## BILL OF MATERIALS TIDA-00165

TI Designs#

Fitted	Description	Designator	Footprint	Manufacturer	PartNumber	Quantity	RoHS
Fitted	Printed Circuit Board	!PCB1		Any	TIDA-00165	1	0
Fitted	CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402	C1, C7, C13, C19	0402	TDK	C1005X5R0J104K	4	Υ
Fitted	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	C2, C18	1210	MuRata	GRM32ER71H106KA12L	2	Υ
Fitted	CAP, CERM, 0.01uF, 100V, +/-10%, X7R, 0603	C3, C6	0603	TDK	C1608X7R2A103K	2	Υ
Fitted	CAP, CERM, 0.47uF, 6.3V, +/-10%, X5R, 0402	C4	0402	MuRata	GRM155R60J474KE19D	1	Υ
Fitted	CAP, CERM, 2200pF, 6.3V, +/-10%, X7R, 0402	C5	0402	MuRata	GRM155R70J222KA01D	1	Υ
Fitted	CAP, CERM, 2700pF, 100V, +/-10%, X7R, 0402	C8, C11	0402S	MuRata	GRM155R72A272KA01D	2	Υ
Fitted	CAP, CERM, 0.027uF, 100V, +/-10%, X7R, 0603	C9	0603S	Kemet	C0603C273K1RACTU	1	Υ
Fitted	CAP, CERM, 1000pF, 6.3V, +/-10%, X5R, 0402	C10	0402	MuRata	GRM155R60J102KA01D	1	Υ
Fitted	CAP, CERM, 4.7uF, 6.3V, +/-20%, X5R, 0402	C12	0402	TDK	C1005X5R0J475M050BC	1	Υ
Fitted	CAP, CERM, 0.22uF, 6.3V, +/-10%, X5R, 0402	C14, C16, C25	0402	MuRata	GRM155R60J224KE01D	3	Υ
Fitted	CAP, CERM, 0.01uF, 6.3V, +/-10%, X7R, 0402	C15	0402	MuRata	GRM155R70J103KA01D	1	Υ
Fitted	CAP, CERM, 10uF, 6.3V, +/-10%, X7R, 0805	C17	0805_HV	MuRata	GRM21BR70J106KE76L	1	Υ
Fitted	CAP, CERM, 6800pF, 25V, +/-10%, X7R, 0402	C20	0402	MuRata	GRM155R71E682KA01D	1	Υ
Fitted	CAP, CERM, 1800pF, 100V, +/-10%, X7R, 0402	C21, C24	0402S	MuRata	GRM155R72A182KA01D	2	Υ
Fitted	CAP, CERM, 0.018uF, 100V, +/-10%, X7R, 0603	C22	0603S	Kemet	C0603C183K1RACTU	1	Υ
Fitted	CAP, CERM, 0.39uF, 10V, +/-10%, X5R, 0402	C23	0402	MuRata	GRM155R61A394KE15D	1	Υ
Fitted	Diode, Schottky, 40V, 0.35A, SOD-523	D1, D4	SOD-523	Diodes Inc.	ZHCS350TA	2	Υ
Fitted	DIODE SCHOTTKY 100V 0.2A SOD523	D2, D6	SOD-523	ST Microelectronics	BAT41KFILM	2	Υ
Fitted	Diode, Zener, 3.9V, 500mW, SOD-123	D3	SOD-123	ON Semiconductor	MMSZ4686T1G	1	Y
Fitted	TVS DIODE 33.3VWM 69.7VC SMB	D5	SMB	STMicroelectronics	SM6T39CA	1	Υ
Fitted	Connector, Receptacle, 100mil, 2x1, Gold plated, TH	J1	CONN_534206-1	TE Connectivity	5-534206-1	1	Υ
Fitted	Header, 4x1, 50mil, R/A, TH	J2	Mill-Max_850-10-004-20-001000	Mill-Max	850-10-004-20-001000	1	Υ
Fitted	Header, 4x1, 50mil, R/A, SMT	J3	Mill-max_850-10-004-40-001000	Mill-Max	850-10-004-40-001000	1	Y
Fitted	0.25A Ferrite Bead, 1000 ohm @ 100MHz, SMD	L1, L2	0402	MuRata	BLM15HG102SN1D	2	Y
Fitted	Transistor, NPN, 40V, 0.2A, SOT-23	Q1	SOT-23	Fairchild Semiconductor	MMBT3904	1	Y
Fitted	RES, 100 ohm, 0.5%, 0.1W, 0603	R2	0603	Yageo America	RT0603DRE07100RL	1	Y
Fitted	RES, 300 ohm, 0.1%, 0.1W, 0603	R3	0603S	Susumu Co Ltd	RG1608P-301-B-T5	1	Y
Fitted	RES, 47k ohm, 5%, 0.063W, 0402	R4	0402	Vishay-Dale	CRCW040247K0JNED	1	Y
Fitted	RES, 4.12k ohm, 0.1%, 0.1W, 0603	R5, R13, R16, R19	0603S	Susumu Co Ltd	RG1608P-4121-B-T5	4	Y
Fitted	RES, 47 ohm, 5%, 0.063W, 0402	R6, R8, R11	0402	Vishay-Dale	CRCW040247R0JNED	3	Y
Fitted	TRIMMER 500 OHM 0.125W SMD	R7	Bourns_3223W	Bourns	3223W-1-501E	1	Y
Fitted	RES, 100k ohm, 5%, 0.063W, 0402	R9, R12	0402	Vishay-Dale	CRCW0402100KJNED	2	Y
Fitted	RES, 0 ohm, 5%, 0.063W, 0402	R10	0402	Vishay-Dale	CRCW04020000Z0ED	1	Y
Fitted	RES, 22.1k ohm, 1%, 0.063W, 0402	R14	0402	Vishay-Dale	CRCW040222K1FKED	1	Y
Fitted	RES, 20.0 ohm, 1%, 0.063W, 0402	R15	0402	Vishay-Dale	CRCW040220R0FKED	1	Y
Fitted	RES, 3.24k ohm, 0.1%, 0.333W, 1206	R17	1206L	TT Electronics/IRC	PFC-W1206R-12-3241-B	1	Y
Fitted	RES, 12.4k ohm, 1%, 0.063W, 0402	R18	0402	Vishay-Dale	CRCW040212K4FKED	1	Y
Fitted	Switch, Slide, SPDT 100mA, SMT	S1	SW_CAS-120TA	Copal Electronics	CAS-120TA	1	Y
Fitted	Switch, Push Button, SMD	\$2	SW_SKRKAEE010	Alps	SKRKAEE010	1	Y
. 11.00	Low-Power, Low-Noise, 24-Bit Analog-to-Digital Converter		S.IORRIGINEEOTO	r	5.346422010	<u> </u>	<del></del>
Fitted	for Small Signal Sensors, RVA0016A	U1	RVA0016A	Texas Instruments	ADS1220IRVA	1	Υ
Fitted	16-bit SPI Programmable DAC for 4-20mA Loops, RGH0016A	U2	RGH0016A	Texas Instruments	DAC161S997RGH	1	Υ
Fitted	60-V, 5-μA IQ, 100-mA, Low-Dropout Voltage Regulator with Enable and Power-Good, DRB0008A	U3	DRB0008A	Texas Instruments	TPS7A1601DRB	1	Υ
Fitted	24 MHz Mixed Signal Microcontroller, 1024 B SRAM and 17 GPIOs, -40 to 85 degC, RGE0024G	U4	RGE0024G	Texas Instruments	MSP430FR5738IRGE	1	Υ
Not Fitted	RES, 0 ohm, 5%, 0.063W, 0402	R1	0402	Vishay-Dale	CRCW04020000Z0ED	0	Υ

## 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, 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.