

TDA-01505 REV E1 Bill of Materials



Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	Package/Reference
1	PCB	1	TDA-01505	Any	Printed Circuit Board		
2	C1, C2, C36, C37	2	2200pf	CR0402220KARA	TDK	CAP CER, 2200 pf, 3000 V +/- 10%, 1.68 Surface	16 Surface
3	C3, C6, C7, C38, C41, C47	6	100pf	R3727P6100K000	TDK	CAP, Film, 10 pf, 630 V +/- 10%, 0.007 ohm, AEC-Q200 Grade 1, TH	42x18mm
4	C4, C39	2	0.22uF	R767R32040030	Kemet	CAP, Film, 0.22 uF, 1000 V +/- 5%, AEC-Q200 Grade 2, TH	32x18mm
5	C8, C9, C17, C27, C51, C52	6	470uF	EKZE350ELL471M205	Chem-Con	CAP, AL, 470 uF, 35 V +/- 20%, TH	D10xL20mm
6	C10, C11, C13, C14, C15, C16, C24, C25, C34, C44, C45, C46, C48, C49, C50, C27, C38, C78, C81	19	100uF	GRM21BR7A108KE4JL	MuRata	CAP, CERAM, 10 uF, 35 V +/- 10%, XPR, 0805	0805
7	C12, C33, C64	3	0.22uF	GRM21BR71H220KA01L	MuRata	CAP, CERAM, 0.22 uF, 50 V +/- 10%, XPR, 0805	0805
8	C18, C54	2	220pf	EEE-FK1H220P	Panasonic	CAP, AL-22 uF, 50 V +/- 20%, 0.88 ohm, AEC-Q200 Grade 2, SMD	SMT Radial D
9	C19, C26, C28, C45, C59, C62	6	0.1uF	CG120R1H104QBAA	TDK	CAP, CERAM, 0.1 uF, 50 V +/- 10%, XPR, 0805	0805
10	C30, C56	2	2.2uF	CGA4300R1H222K125AB	TDK	CAP, CERAM, 2.2 uF, 50 V +/- 10%, XPR, AEC-Q200 Grade 1, 0805	0805
11	C21, C42, C60, C80, C82	5	1uF	GRM31CR72A105KA01L	MuRata	CAP, CERAM, 1 uF, 100 V +/- 10%, XPR, 1206	1206
12	C22, C61	2	1uF	GRM21BR7E105KA01L	MuRata	CAP, CERAM, 1 uF, 25 V +/- 10%, XPR, 0805	0805
13	C29, C64	2	1uF	GRM18BR7E105KA2D	MuRata	CAP, CERAM, 1 uF, 25 V +/- 10%, XPR, 0603	0603
14	C32	1	0.33uF	GRM18BR7E103KA01L	MuRata	CAP, CERAM, 0.33 uF, 25 V +/- 10%, XPR, 0605	0605
15	C31, C65	2	1000pf	GC2165C11H102AJ16D	MuRata	CAP, CERAM, 1000 pf, 50 V +/- 5%, COG/NPO, AEC-Q200 Grade 1, 0603	0603
16	C32	1	560pf	GRM21BR7E1561KA01D	MuRata	CAP, CERAM, 560 pf, 25 V +/- 10%, XPR, 0805	0805
17	C33, C67	2	0.01uF	GRM21BR7H103KA01D	MuRata	CAP, CERAM, 0.01 uF, 50 V +/- 10%, XPR, 0805	0805
18	C35, C70	2	220pf	GRM21BR7E102KA01D	MuRata	CAP, CERAM, 220 pf, 50 V +/- 10%, COG/NPO, 0805	0805
19	C43	1	0.01uF	GRM21BR72A103KA01L	MuRata	CAP, CERAM, 0.01 uF, 100 V +/- 10%, XPR, 0805	0805
20	C56	1	3300pf	GRM18BR71H3302A01D	MuRata	CAP, CERAM, 3300 pf, 50 V +/- 5%, COG/NPO, 0805	0805
21	C71	1	0.33uF	GRM21BR7H3302A01D	MuRata	CAP, CERAM, 0.33 uF, 50 V +/- 10%, XPR, 0805	0805
22	C72, C75	2	1000pf	GRM18BR7C102JWV1L	MuRata	CAP, CERAM, 1000 pf, 50 V +/- 5%, COG/NPO, 1206	1206
23	C76, C78	2	100pf	EEE-FC100100P	Panasonic	CAP, AL, 100 pf, 100 V +/- 20%, AEC-Q200 Grade 2, SMD	SMT Radial E
24	C74	2	600pf	GRM18BR7C602JA01D	MuRata	CAP, CERAM, 600 pf, 100 V +/- 5%, COG/NPO, 0805	0805
25	C79	1	1000pf	GRM18BR7H101JA01D	MuRata	CAP, CERAM, 1000 pf, 50 V +/- 5%, COG/NPO, 0603	0603
26	C82, C83	2	1000pf	GRM21BR7E101JA01D	MuRata	CAP, CERAM, 1000 pf, 50 V +/- 5%, COG/NPO, 0805	0805
27	D1, D2, D3, D17, D18, D20	6	110V	SMCJ110A	Littelfuse	Diode, TVS, Uni, 110 V, SMC	SMC
28	D4, D5	2	150V	V8-20C1J150SPBF	Vishay-Semiconductor	Diode, Schottky, 150 V, 10 A, D0PAK	D0PAK
29	D6, D8, D21, D22	4	1000V	U8TM13F	Diodes Inc.	Diode, Ultrafast, 1000 V, 1 A, SMA	SMA
30	D7, D9, D16, D23, D33, D34	6	300V	ES1	Fairchild Semiconductor	Diode, Fast Rectifier, 300 V, 1 A, SMA	SMA
31	D8, D24	2	18V	MM5Z4750TG	ON Semiconductor	Diode, Zener, 18 V, 500 mW, SOD123	SOD123
32	D10	2	18V	MM5Z4750	Diodes Inc.	Diode, Zener, 18 V, 500 mW, PowerSO123	PowerSO123
33	D11, D27	2	18V	MM5Z5248B-7-F	Diodes Inc.	Diode, Zener, 18 V, 500 mW, SOD-123	SOD-123
34	D12, D28	2	Green	150000527000	Murum Elektronik	LED, Green, SMD	LED 0603
35	D13, D29	2	Green	98502044012P	Diode, Schottky, 60 V, 0.1 A, SOD-923	Diode, Schottky, 60 V, 0.1 A, SOD-923	SOD-923
36	D14, D30	2	22V	MM5Z5218B-7-F	Diodes Inc.	Diode, Zener, 22 V, 500 mW, SOD-123	SOD-123
37	D15, D36	2	10V	8170-13-1	Diodes Inc.	Diode, Schottky, 10 V, 1 A, SMA	SMA
38	D19, D35	2	18V	SM818-13-F	Diodes Inc.	Diode, TVS, Uni, 18 V, 25 W, SMB	SMB
39	D26	1	18V	8FL216-7	Diodes Inc.	Diode, Zener, 18 V, 1 W, PowerSO123	PowerSO123
40	D31	1	11V	8FL216-7-F	Diodes Inc.	Diode, Zener, 11 V, 500 mW, SOD-123	SOD-123
41	D32	1	5.6V	MM5Z5225B-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
42	FID, FID5, FID6	3	N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial	
43	H1, H2, H3, H4, H11, H15	6	NY FMS 440 0025 PH	RAF - Fastener Supply	Machine Screw, Round #4-40 x 1/4, Nylon, Philips panhead		
44	H6, H6, H7, H8, H12, H16	6	180C	Keystone	Standoff, Hex, 0.5" L, #4-40 Nylon	Standoff	
45	H9, H10	2	F190GD	Avad	Surface mount heat sink for D3PAK	Surface mount heat sink for D3PAK	
46	H13, H14	2	RA-12X-25E	Ohmite	HeatSink, TO-220, TO-218, TO-247	Heat Sink TO-218, TO-220, TO-247	
47	J1, J1, J4, J6, J7, J10, J11, J12, J13	9	F175Z21	Phoenix Contact	Terminal Block, 6.98 mm, 2x1, TH	Terminal Block	
48	J2, J5, J8, J9	4	PP1C02L1BNRCL	Sullins Connector Solutions	Receptacle, 100mil, 2x1, TH, TH	Receptacle, 2x1, 100mil, TH	
49	J14	1	HT59H-103-09-G-S	Samtec	Header, 100mil, 3x1, Gold, TH	Header, 3x1, 2.54mm, TH	
50	K1, L2	2	2.2uH	ML06030222MEB	Coilcraft	Inductor, Shielded, Composite, 2.2 uH, 12.7 A, 0.012 ohm, SMD	IND 6.4x3.1x6.8
51	Q1, Q8	2	1.020 V	61T003000	STMicroelectronics	Transistor, NPN, 1000 V, 1 A, TO-204B	TO-204B
52	Q2, Q10	2	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
53	Q3, Q11	2	50 V	PSS420X119	Megelec	Transistor, NPN, 50 V, 2 A, SOT-89	SOT-89
54	Q4, Q12	2	50 V	MM12907AL11G	ON Semiconductor	Transistor, PNP, 50 V, 0.8 A, SOT-23	SOT-23
55	Q5, Q6	2	40 V	DMT222A-13	Diodes Inc.	Transistor, NPN, 40 V, 0.6 A, SOT-89	SOT-89
56	Q7, Q14	2	1700V	2CM1001180	Diodes Inc.	MOSFET, N-CH, 1700 V, 1 A, DSO8	DSO8
57	Q7, Q15	2	40V	MM12904-7-F	Diodes Inc.	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23
58	Q13	1	45 V	BC177-16L-T1G	ON Semiconductor	Transistor, NPN, 45 V, 0.5 A, SOT-23	SOT-23
59	Q16	1	40V	61T003000	ON Semiconductor	Transistor, PNP, 40 V, 0.5 A, AEC-Q101, SOT-23	SOT-23
60	Q19	1	50V	BSS84-7-F	Diodes Inc.	MOSFET, P-CH, -50 V, -0.13 A, SOT-23	SOT-23
61	D20	1	80V	2N7002K-T1-4-3	Vishay-Siliconix	MOSFET, N-CH, 80 V, 0.3 A, SOT-23	SOT-23
62	R1, R36	2	1.5Meg	RCW201000202EEF	Vishay-Dale	RES, 0.2%, 1.78 W, AEC-Q200 Grade 3, 2010	2010
63	R2, R4, R6, R9, R14, R15, R37, R39, R41, R44, R46, R49	12	1.5Meg	RCJ22Z1J550A	Panasonic	RES, 1.5 M Ohm, 0.75 W, AEC-Q200 Grade 0, 2010	2010
64	R8, R8, R7, R8, R10, R11, R38, R40, R42, R43, R45, R48	12	48.8k	RCW20104889K9FEF	Vishay-Dale	RES, 48.8 k Ohm, 0.75 W, AEC-Q200 Grade 0, 2010	2010
65	R12, R47	2	33k	RCW201033R0JNEF	Vishay-Dale	RES, 33 k Ohm, 0.75 W, AEC-Q200 Grade 0, 2010	2010
66	R17, R52, R61	3	1.00k	RCW0805200KFEA	Vishay-Dale	RES, 200 k Ohm, 0.125 W, 0805	0805
67	R18	1	10.0k	RCW0805100KFEA	Vishay-Dale	RES, 10.0 k Ohm, 0.125 W, 0805	0805
68	R18, R54	2	498k	RCW0805498KFEA	Vishay-Dale	RES, 498 k Ohm, 0.125 W, 0805	0805
69	R20, R55	2	4.7k	RCW08054700KFEA	Vishay-Dale	RES, 4.7 k Ohm, 0.125 W, 0805	0805
70	R21, R56	2	10.0k	RCW0805100KFEA	Vishay-Dale	RES, 10.0 k Ohm, 0.125 W, 0805	0805
71	R22, R57	2	20.0k	RCW0805200KFEA	Vishay-Dale	RES, 20.0 k Ohm, 0.125 W, 0805	0805
72	R23, R64	2	48.8k	RCW0805488KFEA	Vishay-Dale	RES, 48.8 k Ohm, 0.125 W, 0805	0805
73	R24, R25, R27	3	10.0k	RCW1206100R0KFEA	Vishay-Dale	RES, 10.0 k Ohm, 0.25 W, 1206	1206
74	R33, R60	2	13.0k	RCW0805130KFEA	Vishay-Dale	RES, 13.0 k Ohm, 0.125 W, 0805	0805
75	R28, R30	2	20.0k	RCW0805200KFEA	Vishay-Dale	RES, 20.0 k Ohm, 0.125 W, 0805	0805
76	R29, R66	2	10.0k	RCW1206100R0KFEA	Vishay-Dale	RES, 10.0 k Ohm, 0.25 W, 1206	1206
77	R31, R32, R67	3	0.91k	RCM2010-FX-R910ELF	Bourns	RES, 0.91 k Ohm, 1 W, 2010	2010
78	R33, R79	2	100k	RCW1206100R0KFEA	Vishay-Dale	RES, 100 k Ohm, 0.25 W, 1206	1206
79	R34, R71	2	0.90k	RCW0805090KFEA	Vishay-Dale	RES, 9.09 k Ohm, 0.125 W, 0805	0805
80	R35, R72	2	2.2k	RCW0805220KFEA	Vishay-Dale	RES, 2.2 k Ohm, 0.125 W, 0805	0805
81	R36, R75, R77	3	0	RCW080500000KFEA	Vishay-Dale	RES, 0 Ohm, 0.125 W, 0805	0805
82	R81	1	1.2k	RCW0805120KFEA	Vishay-Dale	RES, 1.2 k Ohm, 0.125 W, 0805	0805
83	R83, R75, R76	4	1.00k	RCW0805100KFEA	Vishay-Dale	RES, 1.0 k Ohm, 0.125 W, 0805	0805
84	R84	1	10.2k	RCW0805102KFEA	Vishay-Dale	RES, 10.2 k Ohm, 0.125 W, 0805	0805
85	R89	1	12.4k	RCW0805124KFEA	Vishay-Dale	RES, 12.4 k Ohm, 0.125 W, 0805	0805
86	R70	1	8.8k	RCW08058800KFEA	Vishay-Dale	RES, 8.8 k Ohm, 0.125 W, 0805	0805
87	R73	1	2.4k	RCW0805240KFEA	Vishay-Dale	RES, 2.4 k Ohm, 0.125 W, 0805	0805
88	R74	1	4.98k	RCW0805498KFEA	Vishay-Dale	RES, 4.98 k Ohm, 0.125 W, 0805	0805
89	R76	1	1.18k	RCW0805118KFEA	Vishay-Dale	RES, 1.18 k Ohm, 0.125 W, 0805	0805
90	R85	1	2.05k	RCW0805205KFEA	Vishay-Dale	RES, 2.05 k Ohm, 0.125 W, 0805	0805
91	R85, R89	2	37k	RCW080537KFEA	Vishay-Dale	RES, 37 k Ohm, 0.125 W, 0805	0805
92	R86, R92	2	1.58k	RCW0805158KFEA	Vishay-Dale	RES, 1.58 k Ohm, 0.125 W, AEC-Q200 Grade 0, 2010	2010
93	R87	1	3.01k	RCW0805301KFEA	Vishay-Dale	RES, 3.01 k Ohm, 0.125 W, 0805	0805
94	R88	1	100k	RCW0805100R0KFEA	Vishay-Dale	RES, 100 k Ohm, 0.125 W, 0805	0805
95	R89	1	2.2k	RCW2010220KFEF	Vishay-Dale	RES, 2.2 k Ohm, 0.75 W, AEC-Q200 Grade 0, 2010	2010
96	R93, R100	2	37.4k	RCW0805374KFEA	Vishay-Dale	RES, 37.4 k Ohm, 0.125 W, 0805	0805
97	R94	1	498k	RCW0805498KFEA	Vishay-Dale	RES, 498 k Ohm, 0.125 W, 0805	0805
98	R96	1	237k	RCW0805237KFEA	Vishay-Dale	RES, 237 k Ohm, 0.125 W, 0805	0805
99	R97	1	470k	RCW0805470KFEA	Vishay-Dale	RES, 470 k Ohm, 0.125 W, 0805	0805
100	R1, R2, R3, R4, R5, R6, R7	7	1.5ohm	W48709-AL	Coilcraft	Transformer, 1500 uH, SMT	1500 uH, SMT
101	Y1, Y3, Y4	6	6005	Keystone	Test Point, Compact, Red, 1H	Test Point, Compact, Red, 1H	
102	Y2, Y4, Y5, Y6	4	Blue	5122	Keystone	Test Point, Compact, Blue, 1H	Testpoint
103	Y7, Y8, Y9	3	Black	5126	Keystone	Test Point, Compact, Black, 1H	Black Compact Testpoint
104	U1, U2	2	IC28C43QDR01	Texas Instruments	Automotive Catalog BiCMOS Low-Power Current Mode PWM Controller, D0008A (DSOC-B)	D0008A	
105	U3	1	FO0B17A5D	Fairchild Semiconductor	Optocoupler, 5 kV, 80-160% CTR, SMT	DIP-4, Gullwing	
106	U4	1	TL431A02BZD1	Texas Instruments	Automotive Catalog Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, -40 to 125 degC, 3-pin SOT-23 (MSOP), Green (RoHS & no Sn/Pb)	D62000A-1	
107	C4, C40	0	1000pf	GRM18BR7C102AJ16D	MuRata	CAP, CERAM, 1000 pf, 50 V +/- 5%, COG/NPO, 1206	1206
108	C23, C62	0	1uF	GRM21BR7E105KA01L			

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