

### TIDA-01540 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-01541	Any	Printed Circuit Board	
C1, C55, C56, C57, C58, C59, C60, C61, C62, C71, C73, C75, C80, C85, C86, C95, C96	17	4.7uF	C2012X5R1H475K125AB	TDK	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X5R, 0805	0805
C2, C3, C7, C8, C9, C13, C14, C15, C20, C21, C22, C23, C25, C26, C30, C31, C32, C34, C35, C36, C37, C38, C44, C47, C48, C49, C52, C63, C64, C65, C66, C67, C68, C69, C70, C72, C74, C76, C82, C87, C89, C90, C91, C97, C108	45	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C4, C6, C18, C40, C41, C46, C51, C81, C83, C84, C88, C92	12	0.01uF	885012206040	Wurth Elektronik	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0603	0603
C5, C93	2	10uF	C3225X5R1H106K250AB	TDK	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1210	1210
C12, C17, C19	3	1500pF	06031C152JAT2A	AVX	CAP, CERM, 1500 pF, 100 V, +/- 5%, X7R, 0603	0603
C24	1	22uF	CL21A226MAQNNNE	Samsung Electro-Mechanics	CAP, CERM, 22 µF, 25 V, +/- 20%, X5R, 0805	0805
C27, C28, C29, C39, C43, C45, C50, C53, C54	9	180pF	06035A181JAT2A	AVX	CAP, CERM, 180 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C77, C78, C79	3	0.47uF	C1608X5R1H474K080AB	TDK	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X5R, 0603	0603
C98, C99, C100	3	2.2uF	C2012X7R1H225K125AC	TDK	CAP, CERM, 2.2 µF, 50 V, +/- 10%, X7R, 0805	0805
C101, C102, C103, C104, C105, C106	6	10pF	GRM1885C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C107, C109, C110	3	820pF	GRM188R71H821KA01D	MuRata	CAP, CERM, 820 pF, 50 V, +/- 10%, X7R, 0603	0603
C111, C112	2	3uF	B32774D1305K000	TDK	CAP, Film, 3 µF, 1300 V, +/- 10%, 0.016 ohm, TH	31.5x18mm
C113, C114, C115	3	2200pF	GRM155R71C222KA01D	MuRata	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0402	0402
D1, D8	2	100V	B1100-13-F	Diodes Inc.	Diode, Schottky, 100 V, 1 A, SMA	SMA
D3, D4, D5, D6, D7, D9	6	30V	MSS2P3-M3/89A	Vishay-Semiconductor	Diode, Schottky, 30 V, 2 A, AEC-Q101, MicroSMP	MicroSMP
D12, D13, D14	3	1300V	BYG23T-M3/TR	Vishay-Semiconductor	Diode, Ultrafast, 1300 V, 1 A, SMA	SMA

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FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
H1, H2, H3, H4	4		N/A	N/A	Mountin hole, NPTH Drill 3.2mm	
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1, J4	2		282834-2	TE Connectivity	Terminal Block, 2x1, 2.54mm, TH	Terminal Block, 2x1, 2.54mm, TH
J2, J3	2		TSW-110-07-G-D	Samtec	Header, 100mil, 10x2, Gold, TH	10x2 Header
J13	1		1902547	Phoenix Contact	Horizontal Cable Entry with Pressure Clamp, Serie 1338 - 10.00 mm	
J14	1		1904150	Phoenix Contact	Horizontal Cable Entry with Pressure Clamp, Serie 1318 - 10.00 mm	
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
R1, R132, R133, R134, R135	5	0	ERJ-6GEY0R00V	Panasonic	RES, 0, 5%, 0.125 W, 0805	0805
R3, R18, R42, R45, R106	5	15.0k	RC0603FR-0715KL	Yageo America	RES, 15.0 k, 1%, 0.1 W, 0603	0603
R4, R5, R9, R10, R26, R28, R29, R30, R51, R52, R53, R54, R58, R59, R60, R61, R65, R66, R67, R68	20	4.70k	RC0603FR-074K7L	Yageo America	RES, 4.70 k, 1%, 0.1 W, 0603	0603
R11, R44, R63, R75, R76, R77, R78, R84, R89, R112, R113, R114, R115, R116, R117, R154	16	10k	RC0603JR-0710KL	Yageo America	RES, 10 k, 5%, 0.1 W, 0603	0603
R12, R13, R16, R17, R19, R139, R140, R141, R142, R143, R144	11	100	RC0603FR-07100RL	Yageo America	RES, 100, 1%, 0.1 W, 0603	0603
R14, R15, R31, R33, R43, R49, R55, R56, R57, R79, R80, R85, R86, R87, R88, R91, R107, R110, R145, R149, R152, R158, R159, R160, R161, R162, R163, R164, R165, R166, R168, R169, R170	33	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R20, R35, R48	3	3.00k	RC0603FR-073KL	Yageo America	RES, 3.00 k, 1%, 0.1 W, 0603	0603
R21, R32, R34	3	1.50k	ERJ-3EKF1501V	Panasonic	RES, 1.50 k, 1%, 0.1 W, 0603	0603
R23, R36, R37	3	7.15k	RT0603BRD077K15L	Yageo America	RES, 7.15 k, 0.1%, 0.1 W, 0603	0603

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R25, R27, R40, R47, R50, R62	6	7.50k	ERJ-3EKF7501V	Panasonic	RES, 7.50 k, 1%, 0.1 W, 0603	0603
R69, R70, R71	3	130k	RC0603FR-07130KL	Yageo America	RES, 130 k, 1%, 0.1 W, 0603	0603
R72, R73, R74	3	820	CRCW0805820RJNEA	Vishay-Dale	RES, 820, 5%, 0.125 W, 0805	0805
R82, R83, R92, R93	4	39	CRCW060339R0JNEA	Vishay-Dale	RES, 39, 5%, 0.1 W, 0603	0603
R94, R96, R98, R100, R101, R104, R111	7	0	RC1206JR-070RL	Yageo America	RES, 0, 5%, 0.25 W, 1206	1206
R95, R97, R99, R102, R103, R105	6	16.5	ERJ-8ENF16R5V	Panasonic	RES, 16.5, 1%, 0.25 W, 1206	1206
R109	1	11.0k	RC0603FR-0711KL	Yageo America	RES, 11.0 k, 1%, 0.1 W, 0603	0603
R118, R119, R120	3	0.005	PWR4412-2SDR0050F	Bourns	RES, 0.005, 1%, 5 W, 20.32x4.80mm	20.32x4.80mm
R121, R123, R124, R126, R129	5	100k	CRCW1206100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.25 W, 1206	1206
R122, R125, R127, R128, R130, R131	6	1.0Meg	CRCW08051M00JNEA	Vishay-Dale	RES, 1.0 M, 5%, 0.125 W, 0805	0805
R136, R137, R138	3	1.33	CRCW08051R33FKEA	Vishay-Dale	RES, 1.33, 1%, 0.125 W, 0805	0805
R146, R148, R150, R153, R155	5	10.0k	PHT0603Y1002BGT200	Vishay Sfernice	RES, 10.0 k, 0.1%, 0.0375 W, 0603	0603
R147	1	8.20k	RG1608P-822-B-T5	Susumu Co Ltd	RES, 8.20 k, 0.1%, 0.1 W, 0603	0603
R151	1	5.11Meg	CRCW06035M11FKEA	Vishay-Dale	RES, 5.11 M, 1%, 0.1 W, 0603	0603
R156	1	12.0k	RG1608P-123-B-T5	Susumu Co Ltd	RES, 12.0 k, 0.1%, 0.1 W, 0603	0603
R157	1	200	RG1608P-201-B-T5	Susumu Co Ltd	RES, 200, 0.1%, 0.1 W, 0603	0603
R167	1	1.0k	RC0603JR-071KL	Yageo America	RES, 1.0 k, 5%, 0.1 W, 0603	0603
TP1, TP2, TP3, TP4, TP5, TP6, TP7	7		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
U1, U5, U9, U10, U11	5		OPA320AIDBVR	Texas Instruments	Precision, 20 MHz, 0.9 pA Ib, RRIO, CMOS Operational Amplifier, 1.8 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U2, U6, U7, U25	4		TLC372QDRG4	Texas Instruments	LinCMOS Dual Differential Comparators, D0008A	D0008A
U3	1		TLV1117-33IDCYR	Texas Instruments	FIXED LOW-DROPOUT VOLTAGE REGULATOR, DCY0003A	DCY0003A
U4	1		REF2033AIDDCT	Texas Instruments	Low-Drift, Low-Power, Dual-Output, VREF and VREF / 2 Voltage References, DDC0005A	DDC0005A
U8	1		SN74LVC1G10DBVR	Texas Instruments	Single 3-Input Positive-NAND Gate, DBV0006A	DBV0006A
U12, U15	2		AMC1311DWVVR	Texas Instruments	200 kHz, Fully-Differential Isolation Amplifier, DWV0008A	DWV0008A
U13, U14, U16	3		AMC1301DWVVR	Texas Instruments	200 kHz, Fully-Differential Isolation Amplifier, DWV0008A	DWV0008A
U17, U18, U19	3		UCC21520DW	Texas Instruments	4A/6A, 5KVrms Dual Isolated-channel Universal Gate Driver, DW0016A	DW0016A
U20, U21, U22	3		TL431BQDBZR	Texas Instruments	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U23	1		TLV70433DBVT	Texas Instruments	Single Output LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U24	1		MG1250H-XN2MM	Littelfuse Inc.	IGBT MOD 1200V 50A PKG H CRCT:X	107.5x45mm
C10	0	4.7uF	C2012X5R1H475K125AB	TDK	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X5R, 0805	0805

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C11, C94	0	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 $\mu$ F, 50 V, +/- 10%, X7R, 0603	0603
C16, C33, C42	0	0.01uF	885012206040	Wurth Elektronik	CAP, CERM, 0.01 $\mu$ F, 16 V, +/- 10%, X7R, 0603	0603
D10, D11	0	200V	1SMB5956BT3G	ON Semiconductor	Diode, Zener, 200 V, 550 mW, SMB	SMB
J5, J6, J7	0		800-10-002-10-001000	Mill-Max	Header, 100mil, 2x1, TH	Header, 2x1, 100mil, TH
R2, R24, R39, R41, R64	0	7.50k	ERJ-3EKF7501V	Panasonic	RES, 7.50 k, 1%, 0.1 W, 0603	0603
R6, R8, R22, R38, R46	0	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R7	0	0	ERJ-6GEY0R00V	Panasonic	RES, 0, 5%, 0.125 W, 0805	0805
R81	0	31.6k	CRCW060331K6FKEA	Vishay-Dale	RES, 31.6 k, 1%, 0.1 W, 0603	0603
R90	0	90.9k	RC0603FR-0790K9L	Yageo America	RES, 90.9 k, 1%, 0.1 W, 0603	0603
R108	0	2.61k	CRCW06032K61FKEA	Vishay-Dale	RES, 2.61 k, 1%, 0.1 W, 0603	0603

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