

TI Designs#

Bill Of Materials
 TIDA-00130

Fitted	Description	Designator	Manufacturer	PartNumber	Quantity	RoHS	PackageReference
Fitted	Printed Circuit Board	PCB1	Any	TIDA-00130	1	O	
Fitted	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	C1, C2, C10, C11, C15, C16, C20, C22, C23, C26, C30, C32, C34, C37, C38	AVX	06033C104JAT2A	15	Y	0603
Fitted	CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	C3, C12, C21	Yageo America	CC1206KKX7RCBB102	3	Y	1206
Fitted	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	C4, C7	TDK	C1608X7R1C105K	2	Y	0603
Fitted	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	C5, C8, C29	Kemet	C0603C104K5RACU	3	Y	0603
Fitted	CAP, TA, 4.7uF, 35V, +/-10%, 1.9 ohm, SMD	C6	Vishay-Sprague	293D475X9035C2TE3	1	Y	6032-28
Fitted	CAP, CERM, 22uF, 16V, +/-10%, X5R, 1206	C9	MuRata	GRM31CR61C226KE15L	1	Y	1206
Fitted	CAP, TA, 47uF, 35V, +/-10%, 0.3 ohm, SMD	C13, C31	Kemet	T495X476K035ATE300	2	Y	7343-43
Fitted	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1206	C14	MuRata	GRM31CR72A105KA01L	1	Y	1206
Fitted	CAP, CERM, 0.01uF, 25V, +/-5%, COG/NP0, 0603	C17, C27, C33, C35, C36, C43, C44	TDK	C1608COG1E10J3	7	Y	0603
Fitted	CAP, CERM, 3300pF, 50V, +/-10%, X7R, 0603	C18	Kemet	C0603C332K5RACU	1	Y	0603
Fitted	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603	C19	TDK	C1608X5R1E105K080AC	1	Y	0603
Fitted	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 0805	C24	Kemet	C0805C104K1RACU	1	Y	0805
Fitted	CAP, CERM, 22uF, 16V, +/-20%, X5R, 1206	C25	AVX	1206YD226MAT2A	1	Y	1206
Fitted	CAP, AL, 100uF, 100V, +/-20%, 0.12 ohm, TH	C28	Rubycon	100YXJ100M10X20	1	Y	10x20mm
Fitted	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	C39, C40, C41, C42	AVX	06033C101KAT2A	4	Y	0603
Fitted	Diode, TVS 15V 1500W BIDIR 5% SMC	D1, D3, D5	Littelfuse Inc	SMCJ15CA	3	Y	SMC
Fitted	LED SmartLED Green 570NM	D2	OSRAM	LG L29K-G2J1-24-Z	1		0603
Fitted	Diode, Zener, 5.1V, 5W, SMB	D4	Micro Commercial Components	SMBJ5338B-TP	1	Y	SMB
Fitted	Diode, Schottky, 20V, 1A, SMA	D6	Diodes Inc.	B120-13-F	1	Y	SMA
Fitted	Diode, Zener, 39V, 1W, DO41	D7	Micro Commercial Co	1N4754A-TP	1		DO-41
Fitted	Diode, Zener, 16V, 1W, DO41	D8	Micro Commercial Co	1N4745A-TP	1		DO-41
Fitted	Diode, P-N, 1000V, 1A, TH	D9, D10, D11	Fairchild Semiconductor	1N4007	3	Y	DO-41
Fitted	Diode, Switching, 200V, 0.2A, SOT-23	D12	Diodes Inc.	BAS21-7-F	1	Y	SOT-23
Fitted	FERRITE CHIP 1000 OHM 300MA 0603	FB1	TDK Corporation	MMZ1608B102C	1	Y	0603
Fitted	Fiducial mark. There is nothing to buy or mount.	FID1, FID2, FID3, FID4, FID5, FID6	N/A	N/A	6		Fiducial
Fitted	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	H1, H2, H3, H4	B&F Fastener Supply	NY PMS 440 0025 PH	4	Y	Screw
Fitted	Standoff, Hex, 0.5"L #4-40 Nylon	H5, H6, H8, H9	Keystone	1902C	4	Y	Standoff
Fitted	Mountin hole, NPTH Drill 3.2mm	H7			1		
Fitted	HEATSINK TO-220 W/PINS 1.5" TALL	HS1	Aavid Thermalloy	513102B02500G	1		1.500x1.375in.
Fitted	Header, Male 2x10-pin, 100mil spacing	J1, J11	Sullins	PEC10DAAN	2		0.100 inch x 10 x 2
Fitted	TERMINAL BLOCK 5.08MM VERT 2POS, TH	J3, J6, J12, J16, J17, J18, J19	On-Shore Technology	ED120/2DS	7	Y	TERM_BLK, 2pos, 5.08mm
Fitted	Header, Male 2-pin, 100mil spacing,	J4, J5, J7, J8, J9, J10, J13, J14, J15, J21, J22	Sullins	PEC02SAAN	11		0.100 inch x 2
Fitted	Terminal Block, 3-pin, 15-A, 5.1mm	J20	OST	ED120V3DS	1		0.60 x 0.35 inch
Fitted	Inductor, Common Mode Filter SMD	L1	TDK	ACM2012-900-2P-T002	1		2.00mm x 1.20mm
Fitted	Inductor, 220uH, 30A SMD	L2	Bourns	SRR7032-221M	1	Y	7x7mm
Fitted	Inductor, Chip, 3.3uH 770MA 1210 10%	L3	EPCOS Inc	B82422H1332K	1		1210
Fitted	1.5A Ferrite Bead, 330 ohm @ 100MHz, SMD	L4	MuRata	BLM18SG331T1N1D	1	Y	0603
Fitted	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	LBL1	Brady	THT-14-423-10	1	Y	PCB Label 0.650" W x 0.200" W
Fitted	MOSFET, N-CH, 30V, 22A, SON 2X2 MM	O1	TEXAS INSTRUMENTS	CSD17571Q2	1	Y	DOK
Fitted	MOSFET, N-CH, 60V, 50A, TO-220AB	O5	Texas Instruments	CSD18537NKC5	1	Y	TO-220AB
Fitted	RES, 100 ohm, 1%, 0.1W, 0603	R1, R33, R41, R68	Vishay-Dale	CRCW0603100RFK5EA	4	Y	0603
Fitted	RES, 470 ohm, 1%, 0.125W, 0805	R3, R10	Vishay-Dale	CRCW0805470RFK5EA	2	Y	0805
Fitted	RES, 300 ohm, 5%, 0.1W, 0603	R4, R37	Vishay-Dale	CRCW0603300RJNEA	2	Y	0603
Fitted	RES, 10k ohm, 5%, 0.1W, 0603	R5, R6, R8	Vishay-Dale	CRCW060310K0JNEA	3	Y	0603
Fitted	RES, 120 ohm, 5%, 0.125W, 0805	R7	Vishay-Dale	CRCW0805120RJNEA	1	Y	0805
Fitted	RES, 10.0 ohm, 1%, 0.1W, 0603	R9	Vishay-Dale	CRCW060310R0FK5EA	1	Y	0603
Fitted	RES, 200 ohm, 1%, 0.1W, 0603	R11	Vishay-Dale	CRCW0603200RFK5EA	1	Y	0603
Fitted	RES, 63.4k ohm, 1%, 0.1W, 0603	R12	Vishay-Dale	CRCW060363K4FK5EA	1	Y	0603
Fitted	RES, 121k ohm, 0.1%, 0.125W, 0805	R13	Yageo America	RT0805BRD07121KL	1	Y	0805
Fitted	RES, 10.0k ohm, 1%, 0.1W, 0603	R14, R22, R28	Vishay-Dale	CRCW060310K0FK5EA	3	Y	0603
Fitted	RES, 1.00k ohm, 1%, 0.1W, 0603	R15	Yageo America	RC0603FR-071KL	1	Y	0603
Fitted	RES, 9.76k ohm, 1%, 0.1W, 0603	R16	Vishay-Dale	CRCW06039K76FK5EA	1	Y	0603
Fitted	RES, 53.6k ohm, 0.1%, 0.125W, 0805	R17	Susumu Co Ltd	RG2012P-5362-B-T5	1	Y	0805
Fitted	RES, 100k ohm, 1%, 0.1W, 0603	R18, R31	Vishay-Dale	CRCW0603100KFKEA	2	Y	0603
Fitted	RES, 21.5k ohm, 1%, 0.1W, 0603	R19	Vishay-Dale	CRCW060321K5FK5EA	1	Y	0603
Fitted	RES, 30k ohm, 5%, 0.1W, 0603	R20, R52	Vishay-Dale	CRCW060330K0JNEA	2	Y	0603
Fitted	RES, 280k ohm, 1%, 0.1W, 0603	R21	Vishay-Dale	CRCW0603280KFKEA	1	Y	0603
Fitted	RES, 10 ohm, 5%, 0.1W, 0603	R23, R27, R61, R62	Vishay-Dale	CRCW060310R0JNEA	4	Y	0603
Fitted	RES, 0 ohm, 5%, 0.1W, 0603	R24, R26, R32, R63, R64, R65	Vishay-Dale	CRCW0603000020EA	6	Y	0603
Fitted	RES, 10.0k ohm, 1%, 0.25W, 1206	R25, R29, R34	Vishay-Dale	CRCW120610K0FK5EA	3	Y	1206
Fitted	RES, 43.2k ohm, 1%, 0.1W, 0603	R30	Vishay-Dale	CRCW060343K2FK5EA	1	Y	0603
Fitted	RES, 1.00Meg ohm, 1%, 0.1W, 0603	R35	Vishay-Dale	CRCW06031M00FK5EA	1	Y	0603
Fitted	RES, 10k ohm, 0.01%, 0.063W, 0603	R36, R51	Stackpole Electronics Inc	RNCF0603TKY10K0	2	Y	0603
Fitted	RES, 1.0k ohm, 5%, 0.1W, 0603	R42, R43, R44, R70	Vishay-Dale	CRCW06031K00JNEA	4	Y	0603
Fitted	RES, 1.00k ohm, 1%, 0.25W, 1206	R45, R46	Vishay-Dale	CRCW12061K00FK5EA	2	Y	1206
Fitted	RES, 510 ohm, 0.1%, 0.1W, 0603	R47	Susumu Co Ltd	RG1608P-511-B-T5	1	Y	0603
Fitted	RES, 22 ohm, 5%, 0.25W, 1206	R53, R54, R55, R56, R57, R58, R59, R60	Vishay-Dale	CRCW120622R0JNEA	8	Y	1206
Fitted	RES, 47k ohm, 5%, 0.125W, 0805	R66	Panasonic	ERJ-6GEYJ473V	1	Y	0805
Fitted	RES, 470 ohm, 5%, 0.1W, 0603	R69	Vishay-Dale	CRCW0603470RJNEA	1	Y	0603
Fitted	Transformer 475uH SMD	T1	Würth Electronics Midcom	760390015	1	Y	10.05mm L x 6.73mm W

Fitted	Test Point, 0.040 Hole	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40	STD	STD	40		
Fitted	2.7V, 15.6mV/C, Temperature Sensor, 3-pin SOT-23	U1	National Semiconductor	LM62BIM3	1	N	MF03A
Fitted	IC, ISOLATED RS-485 PROFIBUS TRANSCEIVER	U2	TI	ISO1176DW	1		SO-16
Fitted	IC, 300-mA 40-V LOW-DROPOUT REGULATOR WITH 25-uA QUIESCENT CURRENT	U3	TI	TPS7A6533QKVURQ1	1		PFM
Fitted	100V, 600mA Constant On-Time Synchronous Buck Regulator, DDA0008B	U4	Texas Instruments	LM5017MRE/NOPB	1	Y	DDA0008B
Fitted	IC, DC-DC Converter	U5	TI	TPS55010RTE	1		QFN-16
Fitted	Zero-Drift Programmable Gain Amplifier with MUX	U6	Texas Instruments	PGA11xAIPW	1	Y	TSSOP-20 PW
Fitted	IC, Dual Differential Comparators, 2-36 Vin	U7	TI	LM293AD	1		SO-8
Fitted	IC, Micropower Shunt Voltage Reference 100 ppm/C, 45uA-12mA, Adjustable	U8	TI	LM4041BIDBZ	1		SOT23
Not Fitted	Header, Male 3-pin, 100mil spacing,	J2	Sullins	PEC03SAAN	0		0.100 inch x 3
Not Fitted	MOSFET, N-CH, 30V, 22A, SON 2X2 MM	Q2, Q3, Q4	TEXAS INSTRUMENTS	CSD17571Q2	0	Y	DQK
Not Fitted	RES, 1.00k ohm, 1%, 0.125W, 0805	R2	Vishay-Dale	CRCW08051K00FKEA	0	Y	0805
Not Fitted	RES, 300 ohm, 5%, 0.1W, 0603	R38, R39, R40	Vishay-Dale	CRCW0603300RJNEA	0	Y	0603
Not Fitted	RES, 22 ohm, 5%, 0.25W, 1206	R48, R49, R50	Vishay-Dale	CRCW120622R0JNEA	0	Y	1206
Not Fitted	RES, 0 ohm, 5%, 0.1W, 0603	R67, R71	Vishay-Dale	CRCW06030000Z0EA	0	Y	0603

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.