

TIDM-2017 REV C1 Bill of Materials



Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	Package/Reference
1	PC1	1		TIDM-2017	Any	Printed Circuit Board	
2	C1, C2, C16, C16	4	0.1uF	CGA3E20R1H104K080AA	TDK	CAP. CERM. 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
3	C3, C38	2	4.7uF	CGA3E20R2A474M20KA	TDK	CAP. CERM. 4.7 uF, 100 V, +/- 20%, X7R, AEC-Q200 Grade 1	0603
4	C4	1	0.47uF	CGA3E20R1H104M080AA	TDK	CAP. CERM. 0.47 uF, 50 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603
5	C5, C6, C8, C9, C10, C11, C87, C93	8	4.7uF	GR118C87E475KE13D	MuRata	CAP. CERM. 4.7 uF, 25 V, +/- 10%, X5R, AEC-Q200 Grade 2, 0603	0603
6	C7	1	0.47uF	CGA3E20R2A474K160AA	TDK	CAP. CERM. 0.47 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
7	C12	1	0.1uF	CGA3E30R1H104M080BB	TDK	CAP. CERM. 0.1 uF, 50 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0402	0402
8	C13, C32, C34, C36, C38, C39	6	0.1uF	CGA3E30R1H104K080AE	TDK	CAP. CERM. 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 0, 0603	0603
9	C14, C33, C35	3	10uF	CGA3E10R1H104K160AC	TDK	CAP. CERM. 10 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
10	C17, C18, C19, C23	4	1000pF	GRM188C1H102JA01D	MuRata	CAP. CERM. 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
11	C20, C54, C56, C78, C80, C82, C83, C84, C85, C86, C88, C91, C94, C95	14	470pF	SCM188C1H471JA16D	MuRata	CAP. CERM. 470 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
12	C21, C22, C55, C77, C79, C81, C90	7	470pF	GRM188C1H471JA01D	MuRata	CAP. CERM. 470 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
13	C23, C36, C27	3	10uF	CGA4JX9S1X108K128AC	TDK	CAP. CERM. 10 uF, 16 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0805	0805
14	C24, C26, C28	3	0.1uF	GR07C108K04TA	AVX	CAP. CERM. 0.1 uF, 18 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
15	C29, C31	2	89pF	GRM188C2A89JA01D	MuRata	CAP. CERM. 89 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
16	C30	1	4700pF	SCM188R1H472KA37D	MuRata	CAP. CERM. 4700 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
17	C35, C40	2	22uF	GRM188C222JA01D	MuRata	CAP. CERM. 22 uF, 50 V, +/- 10%, +/- 5%, C0G/NP0, 0603	0603
18	C37, C38, C39, C58, C59	5	22uF	TMK325B722KMP	Taiyo Yuden	CAP. CERM. 22 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	1210
19	C40, C50, C67, C73	4	0.1uF	CW603C104K9CAACUO	Kemet	CAP. CERM. 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
20	C41, C45	2	0.047uF	CGA3E20R1H473K080AA	TDK	CAP. CERM. 0.047 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
21	C42, C43, C44	3	10uF	CGAMP20S1108K250AB	TDK	CAP. CERM. 10 uF, 50 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1210	1210
22	C47	1	0.1uF	CW603C104K9CAACUO	Kemet	CAP. CERM. 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
23	C48	1	1000pF	GR118W102KVA6E	Johanson Technology	CAP. CERM. 1000 pF, 2000 V, +/- 10%, X7R, 1206, 180	1206, 180
24	C49	1	0.047uF	SCM188R11E473KA37D	MuRata	CAP. CERM. 0.047 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
25	C50	1	0.1uF	SCM188R72A104KA3YL	MuRata	CAP. CERM. 0.1 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
26	C52, C58	2	10uF	GR118R10R108R115	MuRata	CAP. CERM. 10 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
27	C60, C61, C62, C83, C72	5	22uF	GR1718R1E1225AE13L	MuRata	CAP. CERM. 22 uF, 25 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0805	0805
28	C63, C68	2	1uF	SCM188R71C105KA64J	MuRata	CAP. CERM. 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
29	C66, C68, C70, C71	4	2.2uF	GRM188R71A225KE16J	MuRata	CAP. CERM. 2.2 uF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
30	C74, C75	2	0.22uF	SCM188R71C224KE02D	MuRata	CAP. CERM. 0.22 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
31	C36	1	1uF	GR1155R6V105KE13D	MuRata	CAP. CERM. 1 uF, 35 V, +/- 10%, X6R, AEC-Q200 Grade 3, 0402	0402
32	D1, D3	2	Green	1500R05S7000	Würth Elektronik	LED Green, SMD	LED, 0603
33	D2	1	Red	1500R05S7000	Würth Elektronik	LED, Red, SMD	LED, 0603
34	D4, D5, D6	3	200	PDS202L7	Diodes Inc.	Diode, Schottky, 20 V, 2 A, AEC-Q101, PowerDi023	PowerDi023
35	D7	1	PV	C250723-SM712	Bourns	Diode, TVS, Bi, 7 V, 50/23	50/23
36	D8, D10, D13, D14	4	60V	PME650730ELXR	Nexperia	Diode, Schottky, 60 V, 3 A, AEC-Q101, SOD-123W	SOD-123W
37	D9	1	100V	SS3H10HE3_A1J	Vishey-Siliconix	Diode, Schottky, 100 V, 3 A, AEC-Q101, SMC	SMC
38	D11	1	28V	TPSMQ05A	Altera/Intel	Diode, TVS, Uni, 28 V, 421 Vc, AEC-Q101, SMC	SMC
39	D12	1	22V	USAA180358-1P	Micro Commercial Components	Diode, Zener, 22 V, 3 W, SMA	SMA
40	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
41	J1, J2	2		734151471	Molex	MMCX JACK, 50 Ohm, Gsm, TH	MMCX JACK, Gsm, TH
42	J3	1		HE5C160-01-L-DV-A-BL	Samtec	C2000 connectorCARD-120HEC connector, SMT	C-2000 pin numbering
43	J4	1		HE5C160-01-L-DV-A-BL	Samtec	C2000 connectorCARD-120HEC 120-pin ribbon connector, SMT	C-2000 pin numbering
44	J6, J6, J7, J8, J9, J10, J11, J12, J13, J18	10		801-41-003-10-01000	Mil-Max	Receptacle, 2.54mm, 3x1, Gold, TH	Receptacle, 2.54mm, 3x1, TH
45	J14	1		TSW-105-08-G-D	Samtec	Header, 2.54mm, 8x2, Gold, TH	Header, 2.54mm, 8x2, TH
46	J15	1		180-009-063R001	NetComp	Receptacle, D-Sub, 9 Position, R/A, SMT	20.81x13.28x10.10 mm
47	J16, J17	2		TSS-108-04-L-R-A	Samtec	Header (Shrouded), 2.54mm, 8x2, 1in, R/A, TH	Header (Shrouded), 2.54mm, 8x2, R/A, TH
48	L1	1	51uH	MC1408-510-3P-10003	TDK	Coupled inductor, 51 uH, 0.2 A, 1 ohm, AEC-Q200 Grade 0, SMD	SMD, 44-lead, Body 4.7 x 3.7 mm
49	L2	1	0.004H	PA4042-SHRLTY	Pulse Engineering	Inductor Shielded, 68 uH, 2 A, 0.24 ohm, AEC-Q200 Grade 1, SMD	0.004 04.5mm
50	L3	1	100uH	SRB0045A-100M	Bourns	Inductor Shielded, Ferrite, 10 uH, 3.2 A, 0.004 ohm, AEC-Q200 Grade 1, SMD	0.004 04.5mm
51	BL1	1		MT-14-423-10	Brady	Normal Transfer Printable Label, 0.650" W x 0.300" H - 10,000 per roll	PCB Label 0.650 x 0.300 inch
52	C1, C2	2	600V	RES-13WVHE37KTA1	Infineon Technologies	MOSETF, N-CH, 60 V, 0.28 A, AEC-Q101, SOT-223	SOT-223
53	R1, R4	2	47k	CRCW0603470R0K0EA	Vishay-Dale	RES, 47.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
54	R2, R5	2	4.6k	CRCW060346K0K0K0EA	Vishay-Dale	RES, 4.64 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
55	R3	1	1.15k	CRCW0603115K15F0K0EA	Vishay-Dale	RES, 1.15 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
56	R6, R9, R16, R30, R31, R67, R81	7	301	RC3060P-R-031R1L	Yageo	RES, 301, 1%, 0.1 W, 0603	0603
57	R12, R17, R70, R72	4	18.4k	RT0603B8D0718K4L	Yageo America	RES, 18.4 k, 0.1%, 0.1 W, 0603	0603
58	R8, R28, R32, R56, R66, R69, R71, R72, R76, R78, R82, R84, R86, R87	14	10.0k	RC0603P-R-0710KL	Yageo	RES, 10.0 k, 1%, 0.1 W, 0603	0603
59	R10	1	43.7k	RT0603C8E0743K7L	Yageo America	RES, 43.7 k, 0.5%, 0.1 W, 0603	0603
60	R11	1	10.0k	CRCW060310K0F0K0EA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
61	R13, R28, R39, R50, R66, R74, R76, R77, R79, R80, R83, R89	12		ELRJ-PB386041V	Panasonic	0.04 kOhms +/- 1% 0.2W, 150W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	0603
62	R14, R15, R20, R38, R67	5	100k	ERA-3ARW104V	Panasonic	RES, 100 k, 0.05%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
63	R17, R71, R73	3	271	RT0603B8D07271RL	Yageo America	RES, 271, 0.1%, 0.1 W, 0603	0603
64	R21, R22, R63, R65	4	10.0k	RMCF0603P10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
65	R23, R24, R25, R26, R27, R62, R84, R86	8	1.00k	CRCW06031000F0K0EA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
66	R33	1	0	RMCF0603240R0D	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
67	R34, R37, R40	3	0	PM960E3P-2000	Rohm	RES, 0, 0, 0.25 W, AEC-Q200 Grade 0, 0603	0603
68	R35, R36	2	60	CR0603W06000000EAF	Vishay-Dale	RES, 60, 10%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
69	R41, R42, R43, R45	5	0	CRCW060300000000EAF	Vishay-Dale	RES, 0, 5%, 0.333 W, AEC-Q200 Grade 0, 0603	0603
70	R44, R45	1	100	CRCW06031000F0K0EA	Vishay-Dale	RES, 100, 1%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
71	R47	1	100	CRCW0603100R0F0K0EA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
72	R48, R50	2	0.05k	RC06030000000000EA	Vishay-Dale	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
73	R49, R50	2	261k	CRCW0603261K0F0K0EA	Vishay-Dale	RES, 261 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
74	R51	1	121k	CRCW0603121K0F0K0EA	Vishay-Dale	RES, 121 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
75	R53	1	0.1k	CRCW0603012K1F0K0EA	Vishay-Dale	RES, 121 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
76	R54	1	64.9k	CRCW0603649K0F0K0EA	Vishay-Dale	RES, 64.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
77	R58	1	97.6k	ELRJ-PB37962V	Panasonic	97.6 kOhms +/- 0.5% 0.2W, 150W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	0603
78	R59	1	0.00k	CRCW060300000000EAF	Vishay-Dale	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
79	R67, R72	2		LV18ACK-TRANSFORMER	Altera/Intel	LV18ACK TRANSFORMER	18030
80	J1	1		REF3133AQ062RQ01	Texas Instruments	Automotive 20 ppm / degC Max, 100 uA, SOT23-3 Series Voltage Reference, DTQ2000A (SOT-23-3)	DR020003A
81	J2	1		DRV3256APAPR01	Texas Instruments	3-Phase 48V Automotive Gate Driver Unit (GDU) with Advanced Protection and Diagnostics	HTDTPR04
82	U3, U4	2		TLV3064PWR	Texas Instruments	4 channel, 10-MHz, Low-Noise, 8800, CMOS Operational Amplifier for Cost-Sensitive Systems, PWR004A (TSSOP-14)	PW0014A
83	J5	1		780105PWR	Texas Instruments	6-Bit Bidirectional Voltage-Level Translator with Auto Direction Sensing and w/ 2.5V ESD Protection, PWR005A (TSSOP-16)	PW0016A
84	J6	1		TCAN1044EDFR01	Texas Instruments	Automotive High-Speed CAN Transceiver	SOT23-8
85	J7	1		ISO771310WR	Texas Instruments	High-Speed, Robust EMC Triple-Channel Digital Isolators, DW0016B (SOIC-16)	DW0016B
86	J8	1		TPS78B9500DBVR01	Texas Instruments	Automotive High-Voltage Ultra-Low to Low-Dropout Regulator/Fixed 5-V Output Voltage, DBV005A (SOT-23-5)	DBV0005A
87	J9	1		LMX101A0Q2R0R01	Texas Instruments	Q2TRN-FSR PhysXs DCOX Converter with 65-V, 4-A Integrated MOSFET, NCU009C (VSON-8)	NCU009C
88	J10	1		LMV7010SD020R01	Texas Instruments	4-Input 80V-TA Synchronous Buck Converter with 80-uA IQ	HS0018
89	J11	1		LMV3302AQ2RNR0R01	Texas Instruments	1.8-V to 36-V, 2-A Synchronous step-down voltage converter, RVN0012B (VQFN-48-12)	RVN0012B
90	J12, U13	2		PS1B425502BVR01	Texas Instruments	Automotive, VINA, 48-V, Voltage-Tracking LDO With 5-mV Tracking Tolerance, SOT23-5	SOT23-5
91	J14	1		PS7A12100PQW0RB0R01	Texas Instruments	Automotive, 550-mA, Low-Noise, Low-IG, High-PSRR LDO	V50N8