

**TIDA-00299 REV E2.1 Bill of Materials**

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	C1, C91, C92, C94, C95, C97, C98, C100, C101, C103, C104, C106, C107, C108, C109, C110, C111, C112, C113, C114, C119, C120, C121, C122, C124, C125, C126, C127, C128, C129, C130, C134, C135, C145, C146, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C163, C164, C165, C166, C167, C169, C182, C183	56	0.01uF	GRM033R71A103KA01D	MuRata	CAP, CERM, 0.01 µF, 10 V, +/- 10%, X7R, 0201	0201
2	C2, C172, C173, C174, C175, C176	6	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X7R, 0402	0402
3	C3, C6, C23, C171	4	0.1uF	GRM155R70J104KA01D	MuRata	CAP, CERM, 0.1 µF, 6.3 V, +/- 10%, X7R, 0402	0402
4	C5	1	1000pF	GRM155R71C102KA01D	MuRata	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0402	0402
5	C7, C8, C32, C36, C55, C63	6	10uF	885012207026	Würth Elektronik	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805	0805
6	C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C41, C42, C60, C61, C88, C89, C90	21	0.1uF	885012205037	Würth Elektronik	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0402
7	C24, C25, C40, C43, C47, C48, C59, C62, C72, C76, C77, C79, C83, C85, C86, C131, C132, C133	18	1uF	GRM155R70J105MA12D	MuRata	CAP, CERM, 1 µF, 6.3 V, +/- 20%, X7R, 0402	0402
8	C26, C27, C49, C50	4	0.1uF	885012205037	Würth Elektronik	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0402L
9	C28, C29, C30, C31, C51, C52, C53, C54	8	4.7pF	GRM0335C1H4R7CA01D	MuRata	CAP, CERM, 4.7 pF, 50 V, +/- 5%, C0G/NP0, 0201	0201
10	C33, C37, C56, C64	4	0.01uF	885012205031	Würth Elektronik	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0402	0402
11	C34, C38, C57, C65	4	1000pF	885012205044	Würth Elektronik	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0402	0402
12	C35, C39, C58, C66	4	100pF	CC0402KRX7R9BB101	Yageo America	CAP, CERM, 100 pF, 50 V, +/- 10%, X7R, 0402	0402
13	C44, C67	2	0.01uF	C1812C103KDRACU	Kemet	CAP, CERM, 0.01 µF, 1000 V, +/- 10%, X7R, 1812	1812
14	C45, C46, C68, C69, C168, C170	6	20pF	GRM1555C1H200JA01D	MuRata	CAP, CERM, 20 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402

15	C70, C71, C73, C74, C75, C78, C80, C81, C82, C93, C96, C99, C102, C105, C115, C123, C136, C137, C147, C148, C162	21	10uF	C1608X5R1E106M080AC	TDK	CAP, CERM, 10 µF, 25 V, +/- 20%, X5R, 0603	0603
16	C84, C87	2	2.2uF	GRM188R71A225KE15D	MuRata	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X7R, 0603	0603
17	C116, C117, C118, C138, C139, C140, C141, C142, C143, C144	10	0.1uF	CL03A104KP3NUNC	Samsung	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0201	0201
18	C177	1	4.7uF	GRM188R61C475KAAJ	MuRata	CAP, CERM, 4.7 µF, 16 V, +/- 10%, X5R, 0603	0603
19	C178, C181	2	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	0603
20	C179, C180	2	22uF	GRM188R61A226ME15D	MuRata	CAP, CERM, 22 µF, 10 V, +/- 20%, X5R, 0603	0603
21	C184, C186	2	1000pF	202R18W102KV4E	Johanson Technology	CAP, CERM, 1000 pF, 2000 V, +/- 10%, X7R, 1206_190	1206_190
22	D2, D3, D8, D15	4	Green	150060VS75000	Würth Elektronik	LED, Green, SMD	LED_0603
23	D4, D9	2	Yellow	150060YS75000	Würth Elektronik	LED, Yellow, SMD	LED_0603
24	D5, D10	2	Orange	VLMO1500-GS08	Vishay-Semiconductor	LED, Orange, SMD	LED, 1x.35x.5mm
25	D6, D17	2	GREEN	APTD1608LZGCK	Kingbright	LED, GREEN SMD	LED_0603
26	D7	1	Red	150060RS75000	Würth Elektronik	LED, Red, SMD	LED_0603
27	D11, D12, D13, D14	4	40V	MBR0540T1G	ON Semiconductor	Diode, Schottky, 40 V, 0.5 A, SOD-123	SOD-123
28	D16, D19	2	RED	APTD1608LSECK/J3-PF	Kingbright	LED, RED SMD	LED_0603
29	D18, D20	2	YELLOW	APTD1608LSYCK/J3-PF	Kingbright	LED, YELLOW SMD	LED_0603
30	FID4, FID5, FID6	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
31	H1, H2	2		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
32	J1	1		FTR-110-51-S-D-06	Samtec	Header, 1.27mm, 10x2, Tin, SMT	Header, 1.27mm, 10x2, SMT
33	J3	1		PEC06SAAN	Sullins Connector Solutions	Header, 100mil, 6x1, Tin, TH	TH, 6-Leads, Body 608x100mil, Pitch 100mil
34	J4, J5	2		SSW-110-23-F-D	Samtec	Connector, Receptacle, 100mil, 10x2, Gold plated, TH	10x2 Receptacle
35	J6, J7	2		1-406541-1	TE Connectivity	RJ-45, No LED, tab up, R/A, TH	16.26x14.54x15.75
36	J8	1		RAPC722X	Switchcraft	Power Jack, mini, 2.1mm OD, R/A, TH	Jack, 14.5x11x9mm
37	J9	1		PEC01DAAN	Sullins Connector Solutions	Header, 2.54mm, 1x2, Tin, Black, TH	Header, 2.54mm, 2x1, TH
38	L1, L2	2	2.2uH	VLCF4020T-2R2N1R7	TDK	Inductor, Shielded, Ferrite, 2.2 µH, 1.72 A, 0.059 ohm, SMD	4.0x2.0x4.0mm
39	L3	1	3.3uH	VLCF4020T-3R3N1R5	TDK	Inductor, Shielded, Ferrite, 3.3 µH, 1.52 A, 0.078 ohm, SMD	4.0x2.0x4.0mm
40	L4	1	1.5uH	XFL4020-152MEB	Coilcraft	Inductor, Shielded, Composite, 1.5 µH, 4.6 A, 0.01 ohm, SMD	4x2x4mm
41	LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W
42	Q1, Q2, Q3, Q4, Q5, Q6	6	12V	CSD13383F4	Texas Instruments	MOSFET, N-CH, 12 V, 2.9 A, YJC0003A	YJC0003A
43	R1, R2, R3, R24, R53, R215, R216, R218, R219, R237	10	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402

44	R4, R5, R6, R7, R8, R41, R46, R50, R52, R57, R62, R70, R73, R77, R81, R83, R84, R89, R93, R94, R98, R102, R139, R143, R144, R146, R151, R152, R154, R156, R157, R158, R159, R160, R161, R163, R164, R165, R166, R167, R170, R171, R182, R183, R186, R187, R212	47	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
45	R9	1	100	CRCW0402100RJNED	Vishay-Dale	RES, 100, 5%, 0.063 W, 0402	0402
46	R10	1	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
47	R14, R18, R23, R32, R33, R48, R64, R103, R114, R115, R119, R121, R138, R141, R142, R162, R168, R207, R208, R209, R210, R213, R214, R234	24	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
48	R15, R17, R25, R27	4	1.6k	CRCW04021K60JNED	Vishay-Dale	RES, 1.6k, 5%, 0.063 W, 0402	0402
49	R16, R26	2	1.2k	CRCW04021K20JNED	Vishay-Dale	RES, 1.2k, 5%, 0.063 W, 0402	0402
50	R19, R20, R21, R22, R28, R29, R30, R31	8	1.5k	CRCW04021K50JNED	Vishay-Dale	RES, 1.5 k, 5%, 0.063 W, 0402	0402
51	R34, R35, R36, R39, R40, R217, R238, R239, R240	9	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
52	R37	1	1.50k	CRCW04021K50FKED	Vishay-Dale	RES, 1.50 k, 1%, 0.063 W, 0402	0402
53	R38	1	240	ERJ-2RKF2400X	Panasonic	RES, 240, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
54	R42, R43, R44, R45, R58, R59, R60, R61	8	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, 0402	0402L
55	R47, R63	2	4.87k	CRCW04024K87FKED	Vishay-Dale	RES, 4.87 k, 1%, 0.063 W, 0402	0402
56	R49, R66	2	1.00Meg	HVC2010-1M0GT3	TT Electronics/IRC	RES, 1.00 M, 2%, 0.5 W, 2010	2010
57	R56, R69	2	2.4k	CRCW04022K40JNED	Vishay-Dale	RES, 2.4 k, 5%, 0.063 W, 0402	0402
58	R67, R68, R188, R189, R235, R236	6	2.49k	CRCW04022K49FKED	Vishay-Dale	RES, 2.49 k, 1%, 0.063 W, 0402	0402
59	R78	1	165k	CRCW0402165KFKED	Vishay-Dale	RES, 165 k, 1%, 0.063 W, 0402	0402
60	R79, R86, R97, R100	4	200k	CRCW0402200KFKED	Vishay-Dale	RES, 200 k, 1%, 0.063 W, 0402	0402
61	R80	1	2.0	CRCW06032R00JNEA	Vishay-Dale	RES, 2.0, 5%, 0.1 W, 0603	0603
62	R82	1	301k	CRCW0402301KFKED	Vishay-Dale	RES, 301 k, 1%, 0.063 W, 0402	0402
63	R85	1	4.99k	CRCW04024K99FKED	Vishay-Dale	RES, 4.99 k, 1%, 0.063 W, 0402	0402
64	R87, R91	2	2.00k	CRCW04022K00FKED	Vishay-Dale	RES, 2.00 k, 1%, 0.063 W, 0402	0402
65	R88, R95	2	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, 0402	0402
66	R90	1	432k	CRCW0402432KFKED	Vishay-Dale	RES, 432 k, 1%, 0.063 W, 0402	0402
67	R92	1	95.3k	CRCW040295K3FKED	Vishay-Dale	RES, 95.3 k, 1%, 0.063 W, 0402	0402
68	R96, R99	2	162k	CRCW0402162KFKED	Vishay-Dale	RES, 162 k, 1%, 0.063 W, 0402	0402

69	R101, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R135, R136, R137, R172	15	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
70	R140, R147, R148, R150, R153, R179	6	22	CRCW040222R0JNED	Vishay-Dale	RES, 22, 5%, 0.063 W, 0402	0402
71	R145, R149	2	47	CRCW040247R0JNED	Vishay-Dale	RES, 47, 5%, 0.063 W, 0402	0402
72	R155	1	2.2k	CRCW04022K20JNED	Vishay-Dale	RES, 2.2 k, 5%, 0.063 W, 0402	0402
73	R169	1	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, 0402	0402
74	R174, R175	2	33k	CRCW040233K0JNED	Vishay-Dale	RES, 33 k, 5%, 0.063 W, 0402	0402
75	R176, R177	2	51k	CRCW040251K0JNED	Vishay-Dale	RES, 51 k, 5%, 0.063 W, 0402	0402
76	R178	1	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, 0402	0402
77	R184, R185	2	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.1 W, 0603	0603
78	R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206	16	1.00k	CRCW02011K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.05 W, 0201	0201
79	R220, R221, R222, R223, R224, R225, R226, R227	8	75.0	CRCW080575R0FKEA	Vishay-Dale	RES, 75.0, 1%, 0.125 W, 0805	0805
80	R228, R229, R230, R231, R232, R233	6	499	CRCW0201499RFKED	Vishay-Dale	RES, 499, 1%, 0.05 W, 0201	0201
81	S1	1		B3U-1000P	Omron Electronic Components	SWITCH TACTILE SPST-NO 0.05A 12V	3x1.6x2.5mm
82	T1, T2	2	350uH	HX1188FNLT	Pulse Engineering	Transformer, 350 uH, SMT	12.7x9.09mm
83	TP8, TP9, TP10	3		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
84	U1	1		MT41K256M16HA-125 IT:E	Micron Technology	4GBIT DDR3 SDRAM, 96-FBGA	BGA, 96-Balls, Body 9x14mm, Pitch 0.8mm
85	U2	1		W25Q64FVZPIG	Winbond	3V 64 M-bit Serial Flash Memory With Dual/Quad SPI&QPI, WSON-8	WSON 6X5 mm
86	U3, U5	2		DP83822HRHBR	Texas Instruments	10/100 Ethernet PHY, RHB0032B	RHB0032B
87	U4, U6	2		TPD4E05U06DQAR	Texas Instruments	1, 4, 6 CHANNEL PROTECTION SOLUTION FOR SUPER-SPEED (UP TO 6 GBPS) INTERFACE, DQA0010A	DQA0010A
88	U7	1		TPS650250RHBR	Texas Instruments	Power Management IC for Li-Ion Powered Systems, RHB0032E	RHB0032E
89	U8, U9	2		SN74LVC541ADGVR	Texas Instruments	Octal Buffers/Drivers With 3-State Outputs, DGV0020A	DGV0020A
90	U10	1		SN74LVC2G66YZPR	Texas Instruments	Dual Bilateral Analog Switch, YZP0008ADAD	YZP0008ADAD
91	U11	1		AMIC110BZCZA	Texas Instruments	Sitara Processors, ZCZ0324A	ZCZ0324A
92	U12	1		SN74LVC2G241YZPR	Texas Instruments	Dual Buffer and Driver With 3-State Output, YZP0008ADAD	YZP0008ADAD
93	U13, U14, U15	3		SN74CB3Q3245RGYR	Texas Instruments	8-BIT FET BUS SWITCH 2.5-V/3.3-V LOW-VOLTAGE HIGH-BANDWIDTH BUS SWITCH, RGY0020A	RGY0020A
94	U16	1		CAT24C256WI-GT3	ON Semiconductor	256 kb I2C CMOS Serial EEPROM, SOIC-8	SOIC-8
95	Y1, Y2, Y3	3		CTX1175TR-ND	CTS ELECTRONIC COMPONENTS	Crystal, 25 MHz, 18 pF, SMD	CTX
96	FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
97	J2	0		DF40HC(4.0)-60DS-0.4V(51)	Hirose Electric Co. Ltd.	Receptacle, 0.4mm, 30x2, Gold, SMT	Receptacle, 0.4mm, 30x2, SMT
98	R11, R190	0	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
99	R12, R13, R51, R54, R65, R71, R74, R211	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402

100	R55, R76, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R116, R117, R118, R120	0	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
101	R72, R75	0	2.49k	CRCW04022K49FKED	Vishay-Dale	RES, 2.49 k, 1%, 0.063 W, 0402	0402
102	R122, R133, R134	0	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
103	R173	0	51k	CRCW040251K0JNED	Vishay-Dale	RES, 51 k, 5%, 0.063 W, 0402	0402
104	R180, R181	0	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, 0603	0603

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