

STEVAL-IHM023V2

Bill of material

Quantity	Reference	Value / generic part number	Package / class	Manufacturer
2	C1, C5	2.2 nF/Y1	Y1 safety CAP - 4.7 nF	Murata Manufacturing Co., Ltd.
2	C2, C3	1200 μ F/250 V	Elyt. capacitor, RM 10 mm, 30 x 45, 105 °C	Panasonic
1	C13	nc		
1	C14	220 nF/25 V	Capacitor, SMD 0805	
1	C15	3.3 μ F/450 V		Panasonic
1	C16	1 μ F/50 V	Elyt. capacitor, SMD 4 x 4	Panasonic
1	C19	100 μ F/25 V	Elyt. capacitor, SMD 8 x 8	Panasonic
9	C66, C67, C71, C72, C73, C26, C24, C27, C28, C6, C7, C17, C18, C10, C11	100 nF/25 V	Capacitor, SMD 0805	
3	C69, C70, C74	10 pF/25 V	Capacitor, SMD 0805	
1	C25	4.7 μ F/25 V	Elyt. capacitor, SMD 4 x 4	Panasonic
1	C29	2.2 nF/25 V	Capacitor, SMD 0805	
1	C30	4.7 nF/25 V	Capacitor, SMD 0805	
3	C31, C42, C53	330 pF/25 V	Capacitor, SMD 0805	
6	C32, C33, C43, C44, C54, C55	1 μ F/50 V	Capacitor, SMD 1206; 50 V	
6	C34, C35, C45, C46, C58, C59	10 pF/25 V	Capacitor, SMD 0805	
4	C36, C47, C60, C75	1 nF/25 V	Capacitor, SMD 0805	
3	C37, C48, C61	470 nF/25 V	Capacitor, SMD 0805	
3	C39, C50, C62	100 pF/25 V	Capacitor, SMD 0805	
1	C4	150 nF/X2	Foil X2 capacitor, RM 22.5 mm	Arcotronics
3	C40, C49, C63	2.2 nF/25 V	Capacitor, SMD 0805	
3	C41, C51, C64	33 pF/25 V	Capacitor, SMD 0805	
1	C52	330 pF/25 V	Capacitor, SMD 0805	
1	C65	100 pF/25 V	Capacitor, SMD 0805	
1	C56	100 nF/25 V	Capacitor, SMD 0805	
1	C57	470 pF/25 V	Capacitor, SMD 0805	

Bill of material (continued)

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1	C12	47 nF/25 V	Capacitor, SMD 0805	
2	C8,C68	22 μ F/6.3 V	Elyt. capacitor, SMD 4 x 4	Panasonic
2	C9, C38	10 nF/25 V	Capacitor, SMD 0805	
1	RT1	10 k Ω	NTC	EPCOS B57703M103G40
1	VR1	10 Ω	NTC	EPCOS B57364S100M
3	R1, R3, R6	100 k Ω	Resistor, SMD 1206	
1	R10	13 k Ω	Resistor, SMD 0805, 1%	
4	R11,R14,R120,R121	5.6 k Ω	Resistor, SMD 0805	
1	R12	nc		
1	R13	160 Ω	Resistor, SMD 1206	
9	R112, R113, R114, R115, R116, R117,R109, R110,R111	4.7 k Ω	Resistor, SMD 0805	
1	R18	6.8 k Ω	Resistor, SMD 0805	
2	R19, R108	nc		
4	R2, R4, R23, R24	470 k Ω	Resistor, SMD 1206, 1%	
3	R21, R107, R106	220 Ω	Resistor, SMD 0805	
6	R22, R27, R20, R33, R74, R17	10 k Ω	Resistor, SMD 0805	
1	R25	560 Ω	Resistor, SMD 0805	
1	R32	9.1 k Ω	Resistor, SMD 0805, 1%	
1	R26	1 k Ω	Resistor, SMD 0805, 1%	
3	R28,R122,R123	2.2 k Ω	Resistor, SMD 0805	
1	R29	100 Ω	Resistor, SMD 0805	
1	R30	15 k Ω	Resistor, SMD 0805	
1	R31	27 k Ω	Resistor, SMD 0805, 1%	
1	R34	12 k Ω	Resistor, SMD 0805, 1%	
4	R35, R36, R57, R82	100 k Ω	Resistor, SMD 0805	
4	R37, R41, R58, R62	10 Ω	Resistor, SMD 0805	
6	R38, R59, R85, R40, R61, R87	1 k Ω	Resistor, SMD 0805, 1%	
4	R39, R45, R60, R65	120 Ω	Resistor, SMD 0805	
3	R42, R63, R89	3.3 k Ω	Resistor, SMD 0805	
3	R43, R64, R90	47 k Ω	Resistor, SMD 0805, 1%	

Bill of material (continued)

Quantity	Reference	Value / generic part number	Package / class	Manufacturer
1	R44	3.6 kΩ	Resistor, SMD 0805, 1%	
3	R46, R66, R92	3.3 kΩ	Resistor, SMD 0805, 1%	
1	R49	nc		
2	R5, R9	120 Ω	Resistor, SMD 0805	
3	R52, R97, R78	3.3 kΩ	Resistor, SMD 0805, 1%	
3	R54, R76, R100	820 Ω	Resistor, SMD 0805, 1%	
3	R55, R71, R101	0.15 Ω	Resistor, SMD 2512, 1%, 2 W	
3	R56, R68, R102	nc		
6	R67, R70, R75, R79, R50, R53	1 kΩ	Resistor, SMD 0805, 1%	
1	R69	680 Ω	Resistor, SMD 0805, 1%	
1	R7	7.5 Ω	Resistor, SMD 0805, 1%	
6	R72, R48, R47, R77, R51, R98	1 kΩ	Resistor, SMD 0805, 1%	
1	R73	nc		
1	R8	51 kΩ	Resistor, SMD 0805, 1%	
1	R80	2.2 kΩ	Resistor, SMD 0805, 1%	
1	R81	33 Ω	Resistor, SMD 0805, 1%	
2	R83, R88	10 Ω	Resistor, SMD 0805	
1	R104	68 kΩ	Resistor, SMD 0805	
1	R84	2.2 kΩ	Resistor, SMD 0805	
2	R86, R91	120 Ω	Resistor, SMD 0805	
5	R93, R95, R99, R94, R103	1 kΩ	Resistor, SMD 0805, 1%	
1	R96	nc		
1	R105	220 kΩ	Resistor, SMD 0805, 1%	
1	L1	47 μH	SMD choke, 0.5 A	Panasonic
1	L2	2.2 mH	SMD choke, 0.25 A	Würth Elektronik
1	D1	KBU6K	Diode bridge, 250 VAC, 8 A	
7	D11, D12, D15, D16, D19, D20, D2, D23, D24	BAT48	Diode, SMD, SOD-323	STMicroelectronics
8	D13, D5, D14, D17, D18, D21, D22, D10	1N4148	Universal diode, SMD, SOD80C	
2	D25, D29	BZX84B13V	Zener diode, SOT23, 13 V	
1	D3	STPS1150	Schottky diode, DO-241AC (SMA)	STMicroelectronics

Bill of material (continued)

Quantity	Reference	Value / generic part number	Package / class	Manufacturer
1	D4	SM6T36	Transil™, JEDEC DO-214AA	STMicroelectronics
2	D6, D8	STTH1L06	HV diode, SMA	STMicroelectronics
1	D7	LED GREEN	Universal LED 3 mm, 2 mA	
1	D9	BZV55C18SMD	Zener diode, SOD80, 18 V	
1	D27	LED YELLOW	Universal LED 3 mm, 2 mA	
1	D28	LED RED	Universal LED 3 mm, 2 mA	
1	D26	STTH2L06	HV diode, SMA	STMicroelectronics
10	Q1, Q4, Q5, Q12, Q13, Q14, Q15, Q16, Q17, Q18	BC847	NPN transistor, SOT23	
7	Q10, Q11, Q3, Q6, Q7, Q8, Q9	STGP10NC60KD	N channel IGBT, TO220	STMicroelectronics
1	Q2	BC857B	PNP transistor, SOT23	
1	F1	Holder	Fuse holder 5 x 20 mm, KS21 SW	SCHURTER
1	F1	6.25 A	Fuse 6.25 A Slov., FST06.3, 5 x 20 mm	
1	LS1	Finder 4031-12	Relay 12 VDC	Finder
1	U1	LD1117S33	Linear regulator 3.3 V, SOT223	STMicroelectronics
1	U2	L7815	Linear regulator 15 V, TO-220	STMicroelectronics
1	U3	VIPer16	Smart PWM driver, SO-16	STMicroelectronics
2	U4, U8	TS391	Voltage comparator, SOT23-5	STMicroelectronics
3	U5, U6, U7	L6390	HV low and high side driver, SO-16	STMicroelectronics
1	U9	TS3431	Voltage reference, SOT23-3L	STMicroelectronics
1	U10	L78M05C	Linear regulator 5 V, DPAK	STMicroelectronics
1	U11	M74HC14	Hex Schmitt inverter SOP	STMicroelectronics
3	TP1, TP2, TP3	N.C.		
18	TP4 - TP24	PCB terminal 1 mm	Test pin	
1	J1	Connector 4P	Connector RM 5mm, 4-pole male horizontal	PHOENIX CONTACT
1		Connector 4P	Connector RM 5mm, 4-pole female parallel	PHOENIX CONTACT
1	J2	Connector 3P	Connector RM 5mm, 3-pole male horizontal	PHOENIX CONTACT
1		Connector 3P	Connector RM5mm, 3-pole female parallel	PHOENIX CONTACT

Bill of material (continued)

Quantity	Reference	Value / generic part number	Package / class	Manufacturer
1	J3	Con. 5 mm, 2P	Connector RM 5mm, 2-pole, screw	PHOENIX CONTACT
1	J4	Connector 5P	Autocom HE14 5-pin	Stelvio Kontek
1	J5	MLW34G	MLW connector 34-pin	Tyco Electronics
1	J6	Con. 5 mm, 2P	Connector RM 5mm, 2-pole, screw	PHOENIX CONTACT
1	J7	Con. 2.54 mm 12-pin	Pins RM 2.54 mm female, 12-pin	
1	J8	Con. 5 mm, 2P	Connector RM 5 mm, 2-pole, screw	PHOENIX CONTACT
1	W1	Jumper 2.54	Three pins of break way + jumper in position 3.3 V	
1	W10	Jumper 2.54	Two pins of break way + jumper	
1	W11	Jumper 2.54	Three pins of break way + jumper in position 3.3 V	
3	W13	Mounting hole	Three way HV selector, default three-shunt position	
1		Insulated jumper blue	HV Insulated Jumper, 5.08 mm, default three-shunt position	
3	W3	Mounting hole	Three way HV selector	
1		Insulated jumper blue	HV Insulated jumper, 5.08 mm, default "HIGH VOLTAGE" position	
1	W4	Jumper 2.54	Two pins of break way + jumper	
1	W5	Jumper 2.54	Three pins of break way + jumper in position R_BRAKE	
1	W6	Jumper 2.54	Two pins of break way	
1	W7	Jumper 2.54	Two pins of break way	
3	W9	Mounting hole	Three way HV selector, default three-shunt position	
1		Insulated jumper blue	HV Insulated Jumper, 5.08mm, default three-shunt position	
1	W14	Wire jumper	Not assembled	
1	W16	Jumper 2.54	Three pins of break way + jumper in position 1	
150 mm	Het 1	Heatsink	150 mm of AL profile 8693	PADA Engineering
1	Het 2	Heatsink	Heatsink for TO-220 with montage pin	PADA Engineering
7		Clip for het	Montage clip PADA 7704, TO-220, 10 mm	PADA Engineering

Bill of material (continued)

Quantity	Reference	Value / generic part number	Package / class	Manufacturer
1		Clip for het	Montage clip PADA 7703, TO-220, 15 mm	PADA Engineering
130 mm		Isolation tape	Isolation tape, 24 mm wide; approx. 130 mm long, self adhesive	