

TIDA-01429 REV E1 Bill of Materials



Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	IPC81	1		TIDA-01429	Any	Printed Circuit Board	
2	C1	1	1uF	C1608XR1A105K080AC	TDK	CAP. CERM. 1 uF, 10 V, +/- 10%, XSR, 0603	0603
3	C2, C9, C19, C42, C43	5	0.1uF	06033C104JA72A	AVX	CAP. CERM. 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603
4	C3, C4, C5, C6, C7, C8	6	2.2uF	C0603C225K9PACTU	Kemet	CAP. CERM. 2.2 uF, 6.3 V, +/- 10%, XSR, 0603	0603
5	C10, C11	2	36pF	GRM1555C1E360JA01D	MuRata	CAP. CERM. 36 pF, 25 V, +/- 5%, COGNP0, 0402	0402
6	C12	1	0.01uF	06031C103JA72A	AVX	CAP. CERM. 0.01 uF, 100 V, +/- 5%, X7R, 0603	0603
7	C13	1	1uF	C1608XR1C105K080AC	TDK	CAP. CERM. 1 uF, 18 V, +/- 10%, X7R, 0603	0603
8	C14	1	0.1uF	C1608XR1E104K080AA	TDK	CAP. CERM. 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603
9	C15	1	47uF	EEE-FK1J470P	Panasonic	CAP. AL. 47 uF, 63 V, +/- 20%, 0.65 ohm, AEC-Q200 Grade 2, SMD	SMT Radial F
10	C16	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP. CERM. 1 uF, 50 V, +/- 10%, X7R, 0603	0603
11	C17, C25	2	0.1uF	CG-188R72A104KA01D	MuRata	CAP. CERM. 0.1 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C18	1	1uF	GRM188R61H225KE11D	MuRata	CAP. CERM. 1 uF, 50 V, +/- 10%, XSR, 0603	0603
13	C20	1	10uF	GRM3E2R71J106KA12L	MuRata	CAP. CERM. 10 uF, 63 V, +/- 10%, X7R, 1210	1210
14	C21, C27, C28	3	2.2uF	GRM188R61H225KE11D	MuRata	CAP. CERM. 2.2 uF, 50 V, +/- 10%, XSR, 0603	0603
15	C22	1	0.1uF	C1608X7S2A104K080AB	TDK	CAP. CERM. 0.1 uF, 100 V, +/- 10%, X7S, 0603	0603
16	C23, C24	2	2.2uF	GR1188R61H225KE13D	MuRata	CAP. CERM. 2.2 uF, 50 V, +/- 10%, XSR, AEC-Q200 Grade 3, 0603	0603
17	C26	1	0.1uF	SCM188R71C104KA37D	MuRata	CAP. CERM. 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
18	C28	1	10uF	GRM188R61C106MALLD	MuRata	CAP. CERM. 10 uF, 16 V, +/- 20%, XSR, 0603	0603
19	C30	1	100pF	06032C101KA72A	AVX	CAP. CERM. 100 pF, 10 V, +/- 10%, X7R, 0603	0603
20	C31	1	10pF	CGA3E2COG1H100D080AA	TDK	CAP. CERM. 10 pF, 50 V, +/- 5%, COGNP0, AEC-Q200 Grade 1, 0603	0603
21	C32	1	0.01uF	C0603C103J3GCAUTO	Kemet	CAP. CERM. 0.01 uF, 25 V, +/- 5%, COGNP0, AEC-Q200 Grade 1, 0603	0603
22	C33	1	1uF	06033C105KA72A	AVX	CAP. CERM. 1 uF, 25 V, +/- 10%, X7R, 0603	0603
23	C34	1	0.01uF	GRM188R71C103KA01D	MuRata	CAP. CERM. 0.01 uF, 16 V, +/- 10%, X7R, 0603	0603
24	C35	1	3pF	C0603C309C5GACTU	Kemet	CAP. CERM. 3 pF, 50 V, +/- 8.3%, COGNP0, 0603	0603
25	C36	1	820pF	C0603C821J5GACTU	Kemet	CAP. CERM. 820 pF, 50 V, +/- 5%, COGNP0, 0603	0603
26	C37	1	1200pF	GRM188R61E122JA01D	MuRata	CAP. CERM. 1200 pF, 25 V, +/- 5%, COGNP0, 0603	0603
27	C38	1	1000pF	C0603C102J5RACTU	Kemet	CAP. CERM. 1000 pF, 50 V, +/- 5%, X7R, 0603	0603
28	C39	1	0.082uF	GRM188R71E823KA01D	MuRata	CAP. CERM. 0.082 uF, 25 V, +/- 10%, X7R, 0603	0603
29	C40, C44	2	56pF	GRM1885C1H560JA01D	MuRata	CAP. CERM. 56 pF, 50 V, +/- 5%, COGNP0, 0603	0603
30	C41	1	4700pF	SCM188R71H47ZKA37D	MuRata	CAP. CERM. 4700 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
31	D1	1	Blue	B-3 032-2N2-35-1	CSL&A	LED, Blue, SMD	BLUE 0603 LED
32	D2	1	Green	150060VS75000	Würth Elektronik	LED, Green, SMD	LED 0603
33	D3	1	Red	150060RS75000	Würth Elektronik	LED, Red, SMD	LED 0603
34	D4	1	Yellow	150060Y75000	Würth Elektronik	LED, Yellow, SMD	LED 0603
35	D5	1	40V	SS24FL	Fairchild Semiconductor	Diode, Schottky, 40 V, 2 A, AEC-Q101, SOD-123F	SOD-123F
36	D6	1	50V	SS25FS43	Vishay Semiconductor	Diode, Schottky, 50 V, 2 A, DCK220AA	DCK220AA
37	D7	1	5.6V	C2R52C5V6	Comchip Technology	Diode, Zener, 5.6 V, 150 mW, SOD-523F	SOD-523F
38	D8	1	40V	B340B-13-F	Diodes Inc.	Diode, Schottky, 40 V, 3 A, SMB	SMB
39	H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	Screw
40	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
41	J1	1		0015912140	Molex	Header, 100mil, 7x2, SMT	Header, 100 mil, 7x2, SMT
42	J2	1		1734354-1	TE Connectivity	Receptacle, D-Sub, 9 Position, R/A, TH	Receptacle, D-Sub, 9 Position, R/A, TH
43	J3	1		5-146278-2	TE Connectivity	Header, 100mil, 2x1, Tin, TH	Header, 2x1, 100mil, TH
44	L1, L2	2	60 ohm	742792602	Würth Elektronik	Ferrite Bead, 60 ohm @ 100 MHz, 3 A, 0603	0603
45	L3	1	220 ohm	BLM21PG221SN1D	MuRata	Ferrite Bead, 220 ohm @ 100 MHz, 2 A, 0805	0805
46	L4, L5	2	1uH	SRN4012TA-1R0M	Bourns	Inductor, Shielded, Ferrite, 1 uH, 2.2 A, 0.0504 ohm, AEC-Q200 Grade 1, SMD	4.0x4.0x1.2mm
47	L6	1	4.7uH	MPH4040R3-4R7-R	Caltionics	Inductor, Shielded, 4.7 uH, 2.3 A, 0.092 ohm, SMD	4.45x1.85x4.06mm
48	L7	1	100uH	B3278C0104H001	TDK	Coupled inductor, 100 uH, 0.15 A, 1.5 ohm, SMD	4.3x3.0x3.2mm
49	LBL1	1		TH1-14-423-10	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
50	Q1	1	100V	BUK9Y104-100B.115	Nexperia	MOSFET, N-CH, 100 V, 14.8 A, AEC-Q101, 4.9x3.95mm	4.9x3.95mm
51	Q2	1	30V	CS317313Q2	Texas Instruments	MOSFET, N-CH, 30 V, 5 A, DCK0066C (VSON-6)	DCK0066C
52	R1	1	16.9	RC0603FR-0716R9L	Yageo America	RES, 16.9, 1%, 0.1 W, 0603	0603
53	R2, R3, R4	3	28.0	CRCW060328R0FKEA	Vishay-Dale	RES, 28.0, 1%, 0.1 W, 0603	0603
54	R5, R6, R7, R8, R15, R16, R17, R18, R32, R52	10	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
55	R9, R14	2	820	RC0603FR-07820RL	Yageo America	RES, 820, 1%, 0.1 W, 0603	0603
56	R10, R11, R12, R13	4	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
57	R19, R20	2	3.30k	RC0603FR-073K3L	Yageo America	RES, 3.30 k, 1%, 0.1 W, 0603	0603
58	R21, R27	2	2.20k	RC0603FR-072K2L	Yageo America	RES, 2.20 k, 1%, 0.1 W, 0603	0603
59	R22, R23	2	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10.0 k, 5%, 0.1 W, 0603	0603
60	R24	1	1.0Meg	CRCW04021M00JNED	Vishay-Dale	RES, 1.0 M, 5%, 0.063 W, 0402	0603
61	R25, R26	2	4.7k	CRCW06034K70JNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.1 W, 0603	0603
62	R28	1	13.7k	CRCW060313K7FKEA	Vishay-Dale	RES, 13.7 k, 1%, 0.1 W, 0603	0603
63	R29	1	10.0k	RNCF0603F10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
64	R30	1	348k	CRCW0603348K7FKEA	Vishay-Dale	RES, 348 k, 1%, 0.1 W, 0603	0603
65	R31	1	102k	CRCW0603102K7FKEA	Vishay-Dale	RES, 102 k, 1%, 0.1 W, 0603	0603
66	R33, R44	2	10.2k	CRCW060310K2FKEA	Vishay-Dale	RES, 10.2 k, 1%, 0.1 W, 0603	0603
67	R34	1	53.6k	CRCW060353K6FKEA	Vishay-Dale	RES, 53.6 k, 1%, 0.1 W, 0603	0603
68	R35, R36	2	4.53k	ERJ-3EK34531V	Panasonic	RES, 4.53 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
69	R37	1	34.0k	ERJ-3EK34340V	Panasonic	RES, 34.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
70	R38	1	16.5k	CRCW060316K5FKEA	Vishay-Dale	RES, 16.5 k, 1%, 0.1 W, 0603	0603
71	R39	1	6.81k	RC0603FR-076K81L	Yageo America	RES, 6.81 k, 1%, 0.1 W, 0603	0603
72	R40	1	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, 0603	0603
73	R41	1	1.87k	CRCW06031K87FKEA	Vishay-Dale	RES, 1.87 k, 1%, 0.1 W, 0603	0603
74	R42	1	14.7k	ERJ-3EK34147V	Panasonic	RES, 14.7 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
75	R43	1	0.15	ERJ-8BSFR15V	Panasonic	RES, 0.15, 1%, 0.5 W, 1206	1206
76	R45	1	20.0	CRCW060320R0FKEA	Vishay-Dale	RES, 20.0, 1%, 0.1 W, 0603	0603
77	R46	1	3.57k	RC0603FR-073K57L	Yageo America	RES, 3.57 k, 1%, 0.1 W, 0603	0603
78	R47, R53, R54, R55, R56, R57	6	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
79	R48, R49	2	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
80	R50, R51	2	60.4	CRCW120660R4FKEA	Vishay-Dale	RES, 60.4, 5%, 0.25 W, 1206	1206
81	RF1	1	10	PWR4522AS10R0JA	Bourns	RES, 10, 5%, 3 W, Axial	Axial
82	S1	1		1571983-5	TE Connectivity	Switch, SPST, 4 Pos, Top Actuated, SMD	SMD, 8-Leads, Pitch 1.27mm
83	S2	1		1-1571983-1	TE Connectivity	Switch, 8SPST, 0.025 A, 24 VDC, SMD	11.28x6.2mm
84	S3	1		B3U-1100P	Omron Electronic Components	Switch, SPST-NO, Off-Mod, 12 V, SMD	SMD, 3-Leads, Body 3x2.5mm
85	TP11, TP12, TP13, TP14	4		5015	Keystone	Test Point, Miniature, SMT	Testpoint_Keystone_Minature
86	U1	1		TMS320F28030PAGO	Texas Instruments	Piccolo Microcontroller, PAG0064A (TQFP-64)	PAG0064A
87	U2, U3	2		SN74LVC2G06DCKRQ1	Texas Instruments	Dual Inverter Buffer/Driver with Open-Drain Output, DCK0006A (SOT-6)	DCK0006A
88	U4	1		TLV7133PQDBVRQ1	Texas Instruments	Capacitor-Free, 150-mA, LDO Regulator w/ Foldback Current Limit, DBV0005A (SOT5)	DBV0005A
89	U5	1		CAHCT1G04GDCKRQ1	Texas Instruments	Single Inverter Gate, DCK0005A (SOT-SC70-5)	DCK0005A
90	U6	1		TPS57140QDCRCRQ1	Texas Instruments	Automotive Catalog 3.5V to 42V Input, 1.5 A Step Down SWIFT(TM) Converter with Eco-Mode(TM), DRC0010J (VSON-10)	DRC0010J
91	U7	1		LM5022QDGSRG1	Texas Instruments	2.2MHz, 60-V Low Side Controller for Boost, SEPIC and Flyback, DGS0010A (VSSOP-10)	DGS0010A
92	U8	1		TCAN1042HGVDRCQ1	Texas Instruments	Automotive Fault Protected CAN Transceiver With Flexible Data-Rate, DRB0008F (VSON-8)	DRB0008F
93	U9	1		TPD2E007DCKR	Texas Instruments	ESD Protection Array for AC Signal Data Interface, 2 Channels, -40 to +85 degC, 3-pin SC70 (DCK), Green (RoHS & no Sb/B)	DCK0003A
94	Y1	1		ABM38-20.000MHZ-10-1-U-T	Abrakon Corporation	Crystal, 20 MHz, 10 pF, SMD	Crystal, 3.2x1.1x5.x mm
95	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

## IMPORTANT NOTICE FOR TI DESIGN INFORMATION AND RESOURCES

Texas Instruments Incorporated ("TI") technical, application or other design advice, services or information, including, but not limited to, reference designs and materials relating to evaluation modules, (collectively, "TI Resources") are intended to assist designers who are developing applications that incorporate TI products; by downloading, accessing or using any particular TI Resource in any way, you (individually or, if you are acting on behalf of a company, your company) agree to use it solely for this purpose and subject to the terms of this Notice.

TI's provision of TI Resources does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such TI Resources. TI reserves the right to make corrections, enhancements, improvements and other changes to its TI Resources.

You understand and agree that you remain responsible for using your independent analysis, evaluation and judgment in designing your applications and that you have full and exclusive responsibility to assure the safety of your applications and compliance of your applications (and of all TI products used in or for your applications) with all applicable regulations, laws and other applicable requirements. You represent that, with respect to your applications, you have all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. You agree that prior to using or distributing any applications that include TI products, you will thoroughly test such applications and the functionality of such TI products as used in such applications. TI has not conducted any testing other than that specifically described in the published documentation for a particular TI Resource.

You are authorized to use, copy and modify any individual TI Resource only in connection with the development of applications that include the TI product(s) identified in such TI Resource. NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information regarding or referencing third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of TI Resources may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI RESOURCES ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING TI RESOURCES OR USE THEREOF, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY YOU AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS EVEN IF DESCRIBED IN TI RESOURCES OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF TI RESOURCES OR USE THEREOF, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

You agree to fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of your non-compliance with the terms and provisions of this Notice.

This Notice applies to TI Resources. Additional terms apply to the use and purchase of certain types of materials, TI products and services. These include; without limitation, TI's standard terms for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>), [evaluation modules](#), and [samples](http://www.ti.com/sc/docs/sampterm.htm) (<http://www.ti.com/sc/docs/sampterm.htm>).

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2017, Texas Instruments Incorporated