

STEVAL-ISA147V3

BILL OF MATERIALS

Item	Q.ty	Reference	Part / Value	Toll. %	Voltage Current	TECNOLOGY information	PACKAGE	Manufacturer	Manufacturer Code	Farnell Code Vendor	More Info
1	2	C15,C18	4n7 Y2	20%	1kV	Polypropilene Radial Polypropilene Y2	RAD 7.5mm	Vishay	BFC233860472	1166486	
2	2	C1,C46	100pF	10%	300V AC	Polypropilene Radial Polypropilene Y2	RAD 7.5mm	Vishay	VY2101K29Y5SG63V7	1902238	
3	1	C2	470uF	20%	16V	Polarized Capacitor (Radial) YXF	RAD 10mm	Rubicon	16YXF470MEFC10X12.5	1144616	
4	21	C3,C20,C27,C30,C33,C37,C38,C47,C48,C49,C50,C51,C55,C57,C59,C60,C67,C69,C74,C79	100nF	10%	25V	Capacitor Ceramic XR7	SMD 0603	Any			
5	1	C4	22uF	20%	35V	Alum Elec SMD	SMD 6.3mm	Nichicon		1899657	
6	6	C5,C56,C63,C73,C78,C86	1uF	10%	25V	Capacitor	SMD 0603	Any			
7	2	C6,C13	100uF	20%	16V	Alum Elec SMD	SMD 6.3mm	Panasonic	EEEFK1C101P	9695672RL	
8	1	C7	82 nF	10%	25V	Capacitor	SMD 0603	Any			
9	1	C8	100uF	20%	25V	Alum Elec SMD	SMD 6.3mm	Cornell Dubilier	AVE107M25X16T-F	1780615	
10	1	C9	120nF	10%	25V	Capacitor	SMD 0603	Any			
11	6	C10,C81,R65,R68,R78	D.N.M.			Not Connected	N.C.	N.C.	N.C.	N.C.	do not mount
12	2	C11,C68	22nF	10%	25V	X7R Capacitor	SMD 0603	Any			
13	4	C17,C19,C23,C25	560nF (D.N.M.)	10%	450V	Ceramic Cap. X7T	SMD2220	MURATA	GR355XD72W564KW05L	1890496	do not mount
14	4	C12,C16,C53,C64	560nF	10%	450V	Ceramic Cap. X7T	SMD2220	MURATA	GR355XD72W564KW05L	1890496	
15	4	C14,C34,C35,C36	100uF	20%	450V	Polarized Elc. Capacitor (Radial)	RAD 22mm	Vishay	MAL215937101E3	1166652	
16	1	C21	2.2uF	20%	275V AC	X2 Polipropilene	RAD 19.5mm	KEMET	PHE840MZ7220MF14R06L2	(RS) 414-8487	
17	1	C24	1uF	20%	305V AC	X2 Polipropilene	RAD 22.5mm	EPCOS	B32923C3105M	1781894	
18	2	C22,C66	1nF	10%	25V	Capacitor	SMD 0805	Any			
19	1	C28	4u7 (Do not Mount)	10%	25V	Capacitor SMD X7R	SMD 1206	Any			do not mount
20	3	C29,C83,C98	100nF (D.N.M.)	N.C.	N.C.	Not Conencted	N.C.	N.C.			do not mount
21	2	C31,C32	100pF (D.N.M.)	N.C.	N.C.	NoT Conencted	N.C.	N.C.			do not mount
22	4	C39,C40,C41,C42	1500uF	20%	16V	Polarized Elec. Capacitor (Radial)	RAD 12.5mm	United Chemicon	ELXY160ELL152MK25S	1551414	
23	1	C43	220pF	10%	1000V	Capacitor COG	SMD 1206	AVX	1206AA221JAT2A	1216461	
24	1	C44	10uF		6.3V	Capacitor X5R	SMD1210	TDK	C1608X5R0J106M	2112705	
25	2	C45, C84,	15nF	10%	1kV	Capacitor Poliprop:	RAD	WIMA	FKP1O121505B00KSSD	1890193	
26	3	C52,C54,C58	10nF	10%	25v	Capacitor X7R	SMD 0603	Any			
27	2	C61,C62	20pF	10%	25v	Capacitor X7R	SMD 0603	Any			
28	1	C65	8n2	10%	25v	Capacitor X7R	SMD 0603	Any			
29	4	C70,C75,C94,C95	47pF	10%	25v	Capacitor X7R	SMD 0603	Any			
30	1	C72	1uF (not mounted)	10%	25v	Capacitor X7R	SMD 0603	Any			
31	1	C77	4u7	10%	25V	Capacitor SMD X7R	SMD 1206	Any			
32	1	C80	4n7	20%	300VAC	E CAP	RAD 7.5mm	MURATA	DE6E3KJ472MN3A	1907543	
33	2	C82,C85	100pF	10%	25V	Capacitor X7R	SMD 0603	Any			
34	1	C87	3.3uF	10%	25V	Capacitor X7R	SMD 1206	Any			
35	1	C88	10nF	10%	25V	Capacitor X7R	SMD 0603	Any			
36	1	C89	22pF	10%	25V	Capacitor X7R	SMD 0603	Any			
37	4	C90,C91,C92,C93	10uF	10%	16V	Capacitor X7R	SMD 1210	TDK	C3225X7R1C106K200AB	2112722	
38	2	C71,C76	68nF	10%	25V	Capacitor X7R	SMD 0805	Any			
39	1	D1	STPS2L40		40V, 2A	Schottky Diode	SMB Flat	STMicroelectronics	STPS2L40UF		
40	1	D2	1.5KE250		250V, 1500W	TRANSIL	DO-201	STMicroelectronics	1.5KE250CA		
41	1	D3	STTH1L06		600V, 1A	Ultrafast high voltage rectifier	SMB Flat	STMicroelectronics	STTH1L06U		
42	2	D14, D19	STPS1L30A		1A, 30V	Schottky Diode	SMA	STMicroelectronics	STPS1L30A		
43	4	D4,D31,D33,D36	1N4148W			High Conductance Fast Diode	SOD-123	Vishay	1N4148W-V-GS08	1469425	
44	2	D5,D6	BAR46		100V, 150mA	Small Signal Schottky Diode	SOT-23	STMicroelectronics	BAR46		
45	2	D7,D8	STPSC1006D		600V, 10A	SIC diode	TO/220AC	STMicroelectronics	STPSC1006D		
46	4	D9,D10,D12,D13	1N4007		1kV, 1A	Standard rectifier diode	DO-204AL	Vishay	1N4007GP-E3/73	700-3665 (RS comp.)	
47	1	D11	BAR43AS (not mounted)		30V,0.1A	Small Signal Schottky Diode	SOT-23-3L	STMicroelectronics	BAR43SFILM		do not mount
48	12	D15,D16,D17,D18,D25,D27,D28,D30,D32,D34,D37,D38	BAT754		30V, 0.1A	Schottky Diode	TO-236AB	NXP	BAT754	508-305 (RS comp)	
49	2	D20,D23	1N4148W			High Conductance Fast Diode		Vishay	1N4148W-V-GS08	1469425	
50	2	D21,D22	BAT754 (not mounted)		45V, 30A	Schottky Diode	PowerFLAT 5x6	STMicroelectronics	STPS3045DJF-TR		do not mount
51	2	D24,D26	LED			Typical BLUE SIC LED				1058385	
52	2	D29,D35	BAR43AS		30V,0.1A	Small Signal Schottky Diode	SOT-23-3L	STMicroelectronics	BAR43SFILM		
53	1	F1	FUSE		265Vrms max, 10Arms	Fuse + Fuseholder				1162740 + 1176774 Farnel	

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54	2	IC1,IC2	PM8834			4A dual low side Driver	SO-8	STMicroelectronics	PM8834		
55	1	JP1	HEADER 3			Header, 3-Pin					
56	2	L1,L2	115uH		10A RMS, 18Apk	PFC Inductor choke	SEE DATASHEET	Yujing	11999-126H400210 QP-3930H		
57	1	L6	2x6mH		10A, 6mH	Common mode choke	TRH	Schaffner	RD5122-10-6M0	(RS) 465-6146	
58	2	L4,L5	0.3 Ohm, 300mA			Ferrite Bead	SMD 0805		BMB2A0120AN4	1193414	
59	1	OPTO1	PC817 D			Optocoupler	Pdip	Sharp	PC817X2J000F	666-6603	
60	1	P1	Header 2			Header, 2-Pin					
61	1	P2	DAC out			Socket					
62	2	P3,P8	Header 4			Header, 4-Pin					
63	2	P4,P5	Header 4			Header, 4-Pin					
64	1	P6	Header 7X2H			Header, 7-Pin, Dual row, Right Angle					
65	1	P7	FAN			Header, 3-Pin					
66	1	P9	I2C			Header, 3-Pin					
67	2	Q1,Q2	STP42N60M2-EP		600V,34A	650V, 34A Mosfet, 0.076 Ohm	TO-220	STMicroelectronics	STP42N60M2-EP		
68	2	Q3,Q12	STP25N60M2-EP		600V, 18A	N-Channel MOSFET, 600V, 18A,	TO-220	STMicroelectronics	STP25N60M2-EP		
69	2	Q4,Q11	not mounted			N-Channel MOSFET				not mounted	
70	2	Q17,Q16	Not Mounted			N-Channel MOSFET					
71	2	Q5,Q9	PMBF170		60V, 0.3A	N-channel MOSFET 60V, 300mA	SOT-23	NXP		1081473	
72	4	Q6,Q7,Q8,Q10	STL220N6F7		60V, 260A	N-Channel MOSFET 60V, 260A	PowerFLAT™ 5x6	STMicroelectronics	STL220N6F7		
73	1	Q15	STN4NF03L		30V,4A	N-Channel MOSFET 30V, 4A	SOT-223	STMicroelectronics	STN4NF03L		
74	1	R1	1			Resistor	SMD 0603	Any			
75	1	R2	3.3			Resistor	SMD 0603	Any			
76	9	R3,R4,R6,R26,R27,R30,R31,R34,R36	470K		1%	Resistor	SMD 1206	YAGEO	RC1206FR-07470KL	9241108	
77	1	R5	2.4K			Resistor	SMD 0603	Any			
78	1	R7	33K D.N.M			Resistor	SMD 0603	Any			do not mount
79	1	R8	1.8K			Resistor	SMD 0603	Any			
80	1	R9	16K			Resistor	SMD 0603	Any			
81	1	R10	110K			Resistor	SMD 0603	Any			
82	1	R11	7.5K			Resistor	SMD 0603	Any			
83	1	R13	47K			Resistor	SMD 0603	Any			
84	1	R14	4.3K			Resistor	SMD 0603	Any			
85	2	R15,R16	36			Resistor	SMD 0603	Any			
86	5	R17,R19,R24,R28,R45	470			Resistor	SMD 0603	Any			
87	1	R115	0			Resistor	SMD 0805	ANY			do not mount
88	2	R18,R50	D.N.M		1%	Resistor	SMD 1206	VISHAY DRALORIC	CRCW120613R0FKEA	2139255	do not mount
89	8	R20,R32,R38,R62,R63,R64,R87,R99	10K			Resistor	SMD 0805	Any			
90		R21,R22	6.8		1%	Resistor	SMD 1206	Any			
91	8	R25,R29,R37,R39,R41,R105	1K			Resistor	SMD 0603	Any			
92	25	R23,R46,R47,R48,R69,R70,R71,R72,R73,R75,R81,R82,R85,R86,R100,R104,R107,R114,R117,R118,R76,R88,R89,R90,R12	0		5%	Resistor	SMD 0603	Any	Multicomp	9331662	
93	2	R33,R42	39			Resistor	SMD 0805	Any			
94	1	R35	47			Resistor	SMD 0805	Any			
95	1	R44	27			Resistor	SMD 0805	Any			
96	1	R40	2000			Resistor	SMD 0603	Any			
97	1	R43	5K1			Resistor	SMD 0603	Any			
98	2	R49,R51	0		1%	Resistor	SMD 1206	VISHAY DRALORIC	CRCW120647R0FKEA	1470017	
99	3	R52,R56,R74	20		1%	Resistor	SMD 1206	Panasonic	ERJ8ENF20R0V	2057742	
100	4	R53,R57,R106,R112	360			Resistor	SMD 0603	Any			
101	2	R54,R58	3.3			Resistor	SMD 0805	Any			
102	2	R55,R59	82			Resistor	SMD 0805	Any			
103	6	R60,R61,R67,R108,R109,R111	330			Resistor	SMD 0603	Any			
104	5	R66,R77,R79,R80,R97	300			Resistor	SMD 0603	Any			
105	2	R83,R84	39			Resistor	SMD 0603	Any			
106	3	R91,R92,R95	180K			Resistor	SMD 0805	Any			
107	1	R93	620			Resistor	SMD 0603	Any			
108	1	R94	100			Resistor	SMD 1206	Any		1632521	
109	1	R96	3K6			Resistor	SMD 0603	Any			
110	1	R98	200			Resistor	SMD 0603	Any			
111	2	R101,R103	820			Resistor	SMD 0603	Any			
112	1	R102	4K3			Resistor	SMD 0603	Any			
113	2	R110,R113	2k			Resistor	SMD 0603	Any			
114	1	T1	HF TRANSFORMER LLC			500W LLC HF Transformer		Yujing		LP4525-H	

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115	1	T2	LLC Sensing CT		1:100, 10A	Current Sensing Transformer		Magnetics	20,340,002		
116	2	T4,T5	MURATA 53020C		20A	20A CURRENT SENSING TRANSFORMER	SEE DATASHEET	MURATA	53020C	715-7015 (RS-Comp.)	
117	4	T8,T9,T12,T13	Test point								
118	1	TR1	Switich Mode Transformer			Transformer for Flyback	see datasheet	Wurth Elektronik	750871012		
119	2	U1,U4	LD1117		3.3V	Low Drop Fixed Positive Regulator	SOT-223	STMicroelectronics	LD117AS33TR		
120	1	U2	VIPER27H		115kHz	Fixed Frequency off line high voltaeg converter	Dip-7	STMicroelectronics	Viper27HN		
121	1	U3	TS431ILT			Adjustable Precision Shunt Regulator	SOT-23-5	STMicroelectronics	TS431ILT		
122	2	U5,U15	LM19CIZ		2.4V, 10µA	Temperature Sensor, 3-pin TO-92	TO-92	Texas lnstruments	LM19CIZ	535-8758 (Rs-comp.) FARNELL 948-9649	
123	1	U6	TSV611		10uA, 120kHz	Rail to Rail Cmos Opamp	SOT23-5	STMicroelectronics	TSV611ILT		
124	1	U8	L6491D			Mosfet Driver		STMicroelectronics	L6491D		
125	2	U9,U10	ACPL-P484		3.7kV,7mA	Optocoupler	SOIC	AVAGO	ACPL-P484-000E	2070254	
126	2	U11,U12	KB357NT			Optocoupler	SMD 4 Pins	Kingbright	KB357NT	2001647RL	
127	1	U13	STM32F051Kx		64 Kbytes Flash, 48 MHz CPU 32 PINS	32 BIT MICROCONTROLLER ARM CORTEX MO	UFQFPN32 5x5 mm	STMicroelectronics	STM32F051K8U6		
128	1	U14	STM32F334Cx		48K FLASH, 72MHz, 48 PINS	32 BIT MICROCONTROLLER ARM CORTEX M4	LQFP48 (7 × 7 mm)	STMicroelectronics	STM32F334C8T6		
129	1	Y2	8MHz HC49/US		8MHz	Crystal Oscillator					
130	2	Con1,Con2	Plug and sockect Connector		600V	Header 4.20mm, dual row, RA,pcb lock,14w	4.2mm	Molex	39-30-1142	670-5782 (Rs-Comp)	
131	2	HT1	Heat Sink		8 C/W	LED HEATSINK, STANDARD EXTRUDED for TO 220 / SOT 32	see data sheet	Fisher Elektronik	SK 470100 SA	1850031	
132	2	HT2	Heat Sink		7.2 C/W	LED HEATSINK, STANDARD EXTRUDED for TO-3P / TO-218 / TO-220 / TO-247 / TO-2		Fisher Elektronik	SK 573 100	1892339	
133	1	External Cooling FAN	Cooling Fan		12 V 30m³/h	Cooling Fan		RS-Comp	OD6025-12MB	541-4965 (RS)	
134	1	Sil PAD	Isolator		1,6W/mK	Sil-Pad 800		Bergquist	SP800-0.005-AC-1212	284-0800	
135	6	clips for TO-220 Heat sink connection									
136	1	Ouptut Cable for Load conenction	Multiwire Cable		12V, 40A	Cable for Load Supply, 50cm lenght; 14 wires x 1.5mm²2					
137	1	Jumper for P1	2 way female		2.54mm	2w Jumper 2.54mm pitch	2.54mm	ASSMANN	AKSPLTZ BLACK	674-2400 (RS)	ADD Jumper to P1 connector