

Variant: TLIN4029A-Q1
 Generated: 1/14/2026 7:28 PM
 TID #: TIDA-020101



TIDA-020101 REV E2 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB1	1		TIDA-020101	Any	Printed Circuit Board	
2	C1, C2, C3, C39, C42, C45	6	10µF	CGA6P1X7R2A106K250AC	TDK	10 µF ±10% 100V Ceramic Capacitor X7R 1210 (3225 Metric)	1210
3	C4	1	2.2µF	CGA6N3X7R2A225K230AB	TDK	CAP. CERM, 2.2 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1,	
4	C5	1	2200pF	CL05B222JB5NNNC	Samsung Electro-Mechanics	CAP. CERM, 2200 pF, 50 V, +/- 5%, X7R, 0402	0402
5	C6	1	100pF	CC0402KRX7R9BB101	Yageo America	CAP. CERM, 100 pF, 50 V, +/- 10%, X7R, 0402	0402
6	C7	1	2200pF	GRM188R71H222KA01D	MuRata	CAP. CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603
7	C8, C9	2	2.2µF	CGA4J3X7R1E225K125AB	TDK	CAP. CERM, 2.2 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
8	C10, C23	2	10µF	GRM21BZ71E106KE15L	MuRata	CAP. CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805
9	C11	1	10µF	GRM188Z71A106MA73D	MuRata	CAP. CERM, 10 uF, 10 V, +/- 20%, X7R, 0603	0603
10	C12	1	220pF	GRM188R72A221KA01D	MuRata	CAP. CERM, 220 pF, 100 V, +/- 10%, X7R, 0603	0603
11	C13, C15, C22, C25	4	0.1µF	CGA2B3X7R1E104K050BB	TDK	CAP. CERM, 0.1 µF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
12	C14	1	10µF	C1608X5R1A106M080AC	TDK	CAP. CERM, 10 uF, 10 V, +/- 20%, X5R, 0603	0603
13	C16	1	0.47µF	CGA2B1X7S1C474K050BE	TDK	CAP. CERM, 0.47 µF, 16 V, +/- 10%, X7S, 0402	0402
14	C17, C18, C19, C20, C21	5	0.01µF	GRM155R71C103KA01D	MuRata	CAP. CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	0402
15	C24	1	470pF	CGA2B2X7R1H471K050BA	TDK	CAP. CERM, 470 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
16	C26, C27, C31	3	1µF	C1005X5R1E105K050BC	TDK	CAP. CERM, 1 uF, 25 V, +/- 10%, X5R, 0402	0402
17	C28, C29, C30	3	1µF	CGA3E1X7R1E105K080AD	TDK	CAP. CERM, 1 µF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
18	C32, C33	2	130µF	B40910A0137M000	TDK	130 µF 80 V Aluminum - Polymer Capacitors Radial, Can - SMD 16mOhm 4000 Hrs @ 125°C	SMD2
19	C36, C37, C38	3	1000pF	CGA2B3X7S2A102K050BB	TDK	CAP. CERM, 1000 pF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0402	0402
20	C40, C41, C43, C44, C46, C47	6	0.01µF	CGA3E2X7R2A103K080AA	TDK	CAP. CERM, 0.01 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
21	D1	1	100V	BAS16D-E3-08	Vishay-Semiconductor	Diode, Switching, 100 V, 0.25 A, AEC-Q101, SOD-123	SOD-123
22	D2	1	58.1V	SMA6T68CAY	STMicroelectronics	Diode, TVS, Bi, 58.1 V, 121 Vc, AEC-Q101, SMD, 2-Leads, Body 4.275x2.575mm	SMD, 2-Leads, Body 4.275x2.575mm
23	J1	1		393570003	Molex	Terminal Block, 3.5 mm, 3x1, Tin, TH	Terminal Block, 3.5 mm, 3x1, TH
24	J2, J3, J4, J6, J7	5		SOLDER JUMPER	NA	Solder Jumper, SMT	SolderJumper
25	J5	1		FTSH-105-01-L-DV-K	Samtec	Header(Shrouded), 1.27mm, 5x2, Gold, SMT	Header(Shrouded), 1.27mm, 5x2, SMT
26	L1	1	2.2µH	74438377022	Wurth Electronics	2.2 µH Shielded Wirewound Inductor 12.4 A 11.9mOhm Max Nonstandard	SMD2
27	L2	1	100µH	LPS4040-104MRC	Coilcraft	Low Profile Shielded Power Inductors 100µH 20% 0.82A 0.475 Ohm	SMT_IND_3MM9_3M M9
28	MH1, MH2, MH3	3		63824-1	TE Connectivity	0.250" (6.35mm) Quick Connect Male Solder Connector Non-Insulated	CONN_7MM92_3MM11
29	Q1	1	32 V	BCW60D	Infineon Technologies	Transistor, NPN, 32 V, 0.1 A, SOT-23	SOT-23
30	Q2, Q5, Q6, Q7, Q8, Q9, Q10	7		NVTF56H850NTAG	onsemi	N-Channel 80 V 11A (Ta), 68A (Tc) 3.2W (Ta), 107W (Tc) Surface Mount 8-WDFN (3.3x3.3)	WDFN8
31	Q3	1	40V	SMMBT3904LT3G	On Semiconductor	Bipolar (BJT) Transistor NPN 40 V 200 mA 300MHz 300 mW Surface Mount SOT-23-3 (TO-236)	SOT23
32	Q4	1	-60V	TP0610K-T1-GE3	Vishay-Siliconix	MOSFET, P-CH, -60 V, -0.185 A, SOT-23	SOT-23
33	R1, R10	2	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
34	R2, R7, R9, R20, R22	5	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
35	R3	1	88.7k	CRCW060388K7FKEA	Vishay-Dale	RES, 88.7 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
36	R4	1	481k	RT0603DRE07481KL	Yageo America	RES, 481 k, 0.5%, 0.1 W, 0603	0603
37	R5	1	453k	RC0603FR-07453KL	Yageo	RES, 453 k, 1%, 0.1 W, 0603	0603
38	R6	1	50.5k	RT0603BRD0750K5L	Yageo America	RES, 50.5 k, 0.1%, 0.1 W, 0603	0603
39	R8	1	4.7k	CRCW040247K0JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
40	R11, R13, R15, R17	4	976k	CRCW0402976KFED	Vishay-Dale	RES, 976 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
41	R12, R14, R16, R18	4	30.1k	CRCW040230K1FKED	Vishay-Dale	RES, 30.1 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
42	R21, R29, R31, R33, R35, R37, R39	7	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
43	R24	1	160	CRCW0402160RJNED	Vishay-Dale	RES, 160, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
44	R25	1	0.005	CRE2512-FZ-R005E-3	Bourns	RES, 0.005, 1%, 3 W, AEC-Q200 Grade 0, 2512	2512
45	R26, R27	2	10	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R28, R30, R32, R34, R36, R38	6	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
47	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19	19		5017	Keystone Electronics	PC Test Point, SMT	PC Test Point, SMT
48	U1	1		LM5168PQDDARQ1	Texas Instruments	0.3-A, 120-V, Step-Down Converter with Fly-buck Capability	SO8 PowerPAD
49	U2	1		TPS7B8133QDRVRQ1	Texas Instruments	Automotive 150-mA high-voltage ultra-low-IQ low-dropout (LDO) linear regulator, DRV0006A (WSON-6)	DRV0006A
50	U3	1		TLIN4029ADRBRQ1	Texas Instruments	Automotive LIN Transceiver with Dominant State Timeout and Extended Fault Protection	VSON8
51	U4	1		MSPM0G3507QRHBQ1	Texas Instruments	Automotive Mixed-Signal Microcontrollers With CAN-FD Interface	VQFN32
52	U5	1		DRV8363RGZRQ1	Texas Instruments	48V Battery Three-Phase Smart Gate Driver with Accurate Current Sensing and Advanced Monitoring	VQFN48
53	C35	0	130µF	B40910A0137M000	TDK	130 µF 80 V Aluminum - Polymer Capacitors Radial, Can - SMD 16mOhm 4000 Hrs @ 125°C	SMD2
54	J8, J9	0		SOLDER JUMPER	NA	Solder Jumper, SMT	SolderJumper
55	R19	0	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you fully indemnify TI and its representatives against any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#), [TI's General Quality Guidelines](#), or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products. Unless TI explicitly designates a product as custom or customer-specified, TI products are standard, catalog, general purpose devices.

TI objects to and rejects any additional or different terms you may propose.

Copyright © 2026, Texas Instruments Incorporated

Last updated 10/2025