

Bill of Materials

TI DESIGNS

TIDA-00308

Item	Qty	Reference	Fitted	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	2	C1, C14	Fitted	CAP, TA, 4.7uF, 35V, +/-10%, 1.9 ohm, SMD	Vishay-Sprague	293D475X9035C2TE3	6032-28	
2	8	C2, C11, C13, C16, C17, C21, C27, C30	Fitted	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	Kemet	C0603C104K5RACTU	0603	
3	4	C3, C15, C20, C33	Fitted	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C105K	0603	
4	6	C4, C7, C26, C29, C31, C32	Fitted	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0805	AVX	08055C104KAT2A	0805_HV	
5	4	C5, C6, C8, C9	Fitted	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0805	AVX	08055A101JAT2A	0805_HV	
6	4	C10, C12, C18, C28	Fitted	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	Taiyo Yuden	GMK325AB7106MM-T	1210	
7	1	C19	Fitted	CAP, CERM, 4.7uF, 50V, +/-10%, X5R, 0805	TDK	C2012X5R1H475K125AB	0805_HV	
8	1	C22	Fitted	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	Kemet	C0603C106M9PACTU	0603	
9	3	C23, C24, C25	Fitted	CAP CER 0.1UF 25V 5% X7R 0603	AVX	06033C104JAT2A	0603	
10	0	C34, C35	Not Fitted	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	0603	
11	4	D1, D2, D4, D6	Fitted	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	LED0603AA	
12	1	D3	Fitted	DIODE ZENER 3.9V 500MW SOD123	Diodes Incorporated	MMSZ5228B-7-F	sod-123	
13	3	D5, D7, D11	Fitted	DIODE SCHOTTKY 20V 0.5A SOD123	Diodes Inc	B0520LW-7-F	SOD-123	
14	1	D8	Fitted	Diode, Zener, 6.2V, 1W, PowerDI123	Diodes Inc.	DFLZ6V2-7	powerDI123	
15	2	D9, D10	Fitted	IC TVS ASYMM RS-485V 7/12V SOT23	Semtech	SM712.TCT	SM712.TCT	
16	3	FB1, FB2, FB3	Fitted	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation	MMZ1608B102C	0603, FB0603	
17	5	J1, J2, J3, J4, J5	Fitted	CONN TERM BLOCK 2.54MM 2POS PCB, Terminal Block, 4x1, 2.54mm, TH	On Shore Technology Inc	OSTVN02A150	CN2_MTB_P100_PD80_D1.1_S5.54X6.5_STACK	
18	2	L1, L2	Fitted	CHOKE COMM MODE 200 OHM .35A SMD	TDK	ACM2012-201-2P-T002	IND_0805-4P	
19	2	Q1, Q2	Fitted	MOSFET, N-CH, 30V, 22A, SON 2X2 MM	TEXAS INSTRUMENTS	CSD11751Q2	SON_CSD11751Q2	
20	5	R1, R17, R18, R19, R20	Fitted	RES, 300 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603300RJNEA	0603	
21	1	R2	Fitted	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JNEA	0603	
22	0	R3, R4, R5, R6	Not Fitted	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JNEA	0603	
23	4	R7, R8, R9, R10	Fitted	RES, 10 ohm, 5%, 1W, 2512	Panasonic	ERJ-1TYJ100U	2512M	
24	0	R11, R13	Not Fitted	RES, 120 ohm, 1%, 0.25W, 1206	Yageo America	RC1206FR-07120RL	1206	
25	0	R12	Not Fitted	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	
26	2	R14, R16	Fitted	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	
27	1	R15	Fitted	RES, 3.9k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06033K90JNEA	0603	
28	1	T1	Fitted	Transformer 475uH SMD	Würth Electronics Midcom	760390014	760390015	

Item	Qty	Reference	Fitted	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
29	2	U1, U7	Fitted	WITH 25-uA QUIESCENT CURRENT	TI	TPS7A6533QKVURQ1	KVU_1	
30	2	U2, U3	Fitted	/ 5 V, -40 to +125 degC, 8-pin SOIC (D), Green	Texas Instruments	ISO7221AD	D0008A_N	
31	1	U4	Fitted	DBV0005A	Texas Instruments	SN6501DBV	DBV0005A_N	
32	1	U5	Fitted	IC, RS485 TRANSCEIVER LP, 8-SOIC	TEXAS INSTRUMENTS	SN65HVD3082ED	D0008A_N	
33	1	U6	Fitted	Duplex, -40 to 85 degC, 16-pin SOIC (DW)	Texas Instruments	ISO3088DW	DW0016A_N	
34	1	U8	Fitted	Regulator, LDO, 5V, 0.15A, SOT23-5	Texas Instruments	TLV70450DBV	DBV0005A_N	

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.