

Variant: 001
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TIDA-050089 REV E2 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	IPC8	1		TIDA-050089	Any	Printed Circuit Board	
2	C1, C2, C3, C4, C5, C6, C7, C23, C24, C25, C26, C27, C28, C29	14	0.1uF	GRM155R62A104KE14D	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X5R, 0402	0402
3	C8, C37, C74, C75, C76, C86, C87, C88, C112	9	1000pF	GRM033R71C102KA01D	MuRata	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0201	0201
4	C9, C12, C13, C35, C36, C104	6	0.1uF	C0402C104K8RACTU	Kemet	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
5	C10, C34	2	10pF	GRM1555C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
6	C11, C33	2	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
7	C14, C15, C49	3	2.2uF	C1005X5R1C225K050BC	TDK	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X5R, 0402	0402
8	C16, C38	2	470nF	C0603X5R1A474M030BC	TDK	Multilayer Ceramic Capacitors 470nF ±20% 10V X5R SMD 0201	0201
9	C17, C30, C78	3	0.1uF	GRM033R61C104KE14D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X5R, 0201	0201
10	C18, C19, C20, C21, C22, C46, C47, C52, C83	9	10uF	CL32B106KJNNWE	Samsung Electro-Mechanics	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, 1210	1210
11	C32	1	2.2uF	GRM31CL8E1225KE07L	Murata	Chip Multilayer Ceramic Capacitors for General Purpose 2.2uF ±10% 100Vdc	1206
12	C39, C41	2		GRM188R72A104KA35D	Murata	0.1uF ±10% 100V Ceramic Capacitor X7R 0603 (1608 Metric)	0603
13	C40, C43, C44	3	1uF	EMK105B1J05KVHF	Taiyo Yuden	CAP, CERM, 1 uF, 16 V, +/- 10%, X5R, 0402	0402
14	C42	1	10uF	CL21B106KQNNNE	Samsung Electro-Mechanics	CAP, CERM, 10 uF, 16 V, +/- 10%, X7R, 0805	0805
15	C45	1	10uF	C2012X5R1E106K125AB	TDK	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 0805	0805
16	C48, C100	2		GRM21BC72A105KE01L	Murata	1uF ±10% 100V Ceramic Capacitor X7S 0805 (2012 Metric)	0805
17	C53, C54, C59, C79, C85, C89, C90, C91, C92, C93, C94, C95, C96, C97, C99	15	10uF	C3225X7R2A106K250AC	TDK	10 uF ±10% 100V Ceramic Capacitor X7R 1210 (3225 Metric)	1210
18	C60, C62, C63, C64, C73, C77	6	2.2uF	GRM033R60J225ME47D	MuRata	CAP, CERM, 2.2 uF, 6.3 V, +/- 20%, X5R, 0201	0201
19	C61, C65, C66	3	0.01uF	CGA1A2X7R1A103K030BA	TDK	CAP, CERM, 0.01 uF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0201	0201
20	C67, C68, C69, C71	4	100nF	GRM155R71C104KA88J	Murata	0.1 uF ±10% 16V Ceramic Capacitor X7R 0402 (1005 Metric)	0402
21	C70, C72	2	100pF	CC0402JRNPO98N101	Yageo America	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
22	C80	1	10pF	GJM0335C1E100JB01D	MuRata	CAP, CERM, 10 pF, 25 V, +/- 5%, C0G/NP0, 0201	0201
23	D2, D3	2	40V	BAT54AFILM	STMicroelectronics	Diode, Schottky, 40 V, 0.3 A, SOT-23	SOT-23
24	J1	1		620308111121	Würth Elektronik	Header, 2 mm, 8x1, Gold, TH	Header, 2mm, 8x1, TH
25	J2, J3, J4	3		4637-0-00-15-00-00-03-0	Mill-Max	PC Pin Terminal Connector Through Hole Gold 0.030" (0.76mm) Dia	CONN PIN
26	J5, J6, J7, J8	4		6087-0-00-15-00-00-03-0	Mill-Max	PC Pin Terminal Connector Through Hole Gold 0.051" (1.30mm) Dia	CONN PC PIN
27	L3	1	5.4uH	ERUC23-2R8K	TDK	Unshielded 2 Coil Inductor Array Inductance - Connected in Series 5.4 uH Inductance - Connected in Parallel 1.25mOhm DC Resistance (DCR) - Parallel Nonstandard, 4 Lead	SMT_IND_26MM8_13 MM8
28	R2, R5, R14, R19, R21, R41, R42, R43, R53, R55, R57, R59, R61, R62, R64, R67, R73	17	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201
29	R3, R6, R36, R39, R40, R66	6	110	CRCW0402110RJNED	Vishay-Dale	RES, 110, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
30	R11	1	768k	RC0201FR-07768KL	Yageo America	RES, 768 k, 1%, 0.05 W, 0201	0201
31	R12, R13	2	100k	RC0201FR-07100KL	Yageo America	RES, 100 k, 1%, 0.05 W, 0201	0201
32	R15, R16	2	500u	CST0612-FC-R0005-E	Bourns	0.5 mOhms ±1% 1W Chip Resistor Nonstandard Automotive AEC-Q200, Current Sense, Moisture Resistant Metal Element	SMD4
33	R17, R18, R20, R22	4	9.31	CRCW04029R31FKED	Vishay-Dale	RES, 9.31, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
34	R23	1	2.20k	CRCW02012K20FKED	Vishay-Dale	RES, 2.20 k, 1%, 0.05 W, 0201	0201
35	R24	1	16.2k	RC0201FR-0716K2L	Yageo America	RES, 16.2 k, 1%, 0.05 W, 0201	0201
36	R25, R34, R35, R52	4	10.0k	CRCW020110K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.05 W, 0201	0201
37	R26	1	150k	RC0201DR-07150KL	Yageo America	RES, 150 k, 0.5%, 0.05 W, 0201	0201
38	R27, R45	2	15	RC0201FR-0715RL	Yageo America	RES, 15.0, 1%, 0.05 W, 0201	0201
39	R28	1	1.00k	RC0201DR-071KL	Yageo America	RES, 1.00 k, 0.5%, 0.05 W, 0201	0201
40	R29	1	4.70k	RC0201DR-074K7L	Yageo America	RES, 4.70 k, 0.5%, 0.05 W, 0201	0201
41	R30, R31, R75	3	1.5k	CRCW02011K50FKED	Vishay	1.5k ±1% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) - Thick Film	0201
42	R44	1	1.82k	RC0201FR-071K82L	Yageo America	RES, 1.82 k, 1%, 0.05 W, 0201	0201
43	R46	1	1.62k	RC0201FR-071K62L	Yageo America	RES, 1.62 k, 1%, 0.05 W, 0201	0201
44	R54	1	150	RC0201FR-07150RL	Yageo America	RES, 150, 1%, 0.05 W, 0201	0201
45	RT1, RT2	2		TMP6131DECT	Texas Instruments	Thermistor, DEC0002A (X1SON-2)	DEC0002A
46	SW1	1		PTS830GM140SMT8R LFS	C&K Components	Tactile Switch SPST-NO Top Actuated Surface Mount	SMT_3MM05_2MM6
47	U1, U2, U3, U4	4		LMG3100R017VBER	Texas Instruments	100-V, 64-A GaN with Integrated Driver	VQFN-FCRLF15
48	U5	1		UCD3138ARJAT	Texas Instruments	UCD3138A Highly Integrated Digital Controller for Isolated Power 40-VQFN -40 to 125	VQFN40
49	U6, U7	2		ISO6521FREUR	Texas Instruments	General Purpose Dual-Channel Functional Isolators	VSON8
50	U8	1		TPSM365R6VSRDNR	Texas Instruments	3-V to 65-V Input, 1-V to 13-V Output, 600-mA Synchronous Buck Converter Power Module in a HotRod QFN Package	VQFN-HR9
51	U9, U15	2		INA241A1IDDF	Texas Instruments	-4-V to 110V, Bidirectional, Ultra-Precise Current Sense Amplifier With Enhanced PWM Rejection	SOT-23-8
52	U10	1		TPS7A2033PDBVR	Texas Instruments	300-mA, Ultra-Low-Noise, Low-IQ, High PSRR LDO	SOT23-5
53	U11, U12	2		TMUX1219DCKR	Texas Instruments	1-ch, 2:1 general-purpose analog multiplexer with 1.8-V logic control, DCK0006A (SOT-SC70-6)	DCK0006A
54	U14	1		TLV431BQDBZRQ1	Texas Instruments	Automotive Catalog Low-Voltage Adjustable Precision Shunt Regulator, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
55	C31, C50, C51, C55, C56, C57, C58, C82, C98, C101, C102, C103	0	2.2uF	C2012X7R2A225K125AC	TDK	2.2 uF ±10% 100V Ceramic Capacitor X7R 0805 (2012 Metric)	0805
56	D1	0	15V	BZT52C15-7-F	Diodes Inc.	Diode, Zener, 15 V, 370 mW, AEC-Q101, SOD-123	SOD-123
57	R47, R48, R58, R63, R65, R71, R72, R74	0	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201
58	R51	0	110	CRCW0402110RJNED	Vishay-Dale	RES, 110, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

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