

TIDA-00835 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C16, C35, C36, C40, C41, C56, C59, C64, C69, C76, C77, C101, C115, C130	15	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603
C2, C17, C81	3	10uF	GMK316AB7106KL	Taiyo Yuden	CAP, CERM, 10uF, 35V, +/-10%, X7R, 1206	1206
C3, C20, C114	3	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603
C4, C21	2	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805
C5, C9, C11, C18, C22, C24, C95, C97, C99, C116, C117	11	0.01uF	06031C103KAT2A	AVX	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7R, 0603	0603
C6, C7, C10, C12, C14, C15, C19, C23, C25, C26, C29, C30, C87, C88, C90, C91, C93, C94, C96, C98	20	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603
C31	1	0.1uF	C0603C104K4RACTU	Kemet	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0603	0603
C32, C82	2	0.01uF	GCM155R71H103KA55D	MuRata	CAP, CERM, 0.01uF, 50V, +/-10%, C0G/NP0, 0402	0402
C33, C83	2	1000pF	GRM155R61E102KA01D	MuRata	CAP, CERM, 1000pF, 25V, +/-10%, X5R, 0402	0402
C34, C84	2	100pF	CC0402KRX7R9BB101	Yageo America	CAP, CERM, 100pF, 50V, +/-10%, X7R, 0402	0402
C37, C38, C42, C43	4	1uF	GRM188R71C105KA12D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603
C39, C44	2	330pF	08055A331KAT2A	AVX	CAP, CERM, 330 pF, 50 V, +/- 10%, C0G/NP0, 0805	0805
C45, C49, C50, C52, C80, C85	6	10uF	GMK325AB7106MM-T	Taiyo Yuden	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	1210
C46, C48, C51, C53, C79, C86	6	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C47, C78	2	4.7uF	GRM21BR61H475KE51L	TDK	4.7uF ±10% 50V X5R Ceramic Capacitor -55°C ~ 85°C	0805
C54, C55, C62, C63, C65, C66, C70, C71, C72, C73	10	100pF	06033C101KAT2A	AVX	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603
C57, C58, C67, C68, C74, C75, C102, C103, C104, C107, C108, C109, C110, C111, C112, C113	16	100pF	06033C101KAT2A	AVX	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	0603
C60, C61	2	1000pF	C1608C0G1H102J	TDK	CAP, CERM, 1000pF, 50V, +/-5%, C0G/NP0, 0603	0603
C89, C92, C100, C105, C106	5	1000pF	06031C102JAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 5%, X7R, 0603	0603
C118, C120	2	1uF	GRM188R61E105KA12D	MuRata	CAP, CERM, 1 uF, 25 V, +/- 10%, X5R, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C119, C121	2	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C122, C123, C124, C125, C126, C127, C128, C129	8	47pF	CC0805JRNPO9BN470	Yageo America	CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
C131, C133	2	1uF	CL21B105KPFNNE	Samsung Electro-Mechanics	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0805	0805
C132, C134	2	0.1uF	C0603C104K5RECAUTO	Kemet	CAP, CERM, 0.1µF ±10% 50V Ceramic Capacitor X7R 0603	0603
D1, D2, D3, D4, D5, D6, D7, D8	8	DESD1P0R FW-7	DESD1P0RFB-7	Diodes Inc	Diode, P-N, 70V, 0.2A, SOT-323	SOT-323
D9, D12	2	20V	B0520LW-7-F	Diodes Inc	Diode, Schottky, 20V, 0.5A, SOD-123	SOD-123
D10, D15	2	5.6V	MMSZ5232B-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
D11, D16	2	Green	LG L29K-G2J1-24-Z	OSRAM	LED SmartLED Green 570NM	0603
D17	1	3.6V	MMSZ4685T1G	ON Semiconductor	Diode, Zener, 3.6 V, 500 mW, SOD-123	SOD-123
D18, D19	2	3V	MMSZ4683T1G	ON Semiconductor	Diode, Zener, 3 V, 500 mW, SOD-123	SOD-123
D20	1	20V	MBR0520LT1G	ON Semiconductor	Diode, Schottky, 20 V, 0.5 A, SOD-123	SOD-123
D21, D22, D23, D24, D25, D26, D27	7	3.3V	PESD3V3L1BA	NXP Semiconductor	DIODE, TVS, BIDIRECTIONAL, 3.3VWVM, 26VC, SOD323	SOD323
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	2		61301021121	Würth Elektronik	Header, 2.54 mm, 5x2, Gold, TH	Header, 2.54mm, 5x2, TH
J3, J4, J5, J6, J13	5		ED120/2DS	On-Shore Technology	TERMINAL BLOCK 5.08MM VERT 2POS, TH	TERM_BLK, 2pos, 5.08mm
J7, J8, J9, J10, J15	5		OSTVN02A150	On Shore Technology Inc	Terminal Block, 4x1, 2.54mm, TH	TERM_BLK, 2pos, 2.54mm
J11, J12, J14	3		5-146280-3	TE Connectivity	Header, 2.54mm, 3x1, Gold, TH	Header, 2.54mm, 3x1, TH
JP1, JP2, JP3, JP4, JP5, JP6, JP7, JP8, JP9	9		5-146280-2	TE Connectivity	Header, 100mil, 2x1, Gold, TH	2x1 Header
L1, L2, L3, L4, L5	5	1000 ohm	MMZ1608B102CTA00	TDK	Ferrite Bead, 1000 ohm @ 100 MHz, 0.3 A, 0603	0603
R1, R2, R3, R4, R8, R14, R15, R16, R17, R18, R19, R24, R25, R26, R27, R31, R37, R38, R39, R40, R41, R42, R43, R118, R121, R143, R144, R145, R146, R147, R148, R149, R150	33	0	RC0603JR-070RL	Yageo America	RES, 0, 5%, 0.1 W, 0603	0603
R5, R10, R11, R28, R33, R34	6	510	RC0603FR-07510RL	Yageo America	RES, 510, 1%, 0.1 W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R12, R13, R35, R36, R45, R46, R75, R77, R92, R93, R104, R105, R122, R123, R127, R128, R164, R168, R169, R172, R173	21	10k	CRCW060310K0FKEA	Stackpole Electronics Inc	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R20, R59, R70, R139, R153, R156, R183	7	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.125W, 0805	0805
R21, R44, R186, R187	4	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R47, R48, R49, R72, R134, R182, R188, R189, R191	9	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R50, R65	2	160k	CRCW0603160KFKEA	Vishay-Dale	RES, 160 k, 1%, 0.1 W, 0603	0603
R51, R52, R53, R61, R62, R63	6	332k	ERJ-8ENF3323V	Panasonic	RES, 332 k, 1%, 0.25 W, 1206	1206
R54, R60, R64, R71	4	12.0	RC0603FR-0712RL	Yageo America	RES, 12.0, 1%, 0.1 W, 0603	0603
R55, R67, R180, R181	4	649	CRCW0603649RFKEA	Vishay-Dale	RES, 649, 1%, 0.1 W, 0603	0603
R73, R135	2	3.9k	CRCW06033K90JNEA	Vishay-Dale	RES, 3.9k ohm, 5%, 0.1W, 0603	0603
R74, R76, R78, R80, R84, R87	6	330k	RC1206FR-07330KL	Yageo America	RES, 330 k, 1%, 0.25 W, 1206	1206
R79, R82, R85, R86, R94, R95, R98, R99, R110, R112, R114, R115	12	8.20k	RC0603FR-078K2L	Yageo America	RES, 8.20 k, 1%, 0.1 W, 0603	0603
R81, R83, R96, R97, R111, R113, R136, R137, R138, R158, R159, R160	12	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.1W, 0603	0603
R89, R91	2	3.30k	RC0603FR-073K3L	Yageo America	RES, 3.30 k, 1%, 0.1 W, 0603	0603
R100, R101, R102, R103, R106, R107, R108, R109	8	39.0	RC0603FR-0739RL	Yageo America	RES, 39.0, 1%, 0.1 W, 0603	0603
R116, R117	2	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, 0603	0603
R119, R120	2	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00Meg ohm, 1%, 0.1W, 0603	0603
R124, R125	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R130, R131	2	14.0k	CRCW060314K0FKEA	Vishay-Dale	RES, 14.0 k, 1%, 0.1 W, 0603	0603
R132, R133	2	9.10k	RC1206FR-079K1L	Yageo America	RES, 9.10 k, 1%, 0.25 W, 1206	1206
R140, R162, R163	3	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R152	1	2.55k	CRCW06032K55FKEA	Vishay-Dale	RES, 2.55 k, 1%, 0.1 W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9, SH-J10, SH-J11	11		881545-2	TE Connectivity	Shunt, 100mil, Gold plated, Black	Shunt 2 pos. 100 mil
T1	1	340uH	750313638	Würth Elektronik	Transformer, 340 uH, TH	8x9.14mm
TP3, TP4, TP5, TP8, TP25, TP26	6	Double	1573-2	Keystone	Terminal, Turret, TH, Double	Keystone1573-2
TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22	12	STD	STD	STD	Test Point, 0.040 Hole	
U2, U4	2		ADS131A04IPBS	Texas Instruments	Four Channel Analog Front-End for Power Monitoring, Control, and Protection, PBS0032A	PBS0032A
U5	1		CDCLVC1102PW	Texas Instruments	3.3 V and 2.5 V LVCMOS High-Performance Clock Buffer Family, PW0008A	PW0008A
U6, U7	2		AMC1301DWVR	Texas Instruments	200 kHz, Fully-Differential Isolation Amplifier, DWV0008A	DWV0008A
U8, U14	2		TLV70450DBVR	Texas Instruments	Single Output LDO, 150 mA, Fixed 5 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U9	1		SN6501DBVR	Texas Instruments	Transformer Driver for Isolated Power Supplies, DBV0005A	DBV0005A
U10	1		OPA4180ID	Texas Instruments	0.1 uV/C Drift, Quad, Low Noise, Rail-to-Rail, Zero Drift Operational Amplifier, 4 to 36 V, -40 to 105 degC, 14-pin SOIC (D0014A), Green (RoHS & no Sb/Br)	D0014A
U11	1		OPA4171AID	Texas Instruments	Low Power, RRO, General Purpose Operational Amplifier, 2.7 to 36 V, -40 to 125 degC, 14-pin SOIC (D14), Green (RoHS & no Sb/Br)	D0014A
U13	1		LM4040AIM3-2.5/NOPB	Texas Instruments	Precision Micropower Shunt Voltage Reference, 3-pin SOT-23, Pb-Free	MF03A
U15	1		TPS71733DCKR	Texas Instruments	Single Output High PSRR LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 6.5 V Input, with Low IQ, 5-pin SC70 (DCK), -40 to 85 degC, Green (RoHS & no Sb/Br)	DCK0005A
U16	1		TPS71725DCKR	Texas Instruments	Single Output High PSRR LDO, 150 mA, Fixed 2.5 V Output, 2.5 to 6.5 V Input, with Low IQ, 5-pin SC70 (DCK), -40 to 85 degC, Green (RoHS & no Sb/Br)	DCK0005A
U17	1		TPS60403DBVR	Texas Instruments	-1.8 to -5.25 V, Inverting Charge Pump Regulator, 60 mA, 1.8 to 5.25 V Input with 2-Cell Alkaline / Nixx Input, -40 to 85 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	DBV0005A
U18	1		TPS72325DBVT	Texas Instruments	Single Output High PSRR LDO, 200 mA, Fixed -2.5 V Output, -10 to -2.7 V Input, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U19	1		REF3440IDBVR	Texas Instruments	4.1V Low-Drift Low-Power Small-Footprint Series Voltage Reference, DBV0006A (SOT-23-6)	DBV0006A
U22	1		TLV9061DPW	Texas Instruments	World's Smallest Amp 10MHz, RRIO, 1.8V-5.5V op-amp delivers high performance for challenging systems, DPW0005A (X2SON-5)	DPW0005A
U23, U24	2		TVS0500DRVR	Texas Instruments	5-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
U25	1		REF3425IDBVR	Texas Instruments	REF3425 - 20 PPM/C IQ 85UA	DBV0006A
Y1	1		SG-210STF 16.3480ML	Epson	Oscillator, 13.56MHz, 1.6 to 3.6 V, SMD	SMD, 2x2.5mm
C8, C27	0	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603
C13, C28	0	0.27uF	C0603C274K4RACTU	Kemet	CAP, CERM, 0.27 uF, 16 V, +/- 10%, X7R, 0603	0603
D13, D14	0	200V	BAS21-7-F	Diodes Inc.	Diode, Switching, 200V, 0.2A, SOT-23	SOT-23
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
R6, R7, R9, R29, R30, R32	0	510	RC0603FR-07510RL	Yageo America	RES, 510, 1%, 0.1 W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R22, R23, R151, R154	0	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.125W, 0805	0805
R56, R68, R184, R185	0	649	CRCW0603649RFKEA	Vishay-Dale	RES, 649, 1%, 0.1 W, 0603	0603
R57, R58, R66, R69, R126, R129	0	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.1W, 0603	0603
R88, R90	0	3.30k	RC0603FR-073K3L	Yageo America	RES, 3.30 k, 1%, 0.1 W, 0603	0603
R141, R142, R170, R171	0	0	RC0603JR-070RL	Yageo America	RES, 0, 5%, 0.1 W, 0603	0603
R155, R190	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R157, R161	0	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R165, R166, R167, R174, R175, R176, R177	0	10k	CRCW060310K0FKEA	Stackpole Electronics Inc	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R178, R179	0	14.0k	CRCW060314K0FKEA	Vishay-Dale	RES, 14.0 k, 1%, 0.1 W, 0603	0603
U1, U3	0		ADC104S021CIMM/NOPB	Texas Instruments	4 Channel, 50 kSPS to 200 kSPS, 10-Bit A/D Converter, 10-pin Mini SOIC, Pb-Free	MUB10A
U12, U21	0		LMV331IDBV	Texas Instruments	Single General Purpose Low-Voltage Comparator, DBV0005A	DBV0005A
U20	0		SN74LV1T34DBVR	Texas Instruments	Single Power Supply Single Buffer GATE CMOS Logic Level Shifter, DBV0005A	DBV0005A

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (www.ti.com/legal/termsofsale.html) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2018, Texas Instruments Incorporated