

**ISE4045 REV E2 Bill of Materials**

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB	1		ISE4045	Any	Printed Circuit Board	
2	B11	1		BS-7	Memory Protection Devices	Battery Holder, CR2032, Retainer clip, TH	CR2032 holder
3	C18	1	4.7uF	C1005X5R1A475K050BC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0402	0402
4	C20, C22, C23, C24, C26, C28, C29, C43	8	0.1uF	GRM155R71C104KA88D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
5	C25, C27	2	22uF	C1608X5R0J226M080AC	TDK	CAP, CERM, 22 uF, 6.3 V, +/- 20%, X5R, 0603	0603
6	C31, C32	2	2200pF	C1005X7R1H222K	TDK	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0402	0402
7	C33, C36	2	3.6pF	GRM1555C1H3R6CA01D	MuRata	CAP, CERM, 3.6 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
8	C34	1	0.6pF	GJM1555C1HR60BB01D	Murata	CAP, CERM, 0.6pF, 50V, NP0/COG, +0.1pF, 0402	0402
9	C37	1	2.7pF	GRM1555C1H2R7CA01D	MuRata	CAP, CERM, 2.7 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
10	C38	1	6.2pF	GRM1555C1H6R2CA01D	MuRata	CAP, CERM, 6.2 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
11	C39	1	3.3pF	GRM1555C1H3R3CA01D	MuRata	CAP, CERM, 3.3 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
12	C40, C42	2	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
13	C41	1	1uF	C1005X5R1C105K050BC	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X5R, 0402	0402
14	C46, C47	2	12pF	GRM1555C1E120JA01D	MuRata	CAP, CERM, 12 pF, 25 V, +/- 5%, COG/NP0, 0402	0402
15	C48	1	100uF	C3216X5R1A107M160AC	TDK	CAP, CERM, 100 uF, 10 V, +/- 20%, X5R, 1206_190	1206_190
16	D2	1	5V	1SS315TPH3F	Toshiba	Diode, Schottky, 5V, 0.03A, SOD-323	SOD-323
17	E1	1		ANTENNA_HELICAL	N/A	PCB Antenna. There is nothing to buy or mount.	Antenna
18	H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
19	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
20	J4	1		PEC04SAAN	Sullins Connector Solutions	Header, 100mil, 4x1, Tin, TH	Header, 4x1, 100mil, TH
21	J7	1		GRP052VWVN-RC	Sullins Connector Solutions	Header, 50mil, 5x2, Gold, TH	Header, 5x2, 50mil
22	L2	1	1500 ohm	BLM18HE152SN1D	MuRata	Ferrite Bead, 1500 ohm @ 100 MHz, 0.5 A, 0603_950	0603_950
23	L3	1	6.8uH	MLZ2012N6R8LT000	TDK	Inductor, Multilayer, Ferrite, 6.8 uH, 0.11 A, 0.25 ohm, SMD	0805
24	L4, L8	2	7.5nH	LQW15AN7N5G00D	MuRata	Inductor, Wirewound, 7.5 nH, 0.57 A, 0.13 ohm, SMD	1x.5x.5mm
25	L5	1	18nH	LQW15AN18NJ00D	MuRata	Inductor, Wirewound, 18 nH, 0.37 A, 0.27 ohm, SMD	1x.5x.5mm
26	L6, L7	2	6.8nH	LQW15AN6N8G00D	MuRata	Inductor, Wirewound, 6.8 nH, 0.7 A, 0.09 ohm, SMD	1x.5x.5mm
27	L9	1	11nH	LQW15AN11NG00D	MuRata	Inductor, Wirewound, 11 nH, 0.5 A, 0.14 ohm, SMD	1x.5x.5mm
28	R12, R13	2	47.5k	CRCW040247K5FKED	Vishay-Dale	RES, 47.5 k, 1%, 0.063 W, 0402	0402
29	R14, R15	2	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
30	R16, R17	2	4.75k	CRCW04024K75FKED	Vishay-Dale	RES, 4.75 k, 1%, 0.063 W, 0402	0402
31	R18	1	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
32	S1, S2	2		B3U-1000P	Omron Electronic Components	SWITCH TACTILE SPST-NO 0.05A 12V	3x1.6x2.5mm
33	SH-J1	1	1x2	2SN-BK-G	Samtec	Shunt, 2mm, Gold plated, Black	2mm Shunt, Closed Top
34	TP6, TP7, TP8, TP9	4	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
35	U4	1		OPT3001DNP	Texas Instruments	Ambient Light Sensor, DNP0006A	DNP0006A
36	U5, U6, U8, U9	4		TPD1E10B06DPYR	Texas Instruments	ESD in 0402 Package with 10 pF Capacitance and 6 V Breakdown, 1 Channel, -40 to +125 degC, 2-pin X2SON (DPY), Green (RoHS & no Sb/Br)	DPY0002A
37	U7	1		CC1310F128RGZR	Texas Instruments	Sub-1 GHz and 2.4 GHz Multi-standard RF IC Family, RGZ0048A	RGZ0048A
38	U10	1		HDC1010YPAR	Texas Instruments	Low Power, High Accuracy Digital Humidity Sensor with Temperature Sensor, YPA0008AGAE	YPA0008AGAE
39	Y1	1		TSX3225 24,000MF20G-AC3	Epson	Crystal, 24 MHz, 9 pF, SMD	SMD, 4-Leads, Body 2.65x3.35mm, Height 0.6mm
40	Y2	1		FC-12M 32.7680KA-A3	Epson	Crystal, 32.768kHz, 12.5pF, SMD	Crystal 2.05x.6x1.2mm
41	C1, C2	0	4.7uF	C1005X5R1A475K050BC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0402	0402
42	C3, C4	0	0.1uF	GRM155R70J104KA01D	MuRata	CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X7R, 0402	0402
43	C5	0	0.01uF	C0402C103J5RACTU	Kemet	CAP, CERM, 0.01 uF, 50 V, +/- 5%, X7R, 0402	0402
44	C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17	0	100uF	C3216X5R1A107M160AC	TDK	CAP, CERM, 100 uF, 10 V, +/- 20%, X5R, 1206_190	1206_190
45	C19	0	1uF	GRM155R61A105KE15D	MuRata	CAP, CERM, 1 uF, 10 V, +/- 10%, X5R, 0402	0402
46	C21	0		Used in BOM report	Used in BOM report	CAP, CERM, xxxF, xxV, [TempCo], xx%, [PackageReference]	Used in PnP output and some BOM reports
47	C30	0	0.1uF	GRM155R71C104KA88D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
48	C44, C45	0	12pF	GRM1555C1E120JA01D	MuRata	CAP, CERM, 12 pF, 25 V, +/- 5%, COG/NP0, 0402	0402
49	D1	0	5V	1SS315TPH3F	Toshiba	Diode, Schottky, 5V, 0.03A, SOD-323	SOD-323
50	FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
51	J1	0		PEC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin
52	J5	0		TSW-106-07-G-S	Samtec	Header, 100mil, 6x1, Gold, TH	6x1 Header
53	J6	0		CON5MA001-SMD-G	Linx Technologies	Jack, SMA, PCB, Gold, SMT	SMA Jack
54	L1	0	22uH	LPS4018-223MLB	Coilcraft	Inductor, Shielded Drum Core, Ferrite, 22 uH, 0.83 A, 0.36 ohm, SMD	LPS4018
55	Q1, Q2	0	-20V	CSD75208W1015	Texas Instruments	MOSFET, P-Ch, -20 V, -1.6 A	
56	R1	0	4.12Meg	CRCW04024M12FKED	Vishay-Dale	RES, 4.12 M, 1%, 0.063 W, 0402	0402
57	R2	0	5.76Meg	CRCW04025M76FKED	Vishay-Dale	RES, 5.76 M, 1%, 0.063 W, 0402	0402
58	R3, R4, R5, R11, R19	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
59	R6, R10	0	6.19Meg	CRCW04026M19FKED	Vishay-Dale	RES, 6.19 M, 1%, 0.063 W, 0402	0402
60	R7	0	3.09Meg	CRCW04023M09FKED	Vishay-Dale	RES, 3.09 M, 1%, 0.063 W, 0402	0402
61	R8	0	6.65Meg	CRCW04026M65FKED	Vishay-Dale	RES, 6.65 M, 1%, 0.063 W, 0402	0402
62	R9	0	3.57Meg	CRCW04023M57FKED	Vishay-Dale	RES, 3.57 M, 1%, 0.063 W, 0402	0402
63	TP1, TP2, TP3, TP5	0	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
64	TP4	0	Black	5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
65	U1, U2	0	0.5V	KXOB22-12X1L	IXYS	Monocrystalline Solar Cell, 22 X 7mm, SMD	22x7mm
66	U3	0		BQ25505RGR	Texas Instruments	Ultra Low Power Boost Converter with Battery Management for Energy Harvester Applications. RGR0020A	RGR0020A

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