

Bill of Materials

TI DESIGNS TIDA - 00110

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	DNIe
1	!PCB1	Printed Circuit Board	Any	TIDA-00110		
4	C1, C23, C30, C34	CAP, CERM, 0.047uF, 50V, +/-10%, X7R, 0603	TDK	C1608X7R1H473K	0603	
8	C2, C3, C21, C22, C28, C32, C37, C38	CAP, CERM, 4700pF, 50V, +/-10%, X8R, 0603	TDK	C1608X8R1H472K	0603	
6	C4, C14, C20, C26, C31, C48	CAP, TA, 10 μF, 16 V, +/- 10%, 2 ohm, SMD	AVX	F931C106KBA	3528-21	
1	C5	CAP, CERM, 1000pF, 100V, +/-5%, X7R, 0603	AVX	06031C102JAT2A	0603	
0	C6, C7, C11, C13, C18, C24, C25, C27, C33, C35, C36	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A	0603	DNI
7	C8, C15, C17, C19, C29, C50, C52	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A	0603	
2	C9, C10	CAP, CERM, 3300pF, 50V, +/-10%, X7R, 0603	Kemet	C0603C332K5RACTU	0603	
1	C12	CAP, CERM, 0.033uF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H333KA61D	0603	
1	C16	CAP, CERM, 4.7uF, 50V, +/-10%, X5R, 0805	TDK	C2012X5R1H475K125AB	0805	
2	C39, C55	CAP, CERM, 1000pF, 2KV 10% X7R 1206	Johanson Dielectrics Inc	202R18W102KV4E	1206	
13	C40, C41, C42, C43, C46, C47, C49, C51, C53, C54, C56, C57, C58	CAP CER 1000PF 100V 10% X7R 1206	Yageo	CC1206KRX7R0BB102	1206	
2	C44, C45	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	0603	
13	D1, D2, D3, D4, D12, D15, D19, D20, D21, D23, D27, D28, D30	TVS DIODE 11.1VWM 18.2VC SMD	Littelfuse Inc	P4SMA13CA	SMA	
8	D5, D18, D31, D32, D33, D34, D35, D36	Diode, Schotky, 200V, 1A, PowerDI123	DIODES INCORPORATED	DFLS1200-7	PowerDI123	
0	D6, D7, D9, D11, D16, D17, D22, D24, D25, D26	TVS DIODE,70VVVM,8VC,SOT-323	DIODES INCORPORATED	DESD1P0RFW-7	SOT-323	DNI
3	D8, D10, D13	LED, SMARTLED, GREEN, 570NM,0603	OSRAM OPTO SEMICONDUCTORS Inc	LG L29K-G2J1-24-Z	0603	
1	D14	DIODE ZENER 3.8V 1W PMDS	Rohm Semiconductor	PTZTE253.6B	DO-214AC, SMA	
1	D29	TVS 18 VOLT 600 WATT BI-DIR SMB	Littelfuse Inc	SMBJ18CA	SMB	
0	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	DNI
5	J1, J2, J4, J5, J6	Receptacle, 100mil, 4X1 TH	TE Connectivity	282834-4	10.62x10x6.5 mm	
1	J3	Terminal Block, 8x1, 2.54 mm, TH	Phoenix Contact	1725711	8POS Terminal Block	
1	J7	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	Terminal Block, 2x1, 2.54mm, TH	
1	L1	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation	MMZ1608B102C	0603	

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	DNIe
0	LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Brady	THT-14-423-10	PCB Label 0.650"H x 0.200"W	DNI
2	Q1, Q2	MOSFET, N-CH, 30V, 22A, SON 2X2 MM	TEXAS INSTRUMENTS	CSD17571Q2	DQK	
8	R1, R2, R28, R30, R45, R51, R54, R55	RES, 4.12k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-4121-B-T5	0603	
1	R3	RES 2K OHM 1/4W 0.1% 1206	Vishay-Dale	TNPW12062K00BEEA	1206	
2	R4, R10	RES, 4.70k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-472-B-T5	0603	
10	R5, R6, R15, R17, R31, R32, R48, R49, R52, R53	RES, 249, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603249RFKEA	0603	
4	R7, R8, R12, R13	RES, 300 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603300RJNEA	0603	
1	R9	RES, 0 ohm, 5%, 0.125W, 0805	Yageo America	RC0805JR-070RL	0805	
0	R11, R46, R50	RES, 10 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	DNI
0	R14	RES, 0, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	DNI
6	R16, R18, R25, R27, R38, R41	RES, 10 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	
10	R19, R20, R21, R22, R24, R29, R33, R34, R35, R36	RES, 0, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	
8	R23, R37, R39, R40, R42, R43, R44, R47	RES, 100, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603100RFKEA	0603	
1	R26	RES, 1.2 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06031K20JNEAHP	0603	
2	R56, R57	RES, 2.0 k, 5%, 0.1 W, 0603	Yageo America	RC0603JR-072KL	0603	
10	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10	Test Point 40mil pad 20mil drill	STD	STD		
1	U1	Single Output LDO, 100 mA, Fixed 3.3 V Output, 3 to 60 V Input, with Enable and Power Good, 8-pin MSOP (DGN), -40 to 125 degC, Green (ROHS & no Sb/Br)	Texas Instruments	TPS7A1633DGNR	DGN0008C	
1	U2	Low-Voltage 8-Bit I2C and SMBus	Texas Instruments	TCA6408APWR	PW0016A	
1	U3	IC, Dual, 14 Ohms SP4T Analog	TI	TS3A5017D	SO16	
1	U4	IC, 24-Bit A-D Converters for	TI	ADS1248IPW	TSSOP-28	

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design. TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, 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 components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information 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 REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have *not* been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.