

**TIDA-00746 REV A Bill of Materials**

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-00746	Any	Printed Circuit Board	
BIAS1, RESET1	2		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
C1, C2, C5	3	1000pF	06031C102KAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0603	0603
C3, C4, C8, C10	4	10uF	GRM32ER71H106KA12L	MuRata	CAP, CERM, 10 µF, 50 V, +/- 10%, X7R, 1210	1210
C6, C7	2	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X7R, 1206	1206
C9, C11	2	4700pF	C2012X7R2A472K	TDK	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0805	0805
C12	1	2.2uF	C2012X5R1H225K125AB	TDK	CAP, CERM, 2.2 µF, 50 V, +/- 10%, X5R, 0805	0805
C13, C14	2	10uF	GRM31CR61H106KA12L	MuRata	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206	1206
C15, C16	2	10uF	GRM31CR71A106KA01L	MuRata	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 1206	1206
C17, C27, C37, C52	4	2200pF	C0603C222K5RACTU	Kemet	CAP, CERM, 2200pF, 50V, +/-10%, X7R, 0603	0603
C18	1	0.47uF	GRM188R71A474KA61D	MuRata	CAP, CERM, 0.47uF, 10V, +/-10%, X7R, 0603	0603
C19, C24, C43	3	4.7uF	GRM188R61C475KAAJ	MuRata	CAP, CERM, 4.7 µF, 16 V, +/- 10%, X5R, 0603	0603
C20, C23, C42	3	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1 µF, 16 V, +/- 5%, X7R, 0603	0603
C21, C25	2	47uF	GRM31CR60J476ME19L	MuRata	CAP, CERM, 47 µF, 6.3 V, +/- 20%, X5R, 1206	1206
C22, C26, Co2, Co3	4	22uF	GRM31CR71A226KE15L	MuRata	CAP, CERM, 22 µF, 10 V, +/- 10%, X7R, 1206	1206
C28, C31, C41, C46	4	0.1uF	06035C104KAT2A	AVX	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C29, C30, C44, C45	4	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805
C32, C33, C34, C35, C47, C48, C49, C50	8	47uF	C3225X5R0J476M	TDK	CAP, CERM, 47uF, 6.3V, +/-20%, X5R, 1210	1210
C36, C51	2	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603
C38, C53	2	DNP	06035A100JAT2A	AVX	CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0603	0603
C39, C54	2	47pF	08051A470JAT2A	AVX	CAP, CERM, 47 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805
C40	1	2400pF	GRM1885C1H242JA01D	MuRata	CAP, CERM, 2400 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C55	1	6800pF	06031C682KAT2A	AVX	CAP, CERM, 6800 pF, 100 V, +/- 10%, X7R, 0603	0603
Cb1	1	0.47uF	GRM188R61E474KA12D	MuRata	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X5R, 0603	0603
Cbias1, Co1	2	0.1uF	GCM188R71C104KA37J	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
CFF1	1	91pF	GRM1555C1H910JA01D	MuRata	CAP, CERM, 91 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
Cin_hf1, Cin_hf2	2	0.047uF	GRM188R71H473KA61D	MuRata	CAP, CERM, 0.047 µF, 50 V, +/- 10%, X7R, 0603	0603
Co4	1	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 µF, 10 V, +/- 10%, X7R, 1210	1210
Cvcc1	1	4.7uF	GCM21BR71C475KA73L	MuRata	CAP, CERM, 4.7 µF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
D1	1	15V	MMSZ5245B-7-F	Diodes Inc.	Diode, Zener, 15 V, 500 mW, SOD-123	SOD-123
D2	1	28V	SMBJ28A-13-F	Diodes Inc.	Diode, TVS, Uni, 28 V, 600 W, SMB	SMB
D3	1	14V	SMBJ14A-13-F	Diodes Inc.	Diode, TVS, Uni, 14 V, 600 W, SMB	SMB
FID4, FID5, FID6	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
GND2, VOUT2	2	Double	1502-2	Keystone	Terminal, Turret, TH, Double	Keystone1502-2
GND3	1	Black	5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
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
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1	1		6091	Keystone	Standard Banana Jack, Insulated, Red	6091
J2	1		6092	Keystone	Standard Banana Jack, Insulated, Black	6092

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J3	1		HTSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	Header, 100mil, 2x1, TH
L1	1		ACM1211-102-2PL-TL01	TDK	Coupled inductor, 6 A, 0.014 ohm, SMD	SMD, 12x11mm
L2	1	2.2uH	IHLP3232DZER2R2M11	Vishay-Dale	Inductor, Shielded, Powdered Iron, 2.2 µH, 10.2 A, 0.00941 ohm, SMD	322x158x322mil
L3, L5	2	3.3uH	MOS6020-332MLB	Coilcraft	Inductor, Shielded Drum Core, Ferrite, 3.3 µH, 2.48 A, 0.05 ohm, SMD	MOS6020
L4, L6, L9	3	500 ohm	MI1206L501R-10	Laird-Signal Integrity Products	Ferrite Bead, 500 ohm @ 100 MHz, 2 A, 1206	1206
L7	1	1uH	XFL4020-102MEB	Coilcraft	Inductor, Shielded, Composite, 1 µH, 5.4 A, 0.01 ohm, SMD	4x2x4mm
L8	1	2.2uH	SRN8040-2R2Y	Bourns	Inductor, Drum Core, Ferrite, 2.2 µH, 6.3 A, 0.013 ohm, SMD	Inductor, 8x4x8mm
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
LF1	1	2.2uH	IHLP2020CZER2R2M11	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 2.2 µH, 5.5 A, 0.025 ohm, SMD	5.18x3x5.5mm
Q1	1	40V	SQJ422EP-T1-GE3	Vishay-Siliconix	MOSFET, N-CH, 40 V, 75 A, PowerPAK_SO-8L	PowerPAK_SO-8L
Q2	1	-60V	SQJ461EP	Vishay-Siliconix	MOSFET, P-CH, -60 V, 30 A, PowerPAK_SO-8L	PowerPAK_SO-8L
Q3	1	60V	SQ2360EES-T1-GE3	Vishay-Siliconix	MOSFET, N/P-CH, 60 V, 4.4 A, SOT-23	SOT-23
R1, R5	2	100k	CPF0603B100KE	TE Connectivity	RES, 100 k, 0.1%, 0.063 W, 0603	0603
R2	1	20k	CRCW060320K0JNEA	Vishay-Dale	RES, 20 k, 5%, 0.1 W, 0603	0603
R3, R30	2	30.1k	CRCW060330K1FKEA	Vishay-Dale	RES, 30.1 k, 1%, 0.1 W, 0603	0603
R4	1	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, 0603	0603
R6	1	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, 0603	0603
R7, R8, R9	3	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
R10	1	4.99	RC0805FR-074R99L	Yageo America	RES, 4.99 ohm, 1%, 0.125W, 0805	0805
R11, R17, R20, R29	4	4.7	CRCW08054R70JNEA	Vishay-Dale	RES, 4.7 ohm, 5%, 0.125W, 0805	0805
R12, R14	2	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9k ohm, 1%, 0.1W, 0603	0603
R13	1	5.10k	RG1608P-512-B-T5	Susumu Co Ltd	RES, 5.10 k, 0.1%, 0.1 W, 0603	0603
R15	1	3.83k	RG1608P-3831-B-T5	Susumu Co Ltd	RES, 3.83 k, 0.1%, 0.1 W, 0603	0603
R16, R18	2	10.2k	RG1608P-1022-B-T5	Susumu Co Ltd	RES, 10.2 k, 0.1%, 0.1 W, 0603	0603
R19, R28	2	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.1W, 0603	0603
R21	1	249k	RG1608P-2493-B-T5	Susumu Co Ltd	RES, 249 k, 0.1%, 0.1 W, 0603	0603
R22, R31	2	82.5k	CRCW060382K5FKEA	Vishay-Dale	RES, 82.5 k, 1%, 0.1 W, 0603	0603
R23, R32	2	80.6k	CRCW060380K6FKEA	Vishay-Dale	RES, 80.6 k, 1%, 0.1 W, 0603	0603
R26	1	4.75k	CRCW06034K75FKEA	Vishay-Dale	RES, 4.75 k, 1%, 0.1 W, 0603	0603
R33	1	2.61k	CRCW06032K61FKEA	Vishay-Dale	RES, 2.61 k, 1%, 0.1 W, 0603	0603
Rbias1	1	3.0	CRCW06033R00JNEA	Vishay-Dale	RES, 3.0, 5%, 0.1 W, 0603	0603
RFBB1	1	20.0k	CRCW040220K0FKED	Vishay-Dale	RES, 20.0 k, 1%, 0.063 W, 0402	0402
RFBT1	1	80.6k	CRCW040280K6FKED	Vishay-Dale	RES, 80.6 k, 1%, 0.063 W, 0402	0402
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9	9	Double	1503-2	Keystone	Terminal, Turret, TH, Double	Keystone1503-2
U1	1		LM74610	Texas Instruments		MSOP-8
U2	1		TLVH431AQDBVRQ1	Texas Instruments	Automotive Catalog Low-Voltage Adjustable Precision Shunt Regulator, 80 mA, -40 to 125 degC, 5-pin SOT-23 (DBV), Green (RoHS & no Sb/Br)	DBV0005A
U3	1		LM53635MQRNLRQ1	Texas Instruments	2.5/3.5A Synchronous Buck Regulator for Automotive Applications, RNL0022A	RNL0022A
U4	1		LM26420XSQ/NOPB	National Semiconductor	Dual 2.0A, High Frequency Synchronous Step-Down DC-DC Regulator, 16 pin LLP, Pb-Free	SQB16A
U5	1		TPS57114QRTERQ1	Texas Instruments	2.95 V to 6 V Input, 4-A Output, 2MHz, Synchronous Step Down Switcher, RTE0016F	RTE0016F
U6	1		TPS57112QRTERQ1	Texas Instruments	2.95 V to 6 V Input, 2-A Output, 2MHz, Synchronous Step Down Switcher, RTE0016F	RTE0016F

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VINs1	1		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

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