

Sales code: <b>STVAL-IHM028V1</b>	Project code:
Company: <b>STMicroelectronics</b>	Project name: <b>2kW 3-phase motor control evaluation board featuring IGBT intelligent power module STGIPS20K60</b>

Index	Quantity	Reference	Value / Generic Part Number	Package / Class	Manufacturer	Manufacturer's ordering code / Orderable Part Number	Supplier	Supplier's ordering code
1	2	C1,C6	4n7/Y2	Y2 safety CAP - 4n7	Murata/Any		Semic Trade	5SE472MT402A98
2	4	C2,C3,C4,C75	1500u/250V	Elyt 35x50	Kendeil		Semic Trade	E=1G5/250 K05 35x50
3	1	C5	150n/X2	X2 cap; 6x15x26.5	Epcos	B32923C3154M	Farnell	1609510
4	2	C7,C72	10n	capacitor, SMD 0805	any (AVX,...)		any	
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,...)		any	
6	2	C10,C13	47u/4V	elyt. capacitor, SMD 4*4	any		Semic Trade	E=47M/4V SS SMD 4x5.2
7	2	C28,C65	22u/6.3V	elyt. capacitor, SMD 4*4	any		Semic Trade	E=22M/6.3V LZ SMD 4x5.5
8	0	C15	n.c.					
9	1	C16	220n	capacitor, SMD 0805	any (AVX,...)		any	
10	1	C17	3.3u/450V	elyt. capacitor, 10x20	any		Semic Trade	E=3.3/450V KMX 10x20
11	1	C18	1u/50V	elyt. capacitor, SMD 4*4	any		Semic Trade	E=1M/50V LZ SMD 4x5.5
12	1	C20	100u/25V	elyt. capacitor, SMD 8*8	any		Semic Trade	E=220M/25V HT SMD 8x10.5
13	2	C21,C40	4u7/35V	elyt. capacitor, SMD 4*4	any		Semic Trade	E=4.7/35 LZ SMD 4x5.5
14	9	C31,C32,C33,C44,C45,C51,C52,C54,C55	10p	capacitor, SMD 0805	any (AVX,...)		any	
15	2	C37,C56	2n2	capacitor, SMD 0805	any (AVX,...)		any	
16	1	C39	470p	capacitor, SMD 0805	any (AVX,...)		any	
17	1	C42	4n7	capacitor, SMD 0805	any (AVX,...)		any	
18	5	C43,C60,C63,C69,C74	100p	capacitor, SMD 0805	any (AVX,...)		any	
19	6	C46,C47,C48,C49,C50,C53	1u	capacitor, SMD 1206; 50V	AVX	12065C105KAT2A	any	
20	2	C57,C71	330p	capacitor, SMD 0805	any (AVX,...)		any	
21	6	C58,C59,C61,C62,C67,C68	47p	capacitor, SMD 0805	any (AVX,...)		any	
22	1	R1	10k	NTC, 10k, handle under screw	Epcos	B57703M 103G 40	Farnell	1712525
23	3	R1,R4,R7	100k	resistor, SMD 1206	Vishay		any	
24	3	R53,R57,R61	100k	resistor, SMD 0805, 1%	Vishay		any	
25	4	R2,R5,R40,R41	470k	resistor, SMD 1206	Vishay		any	
26	1	R3	10R	NTC resistor 10R, trough hole	Epcos	B57464S0100M	Epcos	B57464S0100M
27	2	R6,R10	120R	resistor, SMD 0805, 1%	Vishay		any	
28	2	R8,R111	7k5	resistor, SMD 0805, 1%	Vishay		any	
29	3	R9,R91,R106	51k	resistor, SMD 0805, 1%	Vishay		any	
30	1	R11	13k	resistor, SMD 0805, 1%	Vishay		any	
31	4	R12,R16,R31,R37	5k6	resistor, SMD 0805, 1%	Vishay		any	
32	1	R13	160R	resistor, SMD 1206	Vishay		any	
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		any	
34	7	R15,R27,R28,R29,R50,R76,R93	10k	resistor, SMD 0805, 1%	Vishay		any	
35	9	R17,R18,R19,R20,R21,R22,R23,R24,R25	4k7	resistor, SMD 0805, 1%	Vishay		any	
36	0	R26,R43	nc					
37	1	R30	100R	resistor, SMD 0805, 1%	Vishay		any	
38	8	R32,R98,R77,R83,R84,R90,R92,R100	8k2	resistor, SMD 0805, 1%	Vishay		any	
39	4	R33,R49,R51,R114	15k	resistor, SMD 0805, 1%	Vishay		any	
40	1	R34	6.8k	resistor, SMD 0805, 1%	Vishay		any	
41	2	R35,R109	910R	resistor, SMD 0805, 1%	Vishay		any	
42	2	R47,R96	220R	resistor, SMD 0805, 1%	Vishay		any	
43	1	R38	22R	resistor, SMD 0805, 1%	Vishay		any	
44	1	R39	68k	resistor, SMD 0805, 1%	Vishay		any	
45	1	R42	560R	resistor, SMD 0805, 1%	Vishay		any	
46	4	R45,R108,R110,R117	2k2	resistor, SMD 0805, 1%	Vishay		any	
47	1	R115	4k3	resistor, SMD 0805, 1%	Vishay		any	
48	1	R46	220k	resistor, SMD 0805, 1%	Vishay		any	
49	2	R48,R52	27k	resistor, SMD 0805, 1%	Vishay		any	
50	5	R56,R60,R65,R116,R73	3k3	resistor, SMD 0805, 1%	Vishay		any	

51	1	R64	16k	resistor, SMD 0805, 1%	Vishay		any	
52	8	R66,R67,R68,R69,R70,R71,R74,R75	0R05	resistor, SMD 2512, 1%, 2W	Welwyn	LR2512-R05FW	Farnell	1100065RL
53	6	R81,R82,R88,R89,R99,R101	3k9	resistor, SMD 0805, 1%	Vishay		any	
54	2	R102,R105	3k0	resistor, SMD 0805, 1%	Vishay		any	
55	1	R104	2k7	resistor, SMD 0805, 1%	Vishay		any	
56	1	R107	180R	resistor, SMD 0805, 1%	Vishay		any	
57	1	R112	1k2	resistor, SMD 0805, 1%	Vishay		any	
58	1	R113	120k	resistor, SMD 0805, 1%	Vishay		any	
59	1	R118	1k8	resistor, SMD 0805, 1%	Vishay		any	
60	1	D1	GBPC3510W	Diode bridge 28.5x28.5x7.5; wire legs, 35A	Any	GBPC3510W	Semic	GBPC3510W
61	8	D2,D8,D11,D12,D15,D16,D17,D18	BAT48JFILM	diode SMD	STMicroelectronics		ERA	BAT48JFILM
62	3	D3,D9,D19	1N4148	diode SMD, MINI-MELF	any		GM	917-001
63	2	D4,D6	STTH1L06A	Diode SMD, SMA	STMicroelectronics		ERA	STTH1L06A
64	1	D13	LED Red	LED 3mm, 2mA, universal	any		GM	511-024
65	1	D7	BZV55C18SMD	zener diode 18V, MINI-MELF	any	BZV55C18SMD	GM	919-007
66	1	D10	LED Yellow	LED 3mm, 2mA, universal	any		GM	511-022
67	1	D5	LED Green	LED 3mm, 2mA, universal	any		GM	511-396
68	1	D14	BZX84B13V	Zener diode, SOT23, 13V; 2%	NXP		RS	484-3328
69	10	Q1,Q2,Q3,Q4,Q5,Q7,Q9,Q10,Q11,Q12	BC847A	NPN transistor, SOT23	Fairchild		GM	912-015
70	1	Q6	BC857B	PNP transistor, SOT23	Fairchild		GM	912-021
71	1	Q8	STGW35NB60SD	TO-247	STMicroelectronics		ERA	STGW35NB60SD
72	1	Q13	BC807-25 SMD	PNP transistor 45V/0.5A, SOT23	Fairchild		GM	912-002
73	1	L1	330uH	inductive choke RM 5mm	Coilcraft	RFB0810-331L	Coilcraft	RFB0810-331L
74	1	L2	1.5mH	SMD choke, 1.5mH/1.5A	Coilcraft	DO5040H-145KLB	Coilcraft	DO5040H-145KLB
75	1	U1	LF33ABDT-TR	Linear regulator DPAK	STMicroelectronics		ERA	LF33ABDT-TR
76	1	U2	VIper26LD	PWM smatr driver, SO-16	STMicroelectronics		ERA	VIper26LD
77	1	U3	L78M05AB	Linear regulator DPAK	STMicroelectronics		ERA	L78M05AB
78	1	U4	M74HC14R	CMOS logic, SO-14	STMicroelectronics		ERA	M74HC14RM13TR
79	2	U5,U10	TS3431BILT	voltage reference, SOT23	STMicroelectronics		ERA	TS3431BILT
80	1	U6	TS3911LT	op amp, SOT23-5	STMicroelectronics		ERA	TS3911LT
81	1	U7	STGIPS20K60	IPM IGBT module	STMicroelectronics		ERA	STGIPS20K60
82	1	U8	TSV994IDT	op amp, SO-14	STMicroelectronics		ERA	TSV994IDT
83	1	U9	TS372ID	dual comparator, SO-8	STMicroelectronics		ERA	TS372ID
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			RS	262-2179
86		W1	Jumper 2.54	Three pins of pin header + jumper in position A			any	
87		W2	Jumper 2.54	Three pins of pin header + jumper in position A			any	
88		W3	Jumper 2.54	Two pins of pin header			any	
89		W4	Jumper 2.54	Two pins of pin header			any	
90		W5	Jumper 2.54	Two pins of pin header + jumper			any	
91		W6	Jumper 2.54	Three pins of pin header + jumper in position A			any	
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			any	
97		W12	Jumper 2.54	Two pins of pin header + jumper			any	
98		W13	Jumper 2.54	Two pins of pin header + jumper			any	
99		W14	Jumper 2.54	Two pins of pin header + jumper			any	
100		W15	Jumper 2.54	nc				
101	1+1	J1	Connector 4P	Connector RM5mm, 4-pole male&female	Hartman		Semic	BU96 4P & ST14 4P
102	1	J2	MLW34G	MLW connector 34pins	ARK		GM	800-053
103	1	J3	BL815G	Pins RM2.54mm, (12 pins from 15 pin liste)			GM	832-052
104	1+1	J4	Connector 3P	Connector RM5mm, 3-pole male&female	Hartman		Semic	BU96 3P & ST14 3P
105	1+1	J5	Con 5mm, 2P+3P	Connector RM 5mm, 2-pole & 3-pole, screw	ARK		Semic	X128V-A 2P & X128V-A 3P
106	1	J6	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	ARK		Semic	X128V-A 2P
107	1	J7	Con 5mm, 2P	Connector RM 5mm, 2-pole, screw	ARK	ARK120/2	GM	821-001
108	1	LS1	Finder 4061	Relay 12V; 16A/250VAC	Finder	RELEF4061-12	GM	634-038

109	1	FAN1	Connector 2.54/3P	PSH02-03PG		PSH02-03PG	GM	800-164
110	2	F1	PA-PZ1008	Fuse holder 10x38; 2pc in one board			Semic	PA-PZ1008
111	1		Fuse 16A, high cur.	P=16A/120kA-500V; 10x38			Semic	P=16A/120kA-500V, AM 10x38
112	150mm	Heatsink	Heatsink	150 mm of AL profile 8424 (65x70)	Pada Engineering		Semic	H+8424
113	1		AIREN red wings 70	fan 12V; 70mmx70mmx15mm	Airen	AIREN-FRW70	Alza	CA632i
114	-30mm		Isolation tape	Isolation tape, 24mm wide; apr. 30mm long, self adhesive	any		Semic	I+W 24-15GHR/AD
115	2		Plexi cover	Plexi cover according to ord. nr. 22481	MK Plexi		MK Plexi	order nr. 22481
116	9		Distance	Distance M3, 35mm long, Messing with screw		DA5M3X35	GM	623-025
117	4		Distance	Distance M3, 8mm long, Messing with screw		DA5M3X08	GM	623-066
118	9		Distance	Distance M3, 50mm long, Messing		DI5M3X50	GM	623-035
119	9		Distance	Distance M3, 10mm long, Messing with screw		DA5M3X10	GM	623-020
120	9		Distance	Distance M3, 5mm long, Messing with screw		DA5M3X05	GM	623-019
121	21		Spur 3mm	3mm spur (under screw)			any	
122	14		Screw 3mm	Screw 3mm, 6mm long			any	
123	4		Screw 3mm	Screw 3mm, 12mm long			any	
124	-		Silicone grease				any	
125	3		Shrink plastic strip	Universal plastic belt 100mmx2.5mm	Panduit, any	F0301CV-100W	GM	656-353
126	-30mm		Spaghetti insulation	Diam. 2mm; 30mm long	any			
127	1		CD/DVD burning					
128	1		CD/DVD Label					
129	1		Box Label					
130	1		Plastic antistatic bag					