

## TIDA-070002 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPC81	1		SLHR016	Any	Printed Circuit Board	
C2, C3	2	220uF	UCZ2A221MNQ1MS	Nichicon	CAP, AL, 220 uF, 100 V, +/- 20%, 0.12 ohm, SMD	D16xL21.5mm
C4, C5, C6, C7, C8, C9, C10, C22, C23, C24, C25, C40	12	4.7uF	CGA6M3X7S2A475K200AB	TDK	CAP, CERM, 4.7 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1210	1210
C11	1	0.039uF	C0603C393K1RACTU	Kemet	CAP, CERM, 0.039 uF, 100 V, +/- 10%, X7R, 0603	0603
C12	1	4700pF	06031C472KAT2A	AVX	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0603	0603
C13	1	4700pF	VJ1210Y472KXEAT5Z	Vishay-Vitramon	CAP, CERM, 4700 pF, 500 V, +/- 10%, X7R, 1210	1210
C15, C16	2	150uF	EEE-FK1V151P	Panasonic	CAP, AL, 150 uF, 35 V, +/- 20%, 0.16 ohm, AEC-Q200 Grade 2, SMD	SMT Radial F
C17, C18	2	4.7uF	C3216X7R1V475K085AC	TDK	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X7R, 1206	1206
C19	1	0.18uF	GRM188R71E184KA88D	MuRata	CAP, CERM, 0.18 uF, 25 V, +/- 10%, X7R, 0603	0603
C20	1	2200pF	GRM188R71E222KA01D	MuRata	CAP, CERM, 2200 pF, 25 V, +/- 10%, X7R, 0603	0603
C21, C39	2	0.1uF	C1210C104K5RACTU	Kemet	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 1210	1210
C26, C38	2	2200pF	08051C222KAT2A	AVX	CAP, CERM, 2200 pF, 100 V, +/- 10%, X7R, 0805	0805
C27	1	680pF	GRM31B5C2J681JW01L	MuRata	CAP, CERM, 680 pF, 630 V, +/- 5%, C0G/NP0, 1206	1206
C28	1	2700pF	GRM188R71H272KA01D	MuRata	CAP, CERM, 2700 pF, 50 V, +/- 10%, X7R, 0603	0603
C29, C57, C58	3	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603	0603
C30, C32, C51, C54, C56	5	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0603	0603
C31	1	1uF	GRM185C81A105KE36D	MuRata	CAP, CERM, 1 uF, 10 V, +/- 10%, X6S, 0603	0603
C33, C34, C35, C36, C37	5	220uF	T495X227K010ATE045	Kemet	CAP, TA, 220 uF, 10 V, +/- 10%, 0.045 ohm, SMD	7343-43
C41	1	22uF	GRM32ER71A226ME20L	MuRata	CAP, CERM, 22 uF, 10 V, +/- 10%, X7R, 1210	1210
C42	1	1200pF	06031C122JAT2A	AVX	CAP, CERM, 1200 pF, 100 V, +/- 5%, X7R, 0603	0603
C43	1	0.1uF	CGA3E2X7R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C44	1	56pF	06035A560JAT2A	AVX	CAP, CERM, 56 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C45	1	0.22uF	885012206048	Wurth Elektronik	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, 0603	0603
C46	1	0.47uF	C1608X7R1H474K080AC	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, 0603	0603
C48	1	220pF	C0603C221K5RACTU	Kemet	CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603	0603
C49	1	470pF	885012206081	Wurth Elektronik	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
C50	1	100pF	885012006057	Wurth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C52	1	2.2uF	EMK107BB7225MA-T	Taiyo Yuden	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0603	0603
C53, C55	2	4.7uF	C1608X7S1A475K080AC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X7S, 0603	0603
D1	1	60V	SS1FH6HM3/H	Vishay-Semiconductor	Diode, Schottky, 60 V, 1 A, AEC-Q101, DO-219AB	DO-219AB
D2	1	60V	VS-40CPQ060PBF	Vishay-Semiconductor	Diode, Schottky, 60 V, 40 A, TH	TO-247
D3	1	18V	SMAZ18-13-F	Diodes Inc.	Diode, Zener, 18 V, 1 W, AEC-Q101, SMA	SMA
D4	1	39V	ACZRC5366B-G	Comchip Technology	Diode, Zener, 39 V, 5 W, AEC-Q101, DO-214AB	DO-214AB
D5	1	60V	SS26FL	Fairchild Semiconductor	Diode, Schottky, 60 V, 2 A, AEC-Q101, SOD-123F	SOD-123F
D7	1	20V	MBR1020VL	Fairchild Semiconductor	Diode, Schottky, 20 V, 1 A, SOD-123F	SOD-123F
D8	1	30V	B130-13-F	Diodes Inc.	Diode, Schottky, 30 V, 1 A, SMA	SMA
D9	1	75V	1N4148WT	Fairchild Semiconductor	Diode, Switching, 75 V, 0.3 A, SOD-523F	SOD-523F
D10	1	Green	LG M67K-G1J2-24-Z	OSRAM	LED, Green, SMD	2x1.4mm
D11	1	6V	MMSZ5233B-7-F	Diodes Inc.	Diode, Zener, 6 V, 500 mW, SOD-123	SOD-123
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
H9	1		634-10ABPE	Wakefield-Vette		16.26x25.4x16.26 mm
J1, J2, J3, J4, J5, J6, J14	7		800-10-002-10-001000	Mill-Max	Header, 100mil, 2x1, TH	Header, 2x1, 100mil, TH

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
J7, J9	2		CT3151SP-2	Cal Test Electronics	Banana Jack Insul Nylon Red, R/A, TH	CTE_CT3151SP-2
J8, J12	2		39544-3004	Molex	Terminal Block, 4x1, 5.08mm, TH	4x1 Terminal Block
J10, J11	2		901-144-8RFX	Amphenol RF	SMA Straight Jack, Gold, 50 Ohm, TH	SMA Straight Jack, TH
J13, J15	2		CT3151SP-0	Cal Test Electronics	Banana Jack Insul Nylon Black, R/A, TH	CTE_CT3151SP-0
J16	1		131-5031-00	Tektronix	Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe
L1	1	500nH	SRN8040TA-R50Y	Bourns	Inductor, Shielded, Ferrite, 500 nH, 12 A, 0.0066 ohm, AEC-Q200 Grade 1, SMD	8x8x4.5 mm
Q1	1	150V	SUM80090E-GE3	Vishay-Siliconix	MOSFET, N-CH, 150 V, 128 A, DDPAK	DDPAK
Q2	1	40 V	MMBT4403	Fairchild Semiconductor	Transistor, PNP, 40 V, 0.6 A, SOT-23	SOT-23
Q3	1	40 V	MMBT3904WT1G	ON Semiconductor	Transistor, NPN, 40 V, 0.2 A, SOT-323	SOT-323
R1	1	0.03	CSRN2010FK30L0	Stackpole Electronics Inc	RES, 0.03, 1%, 1 W, 2010	2010
R3	1	10.0	CRCW201010R0FKEF	Vishay-Dale	RES, 10.0, 1%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R4	1	3.00	ERJ-1TRQF3R0U	Panasonic	RES, 3.00, 1%, 1 W, 2512	2512
R5	1	4.22k	CRCW20104K22FKEF	Vishay-Dale	RES, 4.22 k, 1%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R6	1	10.0	RC0603FR-0710RL	Yageo America	RES, 10.0, 1%, 0.1 W, 0603	0603
R7	1	0.5	CSRN2010FKR500	Stackpole Electronics Inc	RES, 0.5, 1%, 1 W, 2010	2010
R8	1	249k	CRCW0603249KFKEA	Vishay-Dale	RES, 249 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R9	1	7.15k	RG1608P-7151-B-T5	Susumu Co Ltd	RES, 7.15 k, 0.1%, 0.1 W, 0603	0603
R10	1	9.76k	RC0603FR-079K76L	Yageo America	RES, 9.76 k, 1%, 0.1 W, 0603	0603
R11, R26	2	10.2k	RC0603FR-0710K2L	Yageo	RES, 10.2 k, 1%, 0.1 W, 0603	0603
R12	1	43	CRCW251243R0JNEG	Vishay-Dale	RES, 43, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512
R13	1	51	CRCW201051R0JNEF	Vishay-Dale	RES, 51, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R14, R34	2	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R15	1	11.8k	CRCW060311K8FKEA	Vishay-Dale	RES, 11.8 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16	1	1.47k	CRCW06031K47FKEA	Vishay-Dale	RES, 1.47 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R17	1	0.15	CRM2512-FX-R150ELF	Bourns	RES, 0.15, 1%, 2 W, 2512	2512
R18	1	0.12	2-2176057-7	TE Connectivity	RES, 0.12, 1%, 2 W, 2512	2512
R19	1	50	FC0603E50R0BTBST1	Vishay Thin Film	RES, 50, 0.1%, 0.125 W, 0603	0603
R20, R29	2	2.74k	CRCW06032K74FKEA	Vishay-Dale	RES, 2.74 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R21	1	40.2k	CRCW060340K2FKEA	Vishay-Dale	RES, 40.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R22	1	4.22k	CRCW06034K22FKEA	Vishay-Dale	RES, 4.22 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R23, R24	2	49.9	RC0603FR-0749R9L	Yageo America	RES, 49.9, 1%, 0.1 W, 0603	0603
R25	1	17.2k	RT0603BRD0717K2L	Yageo America	RES, 17.2 k, 0.1%, 0.1 W, 0603	0603
R27	1	360	CRCW0603360RJNEA	Vishay-Dale	RES, 360, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R28	1	2.00k	RC0603FR-072KL	Yageo America	RES, 2.00 k, 1%, 0.1 W, 0603	0603
R30	1	0	PMR10EJPJ000	Rohm	RES, 0, 0%, W, AEC-Q200 Grade 0, 0805	0805
R31	1	2.05k	RC0603FR-072K05L	Yageo	RES, 2.05 k, 1%, 0.1 W, 0603	0603
R32	1	9.76k	CRCW06039K76FKEA	Vishay-Dale	RES, 9.76 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R33, R37, R39	3	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R35	1	20k	RC0603JR-0720KL	Yageo	RES, 20 k, 5%, 0.1 W, 0603	0603
R36	1	13.7k	RG1608P-1372-B-T5	Susumu Co Ltd	RES, 13.7 k, 0.1%, 0.1 W, 0603	0603
R38	1	9.76k	RG1608P-9761-B-T5	Susumu Co Ltd	RES, 9.76 k, 0.1%, 0.1 W, 0603	0603
SH-J3, SH-J5	2		SNT-100-BK-T-H	Samtec	Shunt, 100mil, Tin plated, Black	Shunt Connector Black Open Top, 2x1
T1	1	21uH	750317433	Würth Elektronik	Transformer, 21 uH, TH	26x23.5mm
T2	1	1.2mH	PA0184NLT	Pulse Engineering	Transformer, Gate Drive, 1.2mH, SMT	9.02x7.62x8.64mm
TP1, TP2, TP8, TP10, TP13, TP14, TP21	7		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
TP3, TP4, TP5, TP6, TP7, TP9, TP11, TP12, TP15, TP17, TP18, TP19, TP20, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP37, TP38	29		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
TP39, TP40, TP41, TP42, TP43, TP44, TP45, TP46, TP47, TP48, TP49, TP50	12		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
TP51, TP52, TP53, TP54, TP55	5		5117	Keystone	Test Point, Miniature, Blue, TH	Blue Miniature Testpoint
U1	1		5962P8670409VYC	Texas Instruments	QML Class V, Radiation Hardened Current-Mode PWM Controller, HKU0010A (CFP-10)	HKU0010A
U2	1		5962-8944101VCA	Texas Instruments	Isolated Feedback Generator, -55 to 125 degC, 14-pin CDIP (J)	J0014A
U4	1		INA901HKX/EM	Texas Instruments	Voltage Output, Unidirectional Measurement Current-Shunt Monitor, HKX0008A (CFP-8)	HKX0008A
C1	0	4700pF	08051C472KAT2A	AVX	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0805	0805
C14	0	1000pF	08051C102KAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0805	0805
C47	0	2700pF	GRM188R71E272KA01D	MuRata	CAP, CERM, 2700 pF, 25 V, +/- 10%, X7R, 0603	0603
D6	0	30V	B130-13-F	Diodes Inc.	Diode, Schottky, 30 V, 1 A, SMA	SMA
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
R2	0	3.0	CRCW12063R00JNEA	Vishay-Dale	RES, 3.0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
TP36	0		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
U3	0			Texas Instruments	Low Power Low Offset Voltage Quad Comparator, 14-pin CerPACK	

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