

**TIDM-1001 REV E2 Bill of Materials**

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB	1		TIDM-1001	Any	Printed Circuit Board	
C1, C7, C10, C11, C12, C14, C15, C65	8	220pF	C0805C221J5GACTU	Kemet	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
C3, C5, C9, C13, C16, C47, C48	7	3300pF	C0805C332K5RACTU	Kemet	CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0805	0805
C17	1	2200pF	B81123C1222M	TDK	CAP, Film, 2200 pF, 3000 V, +/- 20%, TH	18x7x12.5mm
C18, C19	2	47uF	LGU2W470MELY	Nichicon	CAP, AL, 47 µF, 450 V, +/- 20%, TH	RCAP, 20x25mm
C20, C36	2	1.5uF	ECQ-E2W155KH	Panasonic	CAP, Film, 1.5 µF, 450 V, +/- 10%, TH	25.70x8.20x17.20mm
C21, C38	2	6200pF	ECW-HA3C622H	Panasonic	CAP, Film, 6200 pF, 1600 V, +/- 3%, TH	17.8x7.1mm
C24, C25, C26, C27	4	470uF	PLF1C471MDO1	Nichicon	CAP, AL, 470 µF, 16 V, +/- 20%, 0.009 ohm, TH	THD, 2-Leads, 10 mm Dia, Height 13 mm, Pin Spacing 5 mm
C28, C29, C30, C31	4	47uF	GRM32ER61C476ME15L	MuRata	CAP, CERM, 47 µF, 16 V, +/- 20%, X5R, 1210	1210
C33, C46	2	220pF	C0603C221K5RACTU	Kemet	CAP, CERM, 220 pF, 50 V, +/- 10%, X7R, 0603	0603
C37, C41	2	6.8pF	CC0603BRNPO9BN6R8	Yageo America	CAP, CERM, 6.8 pF, 50 V, +/- 2%, C0G/NP0, 0603	0603
C42	1	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	0603
C49	1	22uF	ECA-1VM220	Panasonic	CAP, AL, 22 µF, 35 V, +/- 20%, TH	5.0mmx11mm
C50	1	22uF	GRT31CR61E226KE01L	MuRata	CAP, CERM, 22 µF, 25 V, +/- 10%, X5R, AEC-Q200 Grade 3, 1206_190	1206_190
C51	1	10uF	C1206C106K3RACTU	Kemet	CAP, CERM, 10 µF, 25 V, +/- 10%, X7R, 1206_190	1206_190
C52	1	0.1uF	C0805C104K3RACTU	Kemet	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0805	0805
C53	1	4.7uF	GRM21BR71E475KA73L	MuRata	CAP, CERM, 4.7 µF, 25 V, +/- 10%, X7R, 0805	0805
C54	1	0.01uF	GRM188R71C103KA01D	MuRata	CAP, CERM, 0.01 µF, 16 V, +/- 10%, X7R, 0603	0603
C55, C56, C61, C62, C63, C64	6	1uF	GRM21BR71H105KA12L	MuRata	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805
C57, C58	2	1uF	C2012X7R1H105K125AB	TDK	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805
D1, D2, D16, D17	4	30V	BAT54A-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
D3, D11	2	Bright Green	150080VS75000	Würth Elektronik	LED, Bright Green, SMD	LED_0805
D4	1	Red	150080SS75000	Würth Elektronik	LED, Red, SMD	LED_0805
D5, D6, D7, D8	4	30V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
D9, D10	2	60V	SS36-E3/57T	Vishay-Semiconductor	Diode, Schottky, 60 V, 3 A, SMC	SMC
D12, D13, D20, D21	4	100V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100 V, 0.15 A, SOD-123	SOD-123
D14, D15, D18, D19	4	12V	MMSZ5242B-7-F	Diodes Inc.	Diode, Zener, 12 V, 500 mW, SOD-123	SOD-123
F1, F2	2		0751.0052	Schurter	FUSE CLIP CART 250V 6.3A, Single End	Fuse End Clips
FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
H1, H2, H3, H4, H17, H18	6		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, H19, H20	6		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
H9, H10, H11, H12, H13, H14, H15, H16	8		531202B02500G	Aavid	HEATSINK TO-220 W/PINS 2" TALL	TH, 2-Leads, Body 34.92x12.7mm, Pin Spacing 25.4mm

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
J1	1		PEC05DAAN	Sullins Connector Solutions	Header, 100mil, 5x2, Tin, TH	Header, 5x2, 100mil, Tin
J2, J6, J7, J8, J15	5		HTSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	Header, 100mil, 2x1, TH
J3	1		HSEC8-160-01-L-DV-A-BL	Samtec	C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering
J4	1		HSEC8-130-01-L-DV-A	Samtec	C2000 controlCARD-180HSEC (60-pin addon) connector, SMT	C2000 pin numbering
J5, J13	2		PEC03SAAN	Sullins Connector Solutions	Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin
J9, J12	2		ED120/2DS	On-Shore Technology	Terminal Block, 5.08 mm, 2x1, Brass, TH	2x1 5.08 mm Terminal Block
J10, J11	2		SLU-70	IlSCO	Copper Mechanical Lugs, 1x1, TH	Copper Mechanical Lugs, 1x1, TH
J14	1		PEC10DAAN	Sullins Connector Solutions	Header, 100mil, 10x2, TH	Header, 10x2, 2.54mm, TH
L1, L2	2	62.1uH	75PR8126	Vitec Corporation	Inductor, 62.1uH, 0.047 ohm, TH	24.15x24.13mm
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
Q1, Q2, Q11, Q12, Q13, Q14	6	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
Q3, Q4, Q7, Q8	4	650V	IPP60R199CP	Infineon Technologies	MOSFET, N-CH, 650 V, 16 A, TO-220AB	TO-220AB
Q5, Q6, Q9, Q10	4	60V	IRLB3036GPBF	International Rectifier	MOSFET, N-CH, 60 V, 195 A, TO-220AB	TO-220AB
R1, R46, R47, R66, R67	5	49.9	ERJ-3EKF49R9V	Panasonic	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R2, R5, R13, R18, R21, R22, R24, R28, R29, R30, R31, R34, R68, R69	14	1.00k	ERJ-6ENF1001V	Panasonic	RES, 1.00 k, 1%, 0.125 W, 0805	0805
R3, R7, R11, R14, R19, R106, R107, R108, R109, R114, R115, R116, R117, R126, R127, R128	16	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R4, R12, R15, R16	4	100	RC0603FR-07100RL	Yageo America	RES, 100, 1%, 0.1 W, 0603	0603
R6, R8, R9, R10, R35, R36, R52, R53, R54	9	1.00k	ERJ-3EKF1001V	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R17, R23, R32, R33, R76, R77, R80, R81, R82, R83, R84, R85, R94, R95, R96, R97, R100, R101, R102, R103	20	10.0k	ERJ-3EKF1002V	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R20, R25	2	2.20k	RC0603FR-072K2L	Yageo America	RES, 2.20 k, 1%, 0.1 W, 0603	0603
R26, R27, R71	3	470	CRCW0805470RFKEA	Vishay-Dale	RES, 470, 1%, 0.125 W, 0805	0805
R37	1	9.09k	ERJ-6ENF9091V	Panasonic	RES, 9.09 k, 1%, 0.125 W, 0805	0805
R40	1	2.37k	ERJ-6ENF2371V	Panasonic	RES, 2.37 k, 1%, 0.125 W, 0805	0805
R45, R50	2	0.001	BVS-M-R001-1.0	Rhopoint Components	RES, 0.001, 1%, 4 W, SMD, 2-Leads, Body 10.3x5.5mm	SMD, 2-Leads, Body 10.3x5.5mm
R51, R55	2	68.0k	RC0603FR-0768KL	Yageo America	RES, 68.0 k, 1%, 0.1 W, 0603	0603
R70	1	330	ERJ-6GEYJ331V	Panasonic	RES, 330, 5%, 0.125 W, 0805	0805

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R72, R73, R86, R87	4	3.01	RC0603FR-073R01L	Yageo America	RES, 3.01, 1%, 0.1 W, 0603	0603
R74, R75	2	27.0k	RC0603FR-0727KL	Yageo America	RES, 27.0 k, 1%, 0.1 W, 0603	0603
R78, R79, R110, R111, R118, R119	6	3.01	RC0805FR-073R01L	Yageo America	RES, 3.01, 1%, 0.125 W, 0805	0805
R112, R113, R120, R121	4	20	ERJ-6GEYJ200V	Panasonic	RES, 20, 5%, 0.125 W, 0805	0805
T1, T3	2		75PR8125	Vitec Corporation	Transformer, 149.2 uH, TH	48.26x36.83mm
T2, T4	2		603-7	West Coast Magnetics	Transformer, 351 mH, TH	13.5x13.5mm
T5, T6	2	900uH	56PR3362	Vitec Corporation	Transformer, 900 uH, TH	12.5x11.5mm
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36	34		K24A/M	Vector Electronics	PCB Pin, Gold, TH	PCB Pin, TH
U2	1		OPA365AIDBVR	Texas Instruments	50 MHz, Low-Noise, Single-Supply Rail-to-Rail Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U4	1		PWR050	Texas Instruments	PCBA, UCC28600EVM-400V-12V	2200x335x1200mil
U5	1		PTH08080WAH	Texas Instruments	2.25 A, 4.5 to 18 V Input Wide Adjust Miniature Power Module, -40 to 85 degC, 5-pin Module (EUF5), Pb-Free (RoHS)	EUF0005A
U6	1		TPS79533DCQR	Texas Instruments	Single Output High PSRR LDO, 500 mA, Fixed 3.3 V Output, 2.7 to 5.5 V Input, 6-pin SOT-223 (DCQ), Green (RoHS & no Sb/Br)	DCQ0006A
U7, U8	2		UCC27524AD	Texas Instruments	Dual 5-A High-Speed Low-Side Gate Driver, D0008A	D0008A
U11, U12, U13, U14	4		UCD7138DRS	Texas Instruments	UCD7xxx Low Side Power MOSFET Driver with Body Diode Conduction Sensing, DRS0006A	DRS0006A

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