

PROJECT NAME:STEVAL-ISV003V1

BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	Package	Manufacturer	Manufacturer Code	RS/Distelec/Other Code
1	2	C137,C147	150uF		63V		ALUMINIUM ELEC. CAP	SMD	Panasonic	EEEFK1J151AQ	Digikey code PCE4852CT-ND
2	2	C83,C144	220uF		25V		ALUMINIUM ELEC. CAP	SMD	Panasonic	EEEF1E221P	Digikey code PCE4005CT-ND
3	2	C146,C138	220nF		63V		X7R SMD CERAMIC CAP	0805	ANY		
4	4	C135,C136,C141,C145	2.7nF		50V		X7R SMD CERAMIC CAP	0805	ANY		
5	2	C80,C143	120pF		25V		X7R SMD CERAMIC CAP	0805	ANY		
6	3	C4,C42,C55	100nF	0.1%	15V		X7R SMD CERAMIC CAP	0805	ANY		
7	39	C5,C35,C38,C43,C50,C56,C77,C79,C82,C84,C86,C88,C95,C96,C97,C99,C100,C107,C108,C109,C110,C111,C112,C120,C121,C122,C123,C124,C125,C126,C129,C130,C131,C132,C133,C134,C139,C140,C148	100nF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
8	1	C7	2.2uF	5%	630VDC		METALLIZED POLYPROPYLENE FILM CAPACITORS	RADIAL	Panasonic	ECQEE225JF	RS 622-5003
9	2	C12,C13	2.2uF	5%	250V		METALLIZED POLYPROPYLENE FILM CAPACITORS	RADIAL	Epocor	B32523Q3225J	RS 334-423
10	4	C8,C9,C10,C11	22uF	20%	450V		ALUMINIUM ELEC. CAP	RADIAL	Panasonic	EEUE2W220S	RS 434-0352
11	4	C14,C40,C53,C54	1uF	20%	25V		X7R SMD CERAMIC CAP	0805	ANY		
12	14	C15,C16,C17,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28	1uF	10%	100V		X7R SMD CERAMIC CAP	1812	KEMET	C1812F105K1RAC	RS 500-2405
13	4	C29,C30,C33,C34	2.2nF	20%	300VAC		CAP POLYESTER Y2	RADIAL	ANY		RS 684-2172
14	1	C31	470nF	10%	275VAC		METALYZED POLYESTER FILM CAP	RADIAL	ANY		RS 725-7543
15	13	C36,C39,C41,C51,C58,C60,C62,C66,C68,C73,C87,C89,C119	10uF	10%	25V		SMD X7R CERAMIC CAP	1210	MURATA	GRM32DR71E106KA12L	RS 106-836
16	8	C61,C65,C149,C150,C152,C153,C154,C155	22uF	10%	25V		SMD CERAMIC CAP	1206	Murata	GRM31CR61E226KE15L	Farnell 1797010
17	1	C37	22nF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
18	7	C57,C59,C63,C64,C69,C71,C76	100nF	10%	50V		X7R SMD CERAMIC CAP	0805	ANY		
19	1	C72	68nF	10%	16V		SMD CERAMIC CAP	0805	ANY		
20	1	C67	100nF	10%	16V		SMD CERAMIC CAP	0805	ANY		
21	6	C75,C78,C85,C98,C118,C142	10nF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
22	2	C127,C128	1uF	10%	16V		X7R SMD CERAMIC CAP	0805	ANY		
23	1	C70	1nF	10%	50V		X7R SMD CERAMIC CAP	0805	ANY		
24	1	C74	47nF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
25	1	C81	Not mounted				X7R SMD CERAMIC CAP	0805	ANY	Not mounted	Not mounted
26	2	C90,C91	10pF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
27	2	C92,C93	22pF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
28	12	C94,C101,C102,C103,C104,C105,C106,C113,C114,C115,C116,C117	180pF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
29	1	C151	470pF	10%	25V		X7R SMD CERAMIC CAP	0805	ANY		
30	2	DCDC L2, DCDC L3	NMV0515SA				Isolated 1W Single Output DC/DC Converters Data Sheet	Through Hole	Murata Power Solutions	NMV0515SAC	RS 544-3288
31	1	DCDC L5	RO-1505S				Isolated 1W Single Output DC/DC Converters Data Sheet	Through Hole	Recor Power Inc	RO-1505S	DIGIKEY RO-1505S-ND
32	2	D31,D32	STPS3L60U		60V,3A		SCHOTTKY DIODE	SMB	STMicroelectronics	STPS3L60U	
33	9	D9,D10,D14,D15,D21,D22,D23,D24,D29	STPS2L25U		25V,2A		SCHOTTKY DIODE	SMB	STMicroelectronics	STPS2L25U	
34	2	D40,D42	STTH12R06G		600V,6A		Turbo 2 ultrafast high voltage rectifier	D2PAK	STMicroelectronics	STTH12R06G	
35	2	D12,D13	Zener 5.1V		5.1V	0.5W	Zener diode	SOD-80	Any		Distrelec 600807
36	2	D35,D36	STTH108		1A, 800V		ULTRAFAST RECTIFIER	SMA	STMicroelectronics	STTH108A	
37	2	D6,D8	STPS1545CB				SCHOTTKY DIODE	DPAK	STMicroelectronics	STPS1545CB	
38	2	IC7,IC12	HCPL 4506				OPTOCOUPERS	Through Hole	Avago Technologies	HCPL-4506-000E	RS 547-3813
39	2	D11,D34	STPSC606		600V,6A		SIC DIODE	D2PAK	STMicroelectronics	STPSC606G-TR	
40	2	D43,D44	SMBJ70A		600V		Transil	SMB	STMicroelectronics	SMBJ70A-TR	
41	1	F1	FUSE		4A/250V		4A FUSE	SMT	Schurter	3404.2422.22	RS code: 703-2764
42	1	IC1	CSLW6B5		5A		HALL EFFECT CURRENT SENSOR		HONEYWELL	CSLW6B5	
43	5	IC2,IC3,IC4,IC5,IC6	PM8834		4A		DUAL LOW SIDE DRIVER	SO8	STMicroelectronics	PM8834TR	
44	3	IC9,IC10,IC11	TS912		20MHz, 5V		RAIL TO RAIL OPAMP	SO8	STMicroelectronics	TS912BID	
45	1	J1	CON_PV		50 VDC, 10A		2-WAYS CONNECTOR	TRH-PITCH 7.62 mm	PHOENIX CONTACT	1731721	RS 189-5966
46	1	J2	CON_GRID		230 VAC		2-WAYS CONNECTOR	TRH-PITCH 7.62 mm	PHOENIX CONTACT	1731721	RS 189-5966
47	1	J3	3.3V		3.3 VDC		2 way screw terminal block 5.08mm pitch	THT 5.08 mm	ANY		RS 193-0586
48	2	J4,J6	LD1086DT33TR		3.3V		VOLTAGE REGULATOR	DPAK	STMicroelectronics	LD1086DT33TR	
49	2	J5,J8	JUMPER		SIGNAL		2 way single row strip line connector (male connector)	Vertical Through Hole	Any		RS 495-8470
50	1	J7	CON20		SIGNAL		20WAY IDC CONNECTOR LOW PROFILE	IDC 20	ANY		RS:461-770
51	1	J9	CON30A		SIGNAL		30 way double row strip line connector (female connector)	Vertical Through Hole	Samtec		RS: 254-6154
52	1	J10	HEADER 8		SIGNAL		8 way double row strip line connector (male connector)	Vertical Through Hole	ANY		ELCART 5/7643-5
53	1	J11	PWM CONNECTOR FOR DEBUG		SIGNAL		50 way double row strip line connector (male connector)	Vertical Through Hole	ANY		ELCART 5/7643
54	4	J12,J13,J14,J16	JUMPER_3		SIGNAL		3 way single row strip line connector (male connector)	Vertical Through Hole	Any		RS code:495-8470
55	1	J15	CON6A		SIGNAL		Multi function switch Joystick		DSL	MT008-A	
56	2	L4,L6	INDUCTOR 600uH				POWER CHOKE	Through Hole	MAGNETICA	2162.0003	06057
57	2	L15,L17	220uH				INDUCTOR		COILCRAFT	MSS1278224	
58	2	L13,L14	3.6mH		1.1A		FILTER INDUCTORS	Through Hole	Magnetica	2196.0001	
59	1	L16	BLM41PG600SN1L				INDUCTOR	SMD 1806	MURATA	BLM41PG600SN1L	RS 188-8665
60	1	P1	DATA PORT 0				DATA PORT 0	Through Hole	Any		RS code: 542-8043
61	4	Q1,Q2,Q3,Q4	STB16N6M5		650 V, 12 A		MDmesh™ V Power MOSFET	DPAK	STMicroelectronics	STB16N64M5	
62	2	Q5,Q7	STH180N10F3-2		100V, 180A		N-channel Power MOSFET	HPPAK	STMicroelectronics	STH180N10F3-2	
63	1	Q9	2N7002		0.18A, 60V	0.3W	MOSFET N Channel SMT	SOT23	NXP	2N7002	RS: 112-5526
64	1	Q10	2STN2340				PNP power transistors	SOT-223	STMicroelectronics	2STN2340	
65	1	RL1	G5LE-1A4-DC12		10A, 12VDC		RELAY SPST 10A 12VDC PCB SEALED	Through Hole	Orron	G5LE-1A4 DC12	RS: 2509036648
66	2	R1,R4	270	5%		1/4W	SMD RESISTOR	1206	ANY		
67	3	R2,R5,R94	200	5%		1/4W	SMD RESISTOR	1206	ANY		
68	1	R3	15M	1%		0.8W	HIGH VALUE RESISTOR	RADIAL	Tyco Electronics	HBA15MFZRE	RS: 158-165

PROJECT NAME:STEVAL-ISV003V1

BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	Package	Manufacturer	Manufacturer Code	RS/Distelec/Other Code
69	6	R7, R8, R19, R20, R21, R23	2.7	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
70	2	R9, R12	27	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
71	1	R10	150k	1%		1/4W	SMD RESISTOR	1206	Tyco Electronics	CRG1206F150K	RS: 223-2552
72	2	R11, R14	0	1%		0.5W	SMD RESISTOR	1206	ANY	ANY	
73	3	R13, R16, R36	330	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
74	1	R18	4.3k	1%		1/4W	SMD RESISTOR	1206	Any	ANY	RS: 679-2187
75	8	R29, R43, R47, R51, R54, R72, R79, R86	10k	1%		1/4W	SMD RESISTOR	1206	Tyco Electronics	CRG1206F10K	RS: 223-2394
76	1	R22	3mOhm	1%		1W	SMD RESISTOR	2512	Panasonic	ERJM1WSF3MOU	RS: 565-847
77	1	R96	1.1K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
78	3	R98, R100, R126	1K	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
79	3	R25, R26, R62	dnf	5%		1/4W	SMD RESISTOR	1206	Not mounted	Not mounted	Not mounted
80	1	R27	470	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
81	1	R28	8.2	5%		5W	Wirewound resistor	AXIAL	ANY	ANY	
82	1	R74	10K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	Distelec: 727033
83	2	R30, R129	1K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
84	1	R40	16K	1%		1/8W	SMD RESISTOR	0805	ANY	ANY	
85	2	R48, R55	8.2K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
86	4	R38, R49, R70, R71	20K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
87	1	R77	4.7K	1%		1/4W	SMD RESISTOR	0805	ANY	ANY	
88	1	R113	100	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
89	1	R115	390	5%		1/8W	SMD RESISTOR	0805	ANY	ANY	
90	1	R128	33k	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
91	1	R130	120	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
92	1	R131	59k	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
93	19	R15, R17, R57, R58, R59, R60, R61, R63, R64, R65, R88, R104, R107, R108, R109, R110, R111, R112, R118	10k	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
94	1	R90	4.7k	0.1%		0.10W	Thin Film Precision Chip Resistor	0805	Tyco Electronics	CPF0805B4K7E	RS: 666-2575
95	1	R92	150k	0.1%		1/8W	Thin Film Precision Chip Resistor	1206			
96	2	R101, R102	10k	0.1%		1/8W	Thin Film Precision Chip Resistor	1206			
97	6	R41, R44, R46, R50, R52, R56	330	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
98	3	R6, R45, R53	100k	1%		1/4W	SMD RESISTOR	1206	Tyco Electronics	CRG1206F100K	RS: 223-2524
99	10	R66, R67, R105, R106, R114, R116, R117, R119, R120, R123	0	1%		0.0625 W	SMD RESISTOR	0402	Tyco Electronics	CRG0402Z2R	RS: 667-8520P
100	1	R68	0	1%		1/8W	Thin Film Precision Chip Resistor	0805			
101	2	R69, R76	6.81k	1%		1/4W	Thick Film resistor	1206	Phycomp	2.32272E+11	RS: 617-8632
102	1	R78	2.7k	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
103	1	R42	56.2K	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
104	2	R39, R75	24k	1%		1/4W	SMD RESISTOR	1206	ANY	ANY	
105	1	R73	180k	1%		1/4W	Thick Film resistor	1206	Tyco Electronics	CRG1206F180K	RS: 223-2568
106	1	R84	20k	1%		1/4W	Thick Film resistor	1206	Phycomp	232272462003	RS: 618-0871
107	1	R122	4K7	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
108	1	R95	30k	0.1%		1/8W	Thin Film Precision Chip Resistor	0603	Tyco Electronics	CPF0603B30KE	RS: 666-2152
109	1	R97	1K	0.1%	75V	0.1W	Metal Film Chip Resistors	0603	Panasonic	ERA3ARB102P	RS: 661-8688
110	1	R103	3.3k	1%		1/4W	SMD RESISTOR	1206	Tyco Electronics	CRG1206F3K3	RS: 223-2338
111	1	R121	47	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
112	2	R124, R127	56	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
113	1	R125	2K2	5%		1/4W	SMD RESISTOR	1206	ANY	ANY	
114	2	SC1, SC3	TMOV14RP250E		250V		VARISTOR THERMAL 250V 6KA 14MM	Disc 14mm	Littelfuse Inc	TMOV14RP250E	DIGIKEY: F4014-ND
115	1	SC2	V275LA20A		275V		VARISTOR 275V 14MM RADIAL LA	Disc 14mm	Littelfuse Inc	V275LA20A	DIGIKEY: V275LA20A-ND
116	1	SW1	SW PUSHBUTTON DPST				Surface Mount Tactile Switch	SMD	any		RS code 183701
117	1	SW2	HMI PUSHBUTTONS				Surface Mount Tactile Switch	SMD	any		RS code 183701
118	1	T1	10mH		3A		Common Mode Chokes	Through Hole	Coilcraft	BU10-6003R0BL	
119	1	T2	Sensing Transformer				TRANSFORMERS	Through Hole	Itacoil	SVL101801	
120	1	T3	Transformer				TRANSFORMERS	Through Hole	MAGNETICA	2159.0003	
121	1	U21	HCNR200-300				Analog Optocoupler	PDIP W SMD	Avago Technologies	HCNR200-300E	RS 693-5264
122	2	U3, U4	L6390		600V		High-voltage high and low side driver	DIP16	STMicroelectronics	L6390N	
123	1	U7	NME0505D				Isolated 1W Single Output DC/DC Converters Data Sheet	Through Hole	Murata Power Solutions	NME0505DC	RS 544-2617
124	2	U8, U9	SFH615A				High reliability Optocouplers	DIP4	Vishay	SFH615A-2	RS 110-185
125	2	U1, U2	L4971				1.5A STEP DOWN SWITCHING REGULATOR	DIP8	STMicroelectronics	L4971	
126	1	U10	ST3232EBTR				± 15 kV ESD protection 3 to 5.5 V low power, up to 250 kbps, RS-232 drivers and receivers	TSSOP16	STMicroelectronics	ST3232EBTR	
127	1	U11	74HCT7007RM13TR				Hex buffer	SOP	STMicroelectronics	M74HCT7007RM13TR	
128	3	U13, U14, U15	TS272AIN				HIGH PERFORMANCE CMOS DUAL OPERATIONAL AMPLIFIERS	Through Hole	STMicroelectronics	TS272AIN	
129	1	Y1	32.768KHz				QUARTZ FSM 32.768KHz	SMT 10.4 x 4.6	Fox Electronics	FSMLF327	RS: 547-6856
130	1	Y2	8MHz				8MHz (with socket)	HC49/SMD	AKER	CAA-8.000-18-3050-X	RS: 671-9242
131	1	1A1A	DAC8534IPW				DIGITAL-TO-ANALOG CONVERTER	TSSOP16	Texas Instruments	DAC8534IPW	RS: 481-6312
132	1	U20	STM32F103ZET6				STM32 MCU	LQFP144	STMicroelectronics	STM32F103ZET6	
133	1	LCD BOARD MB694	TO BE ORDERED and CONNECTED ON J9 CONNECTOR				TO BE ORDERED and CONNECTED ON J9 CONNECTOR				
134A	2	Aluminium bar	Heatsink				N. 2 Aluminium bar 157x20x5mm				
134B	2	Sil-Pad 400	Sil-Pad 400				0.9W/mK 304x304x0.178mm				RS: 507-5605
135	5	SPACER	SIZE-3X10mm				BRASS				