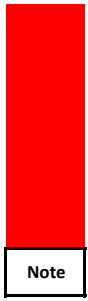


# Bill of Materials

TI DESIGNS

TIDA-00392

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint
1	6	C1, C5, C7, C8, C10, C11	10 µF	CAP, CERM, 10 µF, 25 V, +/- 20%, X5R, 0603	TDK	C1608X5R1E106M080AC		C1608X5R1E106M080AC
2	2	C2, C4	22 µF	CAP, CERM, 22 µF, 10 V, +/- 20%, X5R, 0603	TDK			
3	1	C3	33 pF	CAP, CERM, 33 pF, 100 V, +/- 5%, COG/NPO, 0603	AVX	06031A330JAT2A		06031A330JAT2A
		C6, C9, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C54, C55, C56, C57,						
9	44	C58, C59	0.1 µF	CAP, CERM, 0.1 µF, 16 V, +/- 20%, X7R, 0603	Kemet	C0603C104M4RACTU		C0603C104M4RACTU
10	4	C12, C13, C14, C15	2.2 µF	CAP, CERM, 2.2 µF, 25 V, +/- 10%, X5R, 0402	TDK	C1005X5R1E225K050BC		C1005X5R1E225K050BC
11	2	C52, C53	15 pF	CAP, CERM, 15 pF, 50 V, +/- 5%, COG/NPO, 0402	MuRata	GRM1555C1H150JA01D		GRM1555C1H150JA01D
12	1	D1		Diode, Schottky, 20 V, 0.5 A, 1.0x0.35x0.6mm	Central Semiconductor	CFSH05-20L CT-ND		CFSH05-20L TR
13	1	J1		Header, 2x7 pin, 100mil spacing, Straight, 4 Wall	3M	2514-6002UB		HEADER_14PJTAG
14	1	L1	2.2 µH	Inductor, Drum Core, Ferrite, 2.2 µH, 1 A, 0.11 ohm, SMD	Bourns	SRU2016-2R2Y		SRU2016-2R2Y
15	1	L2	3.3 µH	Inductor, Drum Core, Ferrite, 3.3 µH, 0.6 A, 0.32 ohm, SMD	Bourns	SRU2009-3R3Y		SRU2009-3R3Y
16	2	L3, L4	220 ohm	Ferrite Bead, 220 ohm @ 100 MHz, 0.2 A, 0402	MuRata	BLM15BB221SN1D		BLM15BB221SN1D
17	2	L5, L6	60 ohm	Ferrite Bead, 60 ohm @ 100 MHz, 3.5 A, 0603	TDK	MPZ1608S600A		MPZ1608S600A
18	1	R1	0	RES, 0, 5%, 0.063 W, 0402	Vishay-Dale	CRCW04020000Z0ED		CRCW04020000Z0ED
19	1	R2	806 k	RES, 806 k, 1%, 0.125 W, 0805	Vishay-Dale	CRCW0805806KFKEA		CRCW0805806KFKEA
20	1	R3	178 k	RES, 178 k, 1%, 0.125 W, 0805	Vishay-Dale	CRCW0805178KFKEA		CRCW0805178KFKEA
21	1	R4	205 k	RES, 205 k, 1%, 0.125 W, 0805	Vishay-Dale	CRCW0805205KFKEA		CRCW0805205KFKEA
22	1	R5	200 k	RES, 200 k, 1%, 0.125 W, 0805	Vishay-Dale	CRCW0805200KFKEA		CRCW0805200KFKEA
23	1	R6	22.0 k	RES, 22.0 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0722KL		RC0603FR-0722KL
24	1	R7	39	RES, 39, 5%, 0.063 W, 0402	Vishay-Dale	CRCW040239R0JNED		CRCW040239R0JNED
25	4	R8, R10, R11, R12	2.20 k	RES, 2.20 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-072K2L		RC0603FR-072K2L
26	1	R9	10.0k	RES, 10.0 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040210K0FKED		CRCW040210K0FKED
27	0	R13	DNP	RES, 5%, 0.063 W, 0402		CRCW040210K0FKED		CRCW040210K0FKED
28	1	U1		Dual-Core Delfino Microcontroller, PTP0176F	Texas Instruments	TMS320F28377DPTP		TMS320F28377DPTP
29	1	U2		Buck Adjustable Regulator with 2.5 to 6 V Input and 0.6 to 6 V Output	Texas Instruments	TPS62420DRCR		TPS62420DRCR
30	1	U3		High-Accuracy, Fixed-Threshold OV/UV Monitor, DDC0006A	Texas Instruments	TPS3702CX33DDCR		TPS3702CX33DDCR
31	1	U4		High Accuracy Fixed Threshold OV/UV Monitor, DDC0006A	Texas Instruments	TPS3702CX12DDC		TPS3702CX10DDC
32	1	Y2		Crystal, 20 MHz, 10 pF, SMD	Abracon Corporation	ABM3B-20.000MHZ-10-1-U-T		ABM3B-20.000MHZ-10-1-U-T



## 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.