TIDA-0110034 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-0110034	Any	Printed Circuit Board	
C1, C2, C11, C12, C28, C31, C32, C34, C53, C54, C61, C62, C69, C70, C71, C72	16	1 µF	885012208093	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1206, X7R, 1µF, 50VDC	
C3, C13, C55, C63	4	1 µF	885012206052	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 1µF, 16VDC	
C4, C5, C9, C10, C14, C15, C17, C18, C25, C26, C56, C57, C59, C60, C67, C68	16		885012006063	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, NP0, 1nF, 50VDC	
C6, C16, C58, C66, C75, C76, C77, C78	8	10 nF	885012205012	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 10nF, 10VDC	
C7, C8	2	8.2pF	885392005088	Wurth Elektronik	WCAP-CSRF Multilayer Ceramic Chip Capacitor, High Frequency, size 0402, NP0 Class I, 8.2pF, 50VDC	
C19, C20, C21, C22	4	22 nF	885012207124	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0805, X7R, 22nF, 100VDC	
C23	1	100pF	885012005080	Wurth Electronics	100 pF ±5% 100V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	0402
C24	1	1uF	885012206052	Wurth Elektronik	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603
C27, C43, C64, C65, C73, C74, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90	18	10nF	885012205067	Wurth Electronics	10000pF ±10% 50V Ceramic Capacitor X7R 0402 (1005 Metric)	0402
C29, C30	2	2.2 µF	885012209071	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1210, X7R, 2.2µF, 100VDC	
C33, C35, C36, C38	4	100 nF	885012105018	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X5R, 100nF, 25VDC	
C37	1	220 µF	865230557007	Wurth Elektronik	WCAP-AS5H Aluminum Electrolytic Capacitor, V-Chip, D10 x H10.5mm, 220µF, 35V	
C39	1	100 nF	885012208087	Wurth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1206, X7R, 100nF, 50VDC	
C40, C42, C44, C45, C46, C47	6	4.7µF	885012209048	Wurth	4.7 µF ±10% 50V Ceramic Capacitor X7R 1210 (3225 Metric)	1210
C41	1	22nF	885382206003	Wurth Elektronik	WCAP-CSST Multilayer Ceramic Chip Capacitor, Soft Termination, size 0603, X7R Class II, 22nF, 50VDC	
C48, C49	2	22uF	885012208019	Wurth Elektronik	CAP, CERM, 22 uF, 10 V,+/- 10%, X7R, 1206	1206
C50, C51	2	10uF	885012208041	Wurth Elektronik	CAP, CERM, 10 µF, 16 V,+/- 10%, X7R, 1206	1206

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D1, D2, D3, D4, D5, D6, D7, D8, D14, D15, D16, D17, D18, D19, D20, D21	16			Wurth Elektronik	WL-SFCC SMT Full-color Chip LED Compact, size 0404, Red & Green & Blue, 120°	
D9, D10, D13	3	Green	150040GS73240	Wurth Elektronik	LED, Green, SMD	1x0.5mm
D11, D12	2	33V	SMCJ33CA	Bourns	Diode, TVS, Bi, 33 V, SMC	SMC
FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J1, J2, J3, J4, J12, J13, J14, J15	8		643260100605	Wurth Elektronik	WR-CIRCM12 Screw Mating Panel Connector Female Metal PG9, THT, 5p	
J5, J11, J16	3		61300211121	Wurth Elektronik	Header, 2.54 mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
J6, J7, J8, J9	4		SSQ-110-03-T-D	Samtec	Receptacle, 2.54mm, 10x2, Tin, TH	10x2 Receptacle
J10	1			Wurth Elektronik	WR-TBL Series 3055 PCB Header Horizontal Entry with Plastic Latches, THT, pitch 5.08mm, 04p	
J17	1		6.94106E+11	Wurth	Power Barrel Connector Jack 2.10mm ID (0.083"), 5.50mm OD (0.217") Through Hole, Right Angle	CONN_PWR_JACK
L1, L2, L3, L5, L6	5	600 ohm	7427927291	Wurth Elektronik	Ferrite Bead, 600 ohm @ 100 MHz, 0.3 A, 0402	0402
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
Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q29, Q32	20	60V	CSD18543Q3A	Texas Instruments	MOSFET, N-CH, 60 V, 35 A, DNH0008A (VSONP-8)	DNH0008A
Q21, Q22, Q23, Q24	4	60V	CSD18540Q5B	Texas Instruments	MOSFET, N-CH, 60 V, 100 A, DNK0008A (VSON-CLIP-8)	DNK0008A
Q25, Q26	2	100V	CSD19538Q2	Texas Instruments	MOSFET, N-CH, 100 V, 4.5 A, DQK0006C (WSON-6)	DQK0006C

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R59, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R140, R141, R142, R145, R146, R147, R153, R154, R157, R158, R161, R162, R165, R166, R167, R170, R171, R172	67	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R13, R14, R17, R18, R42, R43, R44, R45, R116, R117, R118, R119	12	40m	WSL1206R0400FEB	Vishay	40 mOhms ±1% 0.25W, 1/4W Chip Resistor Automotive AEC-Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	1206
R15, R16, R27, R28, R61, R62, R63, R64, R65, R92, R93, R101, R102, R129, R130, R131	16	100	CRCW0402100RFKEDHP	Vishay Dale	RES Thick Film, 100Ω, 1%, 0.2W, 100ppm/°C, 0402	0402
R21, R22, R23, R24, R48, R49, R50, R51, R97, R98, R122, R123, R124, R125	14	499	CRCW0402499RFKED	Vishay-Dale	RES, 499, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R25, R26, R29, R47, R53, R54, R55, R57, R60, R95, R99, R103, R120, R121, R132, R133, R134, R135, R136, R137, R138, R139	22	0	CRCW04020000Z0EDC	Vishay	Jumper 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) - Thick Film	0402
R56, R148, R149, R150, R151, R152	6	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R58	1	13.3k	CRCW040213K3FKED	Vishay-Dale	RES, 13.3 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R66, R67	2	100k	RC0402FR-07100KL	Yageo America	RES, 100 k, 1%, 0.0625 W, 0402	0402
R68	1	100	CRCW0402100RJNED	Vishay-Dale	RES, 100, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R69, R70	2	68k	CRCW040268K0JNED	Vishay-Dale	RES, 68 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R71	1	3.92k	CRCW04023K92FKED	Vishay-Dale	RES, 3.92 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R72	1	7.50k	CRCW04027K50FKED	Vishay-Dale	RES, 7.50 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R73	1	23.2k	CRCW040223K2FKED	Vishay-Dale	RES, 23.2 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R74	1	20.0k	CRCW040220K0FKED	Vishay-Dale	RES, 20.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R76	1	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R77	1	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R78, R128, R143, R144, R155, R156, R159, R160, R163, R164, R168, R169	12	10	CRCW040210R0JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R91, R94	2	0.082	MCR18EZHFSR082	Rohm	RES, 0.082, 1%, 0.25 W, 1206	1206
U1, U2, U6, U7, U10, U11, U15, U16, U35, U37, U38, U39, U40, U43, U44, U45	16		TVS3300DRVR	Texas Instruments	33-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
U3, U12, U27, U36	4		TIOM2212RGZT	Texas Instruments	Dual Channel IO-Link Master With Integrated Frame Handler, Supply Controller and Diagnostics	VQFN48
U4, U5, U8, U9, U13, U14, U17, U18, U24, U25, U26, U28, U29, U30, U31, U32, U33, U34, U41, U42	20		TSM36ADBZR	Texas Instruments	Surge Protection Device in SOT-23 Package	SOT23-3
U19	1		TPS274C65AS	Texas Instruments	65-mΩ, Quad-Channel Smart High-Side Switch with SPI interface and Diagnostics	VQFN40
U20	1		TLVM23615RDNR	Texas Instruments	3 V to 36 V Input, 1 V to 15 V Output, 2.5-A Synchronous Buck Converter Power Module in a HotRod QFN Package	QFN-FCMOD11
U21, U22	2		SN74LV4052AQPWRQ1	Texas Instruments	Automotive Catalog Dual 4-Channel Analog Multiplexer/Demultiplexer, PW0016A (TSSOP-16)	PW0016A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U23	1		LM74502DDF	Texas Instruments	Low IQ High Side Switch Controller With Reverse Polarity and Overvoltage Protection	SOT23-8
Y1	1		ABM8G-14.7456MHZ-18-D2Y-T	Abracon Corporation	Crystal, 14.7456 MHz, 18 pF, SMD	Crystal, 2.5x1x3.2mm
C52	0	27pF	885392005116	Wurth Elektronik	WCAP-CSRF Multilayer Ceramic Chip Capacitor, High Frequency, size 0402, NP0 Class I, 27pF, 50VDC	
D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35	0	30V	BAT54WSQ-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.1 A, AEC-Q101, SOD-323	SOD-323
R19, R20, R46, R52, R96, R100, R126, R127	0	0	CRCW04020000Z0EDC	Vishay	Jumper 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) - Thick Film	0402
R75	0	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

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