

TIDA-00777 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		TIDA-00777	Any	Printed Circuit Board	
C1, C3, C5, C8,	14	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 μF, 25 V, +/- 5%, X7R, 0603	0603
C11, C13, C16,						
C18, C25, C28,						
C29, C30, C35,						
C37						
C6, C14, C31,	7	100pF	06035A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C32, C33, C34,						
C36						
C7	1	0.15uF	B32529C154J289	TDK	CAP, FILM, 0.15uF, 63VDC, 5%, RADIAL-2P	
C9, C15, C17,	5	1uF	GRM21BR71H105KA12L	MuRata	CAP, CERM, 1 μF, 50 V, +/- 10%, X7R, 0805	0805
C22, C23						
C10	1	0.1uF	R82DC3100DQ50J	Kemet	CAP, Film, 0.1 μF, 63 V, +/- 5%, TH	7.2x2.5x6.5mm
C19, C20, C21	3	10uF	12103C106KAT2A	AVX	CAP, CERM, 10 μF, 25 V, +/- 10%, X7R, 1210	1210
C24, C26, C27	3	10uF	293D106X9025C2TE3	Vishay-Sprague	CAP, TA, 10 μF, 25 V, +/- 10%, 1.5 ohm, SMD	6032-28
D1, D4	2	2.7V	MMSZ5223B-7-F	Diodes Inc.	Diode, Zener, 2.7 V, 500 mW, SOD-123	SOD-123
D2	1	5.6V	MMSZ5232B-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
D3	1	20V	MBR0520LT1G	ON Semiconductor	Diode, Schottky, 20 V, 0.5 A, SOD-123	SOD-123
D5	1	Green	LG L29K-G2J1-24-Z	OSRAM	LED, Green, SMD	1.7x0.65x0.8mm
FID4, FID5, FID6	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1, J2, J4, J6	4		282834-2	TE Connectivity	Terminal Block, 2x1, 2.54mm, TH	Terminal Block, 2x1, 2.54mm, TH
J3, J7, J8	3		HTSW-103-07-G-S	Samtec	Header, 100mil, 3x1, Gold, TH	Header, 100mil, 3x1, TH
J5	1		282834-5	TE Connectivity	Terminal Block, 2.54mm, 5 Pos, Tin, Green, R/A, TH	Terminal Block,
						2.54mm, 5 Pos, R/A,
						TH
L1, L2	2	1000 ohm	MMZ1608B102CTA00	TDK	Ferrite Bead, 1000 ohm @ 100 MHz, 0.3 A, 0603	0603
R1, R4, R7, R12	4	100k	RG1608P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.1 W, 0603	0603
R2, R3, R13, R17,	11	0	RC0603JR-070RL	Yageo America	RES, 0, 5%, 0.1 W, 0603	0603
R18, R24, R28,						
R43, R47, R53,						
R54						
R5	1	150k	RG1608P-154-B-T5	Susumu Co Ltd	RES, 150 k, 0.1%, 0.1 W, 0603	0603
R6	1	680k	CPF0603B680KE1		RES SMD 680K OHM 0.1% 1/16W 0603	0603
R9	1	10.5k	RG1608P-1052-B-T5	Susumu Co Ltd	RES, 10.5 k, 0.1%, 0.1 W, 0603	0603
R10	1	11.3k	RG1608P-1132-B-T5	Susumu Co Ltd	RES, 11.3 k, 0.1%, 0.1 W, 0603	0603
R11	1	20.5k	RP73PF1J20K5BTDF		RES SMD 20.5K OHM 0.1% 1/6W 0603	0603
R14	1	100	RG1608P-101-B-T5	Susumu Co Ltd	RES, 100, 0.1%, 0.1 W, 0603	0603
R15, R22, R26	3	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R19	1	137k	ERA-3AEB1373V		RES SMD 137K OHM 0.1% 1/10W 0603	0603
R20	1	150k	CRCW0603150KFKEA RC0603FR-0730K9L	Vishay-Dale	RES, 150 k, 1%, 0.1 W, 0603	0603 0603
R21	1	30.9k		Yageo America	RES, 30.9 k, 1%, 0.1 W, 0603	
R25 R27	1	11.0k	CRCW060311K0FKEA RG1608P-1022-B-T5	Vishay-Dale	RES, 11.0 k, 1%, 0.1 W, 0603 RES, 10.2 k, 0.1%, 0.1 W, 0603	0603
	1	10.2k	RC0603FR-07510RL	Susumu Co Ltd		0603 0603
R31 R36	1	510		Yageo America	RES, 510, 1%, 0.1 W, 0603	0603
1730	1	2.55k	CRCW06032K55FKEA	Vishay-Dale	RES, 2.55 k, 1%, 0.1 W, 0603	U0U3

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R40	1	20.0k	RC0603FR-0720KL	Yageo America	RES, 20.0 k, 1%, 0.1 W, 0603	0603
R41	1	20.5k	RC0603FR-0720K5L	Yageo America	RES, 20.5 k, 1%, 0.1 W, 0603	0603
R45, R46, R50,	4	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, 0603	0603
R51				·		
SH-J1, SH-J2, SH-	3		881545-2	TE Connectivity	Shunt, 100mil, Gold plated, Black	Shunt 2 pos. 100 mil
J3						
TP1, TP2, TP3,	13		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature
TP4, TP5, TP6,						Testpoint
TP7, TP8, TP9,						·
TP10, TP11,						
TP13, TP14						
U1, U3, U9	3		OPA188AIDBVR	Texas Instruments	Precision, Low-Noise, Rail-to-Rail Output, 36 V, Zero-Drift Operational	DBV0005A
					Amplifiers, DBV0005A	
U2, U4	2		OPA2188AID	Texas Instruments	0.03 uV/degC, 6 uV Vos, Low Noise, Rail-to-Rail Output, Zero-Drift	D0008A
					Operational Amplifier, 4 to 36 V, -40 to 105 degC, 8-pin SOIC (D0008A),	
					Green (RoHS & no Sb/Br)	
U5	1		LM4040AIM3-2.5/NOPB	Texas Instruments	Precision Micropower Shunt Voltage Reference, 3-pin SOT-23, Pb-Free	MF03A
U6	1		TPS72325DBVT	Texas Instruments	Single Output High PSRR LDO, 200 mA, Fixed -2.5 V Output, -10 to -2.7 V	DBV0005A
					Input, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
U7	1		TPS60403DBVR	Texas Instruments	-1.8 to -5.25 V, Inverting Charge Pump Regulator, 60 mA, 1.8 to 5.25 V	DBV0005A
					Input with 2-Cell Alkaline / Nixx Input, -40 to 85 degC, 5-pin SOT23	
					(DBV5), Green (RoHS & no Sb/Br)	
U8	1		LP2951ACSD/NOPB	Texas Instruments	Series of Adjustable Micropower Voltage Regulators, 8-pin LLP, Pb-Free	SDC08A
					, , , , , , , , , , , , , , , , , , ,	
C2, C4, C12, C38	0	100pF	06035A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
FID1, FID2, FID3	0	,	N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
LBL1	0		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x
				ĺ	,	0.200"W
R16, R34, R39	0	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, 0603	0603
R29	0	18.0k	CRCW060318K0FKEA	Vishay	RES, 18.0 k, 1%, 0.1 W, 0603	0603
R30, R33, R49	0	0	RC0603JR-070RL	Yageo America	RES, 0, 5%, 0.1 W, 0603	0603
R32, R37	0	300k	CRCW0603300KFKEA	Vishay-Dale	RES, 300 k, 1%, 0.1 W, 0603	0603
R38	0	10.0k	RC0603FR-0710KL	Yageo America	RES, 10.0 k, 1%, 0.1 W, 0603	0603

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ('TI") reference designs are solely intended to assist designers ("Designer(s)") who are developing systems that incorporate TI products. TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.

Tl's provision of reference designs and any other technical, applications or design advice, quality characterization, reliability data or other information or services does not expand or otherwise alter Tl's applicable published warranties or warranty disclaimers for Tl products, and no additional obligations or liabilities arise from Tl providing such reference designs or other items.

TI reserves the right to make corrections, enhancements, improvements and other changes to its reference designs and other items.

Designer understands and agrees that Designer remains responsible for using its independent analysis, evaluation and judgment in designing Designer's systems and products, and has full and exclusive responsibility to assure the safety of its products and compliance of its products (and of all TI products used in or for such Designer's products) with all applicable regulations, laws and other applicable requirements. Designer represents that, with respect to its applications, it has all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. Designer agrees that prior to using or distributing any systems that include TI products, Designer will thoroughly test such systems and the functionality of such TI products as used in such systems. Designer may not use any TI products in life-critical medical equipment unless authorized officers of the parties have executed a special contract specifically governing such use. Life-critical medical equipment is medical equipment where failure of such equipment would cause serious bodily injury or death (e.g., life support, pacemakers, defibrillators, heart pumps, neurostimulators, and implantables). Such equipment includes, without limitation, all medical devices identified by the U.S. Food and Drug Administration as Class III devices and equivalent classifications outside the U.S.

Designers are authorized to use, copy and modify any individual TI reference design only in connection with the development of end products that include the TI product(s) identified in that reference design. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY 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 products 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 the reference design or other items described above 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 AND OTHER ITEMS DESCRIBED ABOVE ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY DESIGNERS AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS AS DESCRIBED IN A TI REFERENCE DESIGN OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Tl's standard terms of sale for semiconductor products (http://www.ti.com/sc/docs/stdterms.htm) apply to the sale of packaged integrated circuit products. Additional terms may apply to the use or sale of other types of TI products and services.

Designer will fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of Designer's non-compliance with the terms and provisions of this Notice.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265 Copyright © 2016, Texas Instruments Incorporated