

BILL OF MATERIALS

TI Designs#

TIDA-00247

Fitted	Description	Designator	Footprint	Manufacturer	PartNumber	Quantity	RoHS
Fitted	16-bit Ultra-Low-Power Microcontroller, 32 KB Flash, 1 K RAM, 6U2		RHA0040B	Texas Instruments	MSP430F2274IRHA	1	Y
Fitted	60-V, 5-µA IQ, 100-mA, Low-Dropout Voltage Regulator with En	U1	DRB0008B	Texas Instruments	TPS7A160IDRB	1	Y
Fitted	CAP, CERM, 0.01 µF, 6.3 V, +/- 10%, X7R, 0402	C2	0402	MuRata	GRM155R70J103KA01D	1	Y
Fitted	CAP, CERM, 0.01µF, 100V, +/-10%, X7R, 0603	C14, C22	0603	MuRata	GRM188R72A103KA01D	2	Y
Fitted	CAP, CERM, 0.01µF, 50V, +/-5%, X7R, 0805	C18	0805_HV	AVX	08055C103JAT2A	1	Y
Fitted	CAP, CERM, 0.1 µF, 6.3 V, +/- 10%, X7R, 0402	C5, C8, C10, C20	0402	MuRata	GRM155R70J104KA01D	4	Y
Fitted	CAP, CERM, 0.22 µF, 6.3 V, +/- 10%, X7R, 0603	C13	0603	MuRata	GRM188R70J224KA88D	1	Y
Fitted	CAP, CERM, 0.47 µF, 100 V, +/- 10%, X7R, 1210	C3	1210	MuRata	GRM32MR72A474KA01L	1	Y
Fitted	CAP, CERM, 1 µF, 6.3 V, +/- 10%, X7R, 0603	C15, C16	0603	MuRata	GRM188R70J105KA01D	2	Y
Fitted	CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0402	C11, C12	0402	MuRata	GRM1555C1H100JA01D	2	Y
Fitted	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X7R, 0603	C4, C7, C9	0603	MuRata	GRM188R71A225KE15D	3	Y
Fitted	CAP, CERM, 2200pF, 6.3V, +/-10%, X7R, 0402	C6	0402	MuRata	GRM155R70J222KA01D	1	Y
Fitted	CAP, CERM, 4.7 µF, 10 V, +/- 10%, X7R, 0805	C1	0805	MuRata	GRM21BR71A475KA73L	1	Y
Fitted	CAP, CERM, 4.7 µF, 6.3 V, +/- 10%, X5R, 0603	C19	0603	Kemet	C0603C475K9PACTU	1	Y
Fitted	Crystal, Tuning Fork, 30kHz - 200kHz, SMD	Y1	CRYSTAL-MS3V-T1R	Micro Crystal AG	MS3V-T1R	1	
Fitted	Diode, Schottky, 100V, 0.25A, SOD-323F	D1, D3, D5, D6	SOD-323F	NXP Semiconductor	BAT46WJ.115	4	Y
Fitted	Diode, TVS, Uni, 3.3V, 0.15W, SOD-923	D4	SOD-923	ON Semiconductor	ESD9R3.3ST5G	1	Y
Fitted	Ferrite Bead, 600 ohm @ 100MHz, 1.3A, 0603	L1, L2	0603	MuRata	BLM18KG601SN1D	2	Y
Fitted	Header, 50mil, 4x1, Gold, TH	J1	Preci-dip_850-xx-004-10-001101	Preci-Dip	850-10-004-10-001101	1	Y
Fitted	RES, 1.0 M, 5%, 0.063 W, 0402	R20	0402	Vishay-Dale	CRCW04021M00JNED	1	Y
Fitted	RES, 1.00 k, 0.1%, 0.1 W, 0603	R18, R19	0603	Yageo America	RT0603BRD071KL	2	Y
Fitted	RES, 10.0 k, 0.1%, 0.1 W, 0603	R11, R12	0603	Yageo America	RT0603BRD0710KL	2	Y
Fitted	RES, 10.0 ohm, 1%, 0.1W, 0603	R4	0603	Vishay-Dale	CRCW060310R0FKEA	1	Y
Fitted	RES, 100 ohm, 1%, 0.125W, 0805	R6	0805	Vishay-Dale	CRCW0805100RFKEA	1	Y
Fitted	RES, 12.4 k, 0.1%, 0.1 W, 0603	R5	0603	Susumu Co Ltd	RG1608P-1242-B-T5	1	Y
Fitted	RES, 15.8 k, 0.1%, 0.1 W, 0603	R8, R9	0603	Yageo America	RT0603BRD0715K8L	2	Y
Fitted	RES, 20.0 ohm, 1%, 0.125W, 0805	R17	0805	Vishay-Dale	CRCW080520R0FKEA	1	Y
Fitted	RES, 200 ohm, 1%, 0.125W, 0805	R1	0805	Vishay-Dale	CRCW0805200RFKEA	1	Y
Fitted	RES, 22.1 k, 0.1%, 0.1 W, 0603	R2	0603	Susumu Co Ltd	RG1608P-2212-B-T5	1	Y
Fitted	RES, 240 k, 0.1%, 0.1 W, 0603	R10	0603	Yageo America	RT0603BRD07240KL	1	Y
Fitted	RES, 25.5 k, 0.1%, 0.1 W, 0603	R7	0603	Yageo America	RT0603BRD0725K5L	1	Y
Fitted	RES, 40.2, 0.1%, 0.125 W, 0805	R16	0805	Yageo America	RT0805BRD0740R2L	1	Y
Fitted	RES, 47k ohm, 5%, 0.063W, 0402	R3	0402	Vishay-Dale	CRCW040247K0JNED	1	Y
Fitted	RES, 80.6k ohm, 0.1%, 0.125W, 0805	R13	0805	Yageo America	RT0805BRD0780K6L	1	Y
Fitted	Switch, Push Button, SMD	S1	SW_SKRKAEE010	Alps	SKRKAEE010	1	Y
Fitted	Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	J2	TERM_BLK_ED555-2DS	On-Shore Technology	ED555/2DS	1	Y
Fitted	Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	J3	TERM_BLK_ED555-2DS	On-Shore Technology	ED555/2DS	1	Y
Fitted	Test Point, Miniature, Black, TH	TP2, TP3	Keystone5001	Keystone	5001	2	Y
Fitted	Test Point, Miniature, Red, TH	TP4, TP5, TP6, TP7, TP8	Keystone5000	Keystone	5000	5	Y
Fitted	Test Point, Miniature, White, TH	TP1	Keystone5002	Keystone	5002	1	Y
Fitted	Transistor, NPN, 60 V, 1.5 A, SOT-223	Q1	SOT-223	Fairchild Semiconductor	BCP55	1	Y
Fitted	TVS DIODE 33.3VWM 69.7VC SMB	D2	SMB	STMicroelectronics	SM6T39CA	1	Y
Not Fitted	CAP, CERM, 1 µF, 6.3 V, +/- 10%, X7R, 0603	C21	0603	MuRata	GRM188R70J105KA01D	0	Y
Not Fitted	CAP, CERM, 1µF, 50V, +/-10%, X7R, 0805	C17	0805_HV	AVX	08055C105KAT2A	0	Y
Not Fitted	RES, 4.99 k, 1%, 0.063 W, 0402	R14, R15	0402	Vishay-Dale	CRCW04024K99FKED	0	Y

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.