.54	nc		
93		W8	Jumper 2.54	nc		
94		W9	Jumper 2.54	soldered PCB pads together		
95		W10	Jumper 2.54	soldered PCB pads together		
96		W11	Jumper 2.54	Two pins of pin header + jumper		
97		W12	Jumper 2.54	Two pins of pin header + jumper		
98		W13	Jumper 2.54	Two pins of pin header + jumper		
99		W14	Jumper 2.54	Two pins of pin header + jumper		
100		W15	Jumper 2.54	nc		

101	1+1	J1	Connector 4P	Connector RM5mm, 4-pole male&female	Hartman	
102		1 J2	MLW34G	MLW connector 34pins	ARK	
103		1 J3	BL815G	Pins RM2.54mm, (12 pins from 15 pin liste)		
104	1+1	J4	Connector 3P	Connector RM5mm, 3-pole male&female	Hartman	
105	1+1	J5	Con 5mm, 2P+3P	Connector RM 5mm, 2-pole & 3-pole, screw	ARK	
106		1 J6	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	ARK	
107		1 J7	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	ARK	ARK120/2
108		1 LS1	Finder 4061	Relay 12V; 16A/250VAC	Finder	RELEF4061-12
109		1 FAN1	Connector 2.54/3P	PSH02-03PG		PSH02-03PG
110		2 F1	PA-PZ1008	Fuse holder 10x38; 2pc in one board		
111		1	Fuse 16A, high cur.	P=16A/120kA-500V; 10x38		
112	150mm	Heatsink	Heatsink	150 mm of AL profile 8424 (65x70)	Pada Engineering	
113		1	AIREN red wings 70	fan 12V; 70mmx70mmx15mm	Airen	AIREN-FRW70
114	~30mm		Isolation tape	Isolation tape, 24mm wide; apr. 30mm long, self adhesive	any	
115		2	Plexi cover	Plexi cover according to ord. nr. 22481	MK Plexi	
116		9	Distance	Distance M3, 35mm long, Messing with screw		DA5M3X35
117		4	Distance	Distance M3, 8mm long, Messing with screw		DA5M3X08
118		9	Distance	Distance M3, 50mm long, Messing		DI5M3X50
119		9	Distance	Distance M3, 10mm long, Messing with screw		DA5M3X10
120		9	Distance	Distance M3, 5mm long, Messing with screw		DA5M3X05
121		21	Spur 3mm	3mm spur (under screw)		
122		14	Screw 3mm	Screw 3mm, 6mm long		
123		4	Screw 3mm	Screw 3mm, 12mm long		
124		~	Silicone grease			
125		3	Shrink plastic strip	Universal plastic belt 100mmx2.5mm	Panduit, any	F0301CV-100W
126	~30mm		Spaghetti insulation	Diam. 2mm; 30mm long	any	