

TIDA-020013 REV E2 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	C1, C7	2	0.1uF	HMK107B7104KAHT	Taiyo Yuden	CAP. CERM, 0.1 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
2	C2, C5, C12, C20, C21	5	0.1uF	GCM155R71H104KE02D	MuRata	CAP. CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
3	C3, C4	2	0.68uF	CGA4J3X7R1H684K125AB	TDK	CAP. CERM, 0.68 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
4	C6, C13, C16	3	6.8uF	CGA9M3X7S2A685K200KB	TDK	CAP. CERM, 6.8 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 2220	2220
5	C8, C9	2	4700pF	CGA3E2X7R2A472K080AA	TDK	CAP. CERM, 4700 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
6	C10, C11, C22	3	10uF	CGA5L3X5R1H106M160AB	TDK	CAP. CERM, 10 uF, 50 V, +/- 20%, X5R, AEC-Q200 Grade 3, 1206	1206
7	C14	1	1uF	CGA4J3X7R1H105K125AB	TDK	CAP. CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
8	C15, C17	2	100pF	CGA3E2NP01H101J080AA	TDK	CAP. CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 0, 0603	0603
9	C18, C25, C27	3	0.01uF	CGA2B3X7R1H103K050BB	TDK	CAP. CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
10	C19, C26	2	4.7uF	CGA4J1X7R1V475K125AC	TDK	CAP. CERM, 4.7 uF, 35 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
11	C23	1	0.022uF	CGA3E2X7R2A223K080AA	TDK	CAP. CERM, 0.022 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C24	1	0.033uF	CGA3E3X7S2A333K080AB	TDK	CAP. CERM, 0.033 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0603	0603
13	C28	1	1uF	CGA3E1X7R1E105K080AC	TDK	CAP. CERM, 1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
14	C29	1	0.022uF	CGA2B3X7R1H223K050BB	TDK	CAP. CERM, 0.022 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
15	C30, C37	2	0.22uF	CGA4J2X7R1H224K125AA	TDK	CAP. CERM, 0.22 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
16	C31, C34, C38, C41	4	1uF	1825PC105KA11A	AVX	CAP. CERM, 1 uF, 250 V, +/- 10%, X7R, 1825	1825
17	C32, C39	2	4.7uF	CGA4J1X7R1E475K125AC	TDK	CAP. CERM, 4.7 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
18	C33, C36, C40, C43	4	33pF	C0402C330J5GACALUTO	Kemet	CAP. CERM, 33 pF, 50 V, +/- 5%, C0G, AEC-Q200 Grade 1, 0402	0402
19	C35, C42	2	0.1uF	CGA5L4XT7W104M160AA	TDK	CAP. CERM, 0.1 uF, 450 V, +/- 20%, X7T, AEC-Q200 Grade 1, 1206	1206
20	C44	1	1uF	CL10B105KP8V-PNC	Samsung	CAP. CERM, 1 uF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
21	C45, C46, C47, C48	4	2.2uF	GCM188R70J225KE22D	MuRata	CAP. CERM, 2.2 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
22	D1, D4, D5, D6, D7	5	100V	DFLS1100Q-7	Diodes Inc.	Diode, Schottky, 100 V, 1 A, AEC-Q101, PowerDI123	PowerDI123
23	D2	1	16V	BZT52C16-7-F	Diodes Inc.	Diode, Zener, 16 V, 500 mW, AEC-Q101, SOD-123	SOD-123
24	D3	1	18V	P4SMA18CA-E3/61	Vishay-Semiconductor	Diode, TVS, Bi, 18 V, 25.2 Vc, AEC-Q101, SMA	SMA
25	D8	1	20V	MBR0520LT1G	ON Semiconductor	Diode, Schottky, 20 V, 0.5 A, SOD-123	SOD-123
26	D9, D12	2	600V	MUR160T3G	ON Semiconductor	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMA	SMA
27	D10, D11, D13, D14	4	100V	BAT46W-E3-08	Vishay-Semiconductor	Diode, Schottky, 100 V, 0.15 A, AEC-Q101, SOD-123	SOD-123
28	J1	1	1727010	Phoenix Contact	Cann Term Block, 2POS, 3.81mm, TH	2POS Terminal Block	
29	J2	1	OSTT7020150	On-Shore Technology	Terminal Block, 6.35mm, 2x1, TH	On-Shore OSTT7020150	
30	J3	1	PEC07DAAN	Sullins Connector Solutions	Header, 100mil, 7x2, Tin, TH	Header, 7x2, 100mil, Tin	
31	J4	1	TSW-106-07-T-S	Samtec	Header, 100mil, 6x1, Tin, TH	6x1 Header	
32	L1	1	2.2uH	XAL5030-222MEB	Coilcraft	Inductor, Shielded, Composite, 2.2 uH, 9.2 A, 0.01 ohm, AEC-Q200 Grade 1, SMD	5,3x31,x5.5mm
33	L2	1	27uH	MSS1260T-273MLB	Coilcraft	Inductor, Shielded Drum Core, Ferrite, 27 uH, 2.9 A, 0.05 ohm, SMD	12x6x12mm
34	L3	1	22uH	78438335220	Würth Elektronik	Inductor, Shielded, Powdered Iron, 22 uH, 0.6 A, 1.04 ohm, AEC-Q200 Grade 1, SMD	SMD, 2-Leads, Body 3x3mm
35	L4, L5	2	330uH	SRR1260A-331K	Boums	Inductor, Shielded Drum Core, Ferrite, 330 uH, 1.1 A, 0.58 ohm, AEC-Q200 Grade 1, SMD	12.5 x 12.5mm
36	L6	1	60 ohm	742792063	Würth Elektronik	Ferrite Bead, 60 ohm @ 100 MHz, 3 A, 0805	0805
37	L7	1	220 ohm	782853221	Würth Elektronik	Ferrite Bead, 220 ohm @ 100 MHz, 2 A, 0805	0805
38	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 x 0.200 inch	
39	Q1	1	-30V	DMP3035SFG-7	Diodes Inc.	MOSFET, P-CH, -30 V, -8.5 A, AEC-Q101, 8-PowerVDFN	8-PowerVDFN
40	Q2	1	100V	SQJA68EP-T1_GE3	Vishay-Siliconix	MOSFET, N-CH, 100 V, 14 A, AEC-Q101, PowerPAK SO-8L	PowerPAK SO-8L
41	Q3	1	20V	BSS806NEH6327XTSA1	Infineon Technologies	MOSFET, N-CH, 20 V, 2.3 A, AEC-Q101, SOT-23	SOT-23
42	Q4, Q5, Q6, Q7	4	250V	IPDSN25S340ATMA1	Infineon Technologies	MOSFET, N-CH, 250 V, 5 A, AEC-Q101, DPAK	DPAK
43	R1	1	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
44	R2, R7	2	10.0	CRCW060310R0FKEAHP	Vishay-Dale	RES, 10.0, 1%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
45	R3	1	6.34k	CRCW04026K34FKEA	Vishay-Dale	RES, 6.34 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R4, R13, R19	3	0	RCSP0603000Z0EA	Vishay-Dale	RES, 0, 0%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
47	R5, R6	2	511k	CRCW0402511KFKED	Vishay-Dale	RES, 511 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
48	R8	1	200k	ERJ-8ENF2003V	Panasonic	RES, 200 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
49	R9	1	1.69k	ERJ-6ENF1691V	Panasonic	RES, 1.69 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
50	R10	1	9.09k	CRCW06039K09FKEA	Vishay-Dale	RES, 9.09 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
51	R11	1	0.05	ERJ-L03KF50MV	Panasonic	RES, 0.05, 1%, 0.1 W, AEC-Q200 Grade 1, 0603	0603
52	R12	1	102k	ERJ-8ENF1023V	Panasonic	RES, 102 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
53	R14	1	4.02k	CRCW06034K02FKEA	Vishay-Dale	RES, 4.02 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
54	R15	1	2.40k	ERJ-2RFK2401X	Panasonic	RES, 2.40 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
55	R16, R18, R24, R32, R42	5	0	CRCW0402000020EDHP	Vishay-Dale	RES, 0, 0%, 0.2 W, AEC-Q200 Grade 0, 0402	0402
56	R17	1	19.6k	CRCW060319K6FKEA	Vishay-Dale	RES, 19.6 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
57	R20	1	7.87k	CRCW04027K87FKEA	Vishay-Dale	RES, 7.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
58	R21	1	14.7k	CRCW040214K7FKED	Vishay-Dale	RES, 14.7 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
59	R22	1	1.50Meg	CRCW040215M0FKED	Vishay-Dale	RES, 1.50 M, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
60	R23	1	174k	CRCW0402174KFKED	Vishay-Dale	RES, 174 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
61	R25, R33	2	2.21	CRCW04022R21FKED	Vishay-Dale	RES, 2.21, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
62	R26, R30, R34, R38	4	3.32	CRCW04023R32FKED	Vishay-Dale	RES, 3.32, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
63	R27, R31, R35, R39	4	10.2k	CRCW040210K2FKED	Vishay-Dale	RES, 10.2 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
64	R28, R29, R36, R37	4	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
65	R40, R41	2	4.7k	CRCW06034K7QJNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
66	R43	1	2.20k	RMCF0402F22K20	Stackpole Electronics Inc	RES, 2.20 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
67	R44	1	1.02k	CRCW04021K02FKED	Vishay-Dale	RES, 1.02 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
68	R45, R46	2	18	CRCW120618R0JNEA	Vishay-Dale	RES, 18, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
69	TP1, TP2, TP4, TP11	4	5011	Keystone	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	
70	TP5, TP6, TP7, TP8	4	5011	Keystone	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint	
71	TP13, TP16	2	5127	Keystone	Test Point, Multipurpose, Blue, TH	Blue Multipurpose Testpoint	
72	U1	1	LM5155QDSST01	Texas Instruments	Automotive Grade 2.2-MHz Wide Input Non-synchronous Boost Controller, DSS0012C (WSON-12)	DSS0012C	
73	U2	1	TPS7B8233QDGNRQ1	Texas Instruments	300mA High-Voltage Ultra-Low-Iq Low-Dropout (LDO) Regulator, DGN0008D (VSSOP-8)	DGN0008D	
74	U3	1	TLV271QDRQ1	Texas Instruments	Automotive Catalog 550 uA/Ch, 3 MHz, Rail-to-Rail Output Operational Amplifier, 2.7 to 16 V, -40 to 125 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Bi)	D0008A	
75	U4	1	TPS61041QDBVRQ1	Texas Instruments	Automotive Catalog Low Power DC / DC Boost Converter, 1.8 to 6 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Bi)	DBV0005A	
76	U5, U6	2	UCC27712QDRQ1	Texas Instruments	620-V High-Side Low-Side Gate Driver with 2.5A Peak Output and RobustDrive, D0008A (SOIC-8)	D0008A	
77	U7	1	TMS320F28027PTQ	Texas Instruments	Piccolo Microcontroller, PT0048A (LQFP-48)	PT0048A	

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