

# 010025CB REV E1 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	!PCB1	1		010025CB	Any	Printed Circuit Board	
2	C1, C5, C15	3	680pF	GRM188R71H681KA01D	MuRata	CAP, CERM, 680 pF, 50 V, +/- 10%, X7R, 0603	0603
3	C2, C13, C17, C18, C20, C22, C24, C27, C29, C31, C33, C39, C41, C42, C44, C46, C61, C62, C63	19	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
4	C3, C7, C8, C10, C12, C16	6	330pF	GRM188R71H331KA01D	MuRata	CAP, CERM, 330 pF, 50 V, +/- 10%, X7R, 0603	0603
5	C4, C9, C14	3	2000pF	GRM1885C1H202JA01D	MuRata	CAP, CERM, 2000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
6	C6, C19, C21	3	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
7	C11	1	0.068uF	GRM188R71H683KA93D	MuRata	CAP, CERM, 0.068 uF, 50 V, +/- 10%, X7R, 0603	0603
8	C23, C32, C45, C60	4	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, 1206	1206
9	C28, C30, C40, C43	4	1uF	GRM21BR71C105KA01L	MuRata	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0805	0805
10	C34, C47	2	6800pF	GRM188R71H682KA01D	MuRata	CAP, CERM, 6800 pF, 50 V, +/- 10%, X7R, 0603	0603
11	C35, C36, C48, C49	4	47uF	GRM32ER71A476ME15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 20%, X7R, 1210	1210
12	C37, C50	2	5600pF	GRM188R71H562KA01D	MuRata	CAP, CERM, 5600 pF, 50 V, +/- 10%, X7R, 0603	0603
13	C38, C51, C52	3	6.8pF	GRM1555C1H6R8CA01D	MuRata	CAP, CERM, 6.8 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
14	C53, C54, C55, C56, C57, C58, C59	7	10pF	GRM1885C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
15	D1	1	40V	SS24FL	Fairchild Semiconductor	Diode, Schottky, 40 V, 2 A, AEC-Q101, SOD-123F	SOD-123F
16	D2	1	40V	SS14FL	Fairchild Semiconductor	Diode, Schottky, 40 V, 1 A, AEC-Q101, SOD-123F	SOD-123F
17	FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
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	J1, J2, J3, J4	4		PRPC010DAAN-RC	Sullins Connector Solutions	Header, 2.54mm, 10x2, Gold, TH	Header, 2.54mm, 10x2, TH
21	J5	1		282834-2	TE Connectivity	Terminal Block, 2x1, 2.54mm, TH	Terminal Block, 2x1, 2.54mm, TH
22	J6, J7	2		5747846-4	TE Connectivity	Receptacle, D-Sub, 25 Position, R/A, TH	Receptacle, D-Sub, 25 Position, R/A, TH
23	L1	1	39uH	SDR1307-390KL	Bourns	Inductor, Drum Core, Ferrite, 39 uH, 2.9 A, 0.075 ohm, SMD	SDR1307
24	L2	1	200uH	SDR1105-201KL	Bourns	Inductor, Drum Core, Ferrite, 200 uH, 1 A, 0.65 ohm, SMD	Inductor, 11.1x4.8x10mm
25	R1, R49, R50, R54, R55, R115, R119, R120, R200	9	10.0k	RC0603FR-0710KL	Yageo	RES, 10.0 k, 1%, 0.1 W, 0603	0603
26	R2, R9, R21, R30	4	1.5k	RC0603JR-071K5L	Yageo	RES, 1.5 k, 5%, 0.1 W, 0603	0603
27	R3, R6, R8, R11, R16, R18, R23, R24, R26, R27, R29, R37, R66, R70, R71, R84, R85, R86, R87	19	1.00k	RC0603FR-071KL	Yageo	RES, 1.00 k, 1%, 0.1 W, 0603	0603
28	R4, R10, R17, R28, R36	5	100	RC0603FR-07100RL	Yageo	RES, 100, 1%, 0.1 W, 0603	0603

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29	R5, R13, R15, R19, R22, R31	6	681	RC0603FR-07681RL	Yageo	RES, 681, 1%, 0.1 W, 0603	0603
30	R7, R20, R33	3	866	RC0603FR-07866RL	Yageo	RES, 866, 1%, 0.1 W, 0603	0603
31	R12, R25, R35	3	4.99k	RC0603FR-074K99L	Yageo	RES, 4.99 k, 1%, 0.1 W, 0603	0603
32	R14, R32, R39	3	294	RC0603FR-07294RL	Yageo	RES, 294, 1%, 0.1 W, 0603	0603
33	R34, R59, R60, R61, R62, R72, R73, R74, R92, R93, R94, R104, R105, R106, R114, R116	16	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
34	R38	1	2.08k	RT0603BRD072K08L	Yageo America	RES, 2.08 k, 0.1%, 0.1 W, 0603	0603
35	R40	1	10.0k	RT0603BRD0710KL	Yageo America	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603
36	R42	1	0	RC1206JR-070RL	Yageo America	RES, 0, 5%, 0.25 W, 1206	1206
37	R44	1	100k	RC0603FR-07100KL	Yageo	RES, 100 k, 1%, 0.1 W, 0603	0603
38	R45	1	40.2k	RC0603FR-0740K2L	Yageo	RES, 40.2 k, 1%, 0.1 W, 0603	0603
39	R46, R52	2	287k	RC0603FR-07287KL	Yageo	RES, 287 k, 1%, 0.1 W, 0603	0603
40	R47	1	6.65k	RC0603FR-076K65L	Yageo	RES, 6.65 k, 1%, 0.1 W, 0603	0603
41	R48	1	56.2k	RC0603FR-0756K2L	Yageo	RES, 56.2 k, 1%, 0.1 W, 0603	0603
42	R51	1	71.5k	RC0603FR-0771K5L	Yageo	RES, 71.5 k, 1%, 0.1 W, 0603	0603
43	R53	1	133k	RC0603FR-07133KL	Yageo	RES, 133 k, 1%, 0.1 W, 0603	0603
44	TP2, TP7, TP8, TP9, TP10, TP11, TP17, TP18, TP20, TP21, TP22, TP30, TP31	13		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
45	TP23, TP24	2		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
46	U1, U4	2		LMV339MT/NOPB	Texas Instruments	Quad General Purpose, Low Voltage, Tiny Pack Comparator, 14-pin TSSOP, Pb-Free	PW0014A
47	U2	1		TLV9064IDR	Texas Instruments	4 channel, 10-MHz, Low-Noise, RRIO, CMOS Operational Amplifier for Cost-Sensitive Systems, D0014A (SOIC-14)	D0014A
48	U3	1		TLV9002IDR	Texas Instruments	2-Channel, 1MHz, RRIO, 1.8V to 5.5V Operational Amplifier for Cost-Optimized Systems, D0008A (SOIC-8)	D0008A
49	U5	1		TLV431AIDBVR	Texas Instruments	Low Voltage Adjustable Precision Shunt Regulator, 39 ppm / degC, 15 mA, -40 to 85 degC, 5-pin SOT-23 (DBV), Green (RoHS & no Sb/Br)	DBV0005A
50	U6, U8	2		TPS54140ADRCR	Texas Instruments	3.5V to 42V Input, 1.5A Step-Down Converter with Eco-Mode, DRC0010J (VSON-10)	DRC0010J
51	U7	1		TLV1117LV33DCYR	Texas Instruments	Single Output LDO, 1 A, Fixed 3.3 V Output, 2 to 5.5 V Input, 4-pin SOT-223 (DCY), -40 to 125 degC, Green (RoHS & no Sb/Br)	DCY0004A
52	U9	1		TLV1117-50IDCY	Texas Instruments	Single-Output LDO, 800mA, Fixed (5.0), Internal Current Limit, Thermal Overload Protection, DCY0004A (SOT-223-4)	DCY0004A
53	U10	1		SN74LVC1G10DCKR	Texas Instruments	Single 3-Input Positive-NAND Gate, DCK0006A (SOT-SC70-6)	DCK0006A
54	U11	1		SN74ACT244DWR	Texas Instruments	Octal Buffers/Drivers With 3-State Outputs, DW0020A, LARGE T&R	DW0020A
55	U12	1		SN74LVC1G32DCKR	Texas Instruments	Single 2-Input Positive-OR Gate, DCK0005A, LARGE T&R	DCK0005A
56	C25	0	1000pF	202R18W102KV4E	Johanson Technology	CAP, CERM, 1000 pF, 2000 V, +/- 10%, X7R, 1206_190	1206_190
57	C26	0	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, 1206	1206
58	Q1, Q2, Q3, Q4, Q5, Q6, Q7	0	30V	CSD17571Q2	Texas Instruments	MOSFET, N-CH, 30 V, 22 A, DQK0006C (WSO-6)	DQK0006C
59	R41	0	0	RC1206JR-070RL	Yageo America	RES, 0, 5%, 0.25 W, 1206	1206
60	R43	0	2.00Meg	RC1206FR-072ML	Yageo America	RES, 2.00 M, 1%, 0.25 W, 1206	1206

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61	R56, R57, R58, R63, R64, R65, R67, R68, R69, R81, R82, R83, R88, R89, R90, R91, R95, R96, R97, R98, R99, R100, R101, R102, R103, R113	0	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
62	R75, R76, R77, R107, R108, R109, R117	0	1.00k	RC0603FR-071KL	Yageo	RES, 1.00 k, 1%, 0.1 W, 0603	0603
63	R78, R79, R80, R110, R111, R112, R118	0	10.0k	RC0603FR-0710KL	Yageo	RES, 10.0 k, 1%, 0.1 W, 0603	0603