

TIDA-00420_BIM_ADS7128 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
ALERT, SCL, SCL_ISO, SDA, SDA_ISO, TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP9, TP11, TP12, TP13, TP14, TP15, TP23, TP24, TP26, TP27, TP33, TP35, TP37, TP38, TP39, TP40, TP41, TP42, TP46	31		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
C1, C2, C3, C4, C5, C7, C11, C13, C14, C15, C17, C18, C25, C39, C44, C45, C47, C48, C51, C58, C64, C65, C67, C69, C70, C71, C73, C75, C79, C80, C81, C82, C83, C85, C88, C90, C91, C112	38	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C6, C9, C10, C12, C59, C60, C93	7	10uF	C0603C106M9PACTU	Kemet	CAP, CERM, 10 µF, 6.3 V, +/- 20%, X5R, 0603	0603
C8, C16, C61	3	1uF	LMK107B7105KAHT	Taiyo Yuden	CAP, CERM, 1 µF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C19, C23, C24, C28	4	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C20, C26, C33, C37, C89	5	100pF	06035A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C21, C27, C34, C40	4	0.01uF	C1608C0G1E103J	TDK	CAP, CERM, 0.01uF, 25V, +/-5%, C0G/NP0, 0603	0603
C22, C29, C35, C41	4	1000pF	CGA3E2C0G1H102J080AD	TDK Corporation	CAP CER 1000PF 50V C0G 0603	0603
C43, C46	2	22uF	GRM21BR61A226ME44L	MuRata	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0805	0805
C49, C50, C52, C53	4	33pF	08051A330JAT2A	AVX	CAP, CERM, 33 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805
C62, C68, C72, C107	4	1uF	GCM188R71C105MA64D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603
C63	1	2.2uF	C0805C225K8RACTU	Kemet	CAP, CERM, 2.2uF, 10V, +/-10%, X7R, 0805	0805
C66, C74, C77	3	10uF	T491B106K016AT	Vishay-Sprague	CAP, TA, 10 µF, 16 V, +/- 10%, 2 ohm, SMD	3528-21
C76, C78, C108	3	10uF	GRM31CR61H106KA12L	MuRata	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206	1206
C84	1	4.7uF	C2012X5R1H475K125AB	TDK	CAP, CERM, 4.7uF, 50V, +/-10%, X5R, 0805	0805
C86, C87	2	10uF	GMK325AB7106MM-T	Taiyo Yuden	CAP, CERM, 10uF, 35V, +/-20%, X7R, 1210	1210

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C92	1	1uF	C1206C105K3RACTU	Kemet	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 1206	1206
C94	1	1000pF	C1608C0G2A102J080AA	TDK	CAP, CERM, 1000 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C97, C98	2	10uF	C1608X5R1E106M080AC	TDK	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	0603
C99	1	470pF	GRM188R71H471KA01D	MuRata	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
C100	1	0.1uF	C2012X7R2A104K125AA	TDK	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0805	0805
C101	1	10uF	CL31B106KBHNNNE	Samsung Electro-Mechanics	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, 1206	1206
C102	1	47uF	C3216X5R1C476M160AB	TDK	CAP, CERM, 47 uF, 16 V, +/- 15%, X5R, 1206	1206
D1, D11, D14, D15, D16	5	Green	LG M67K-G1J2-24-Z	OSRAM	LED, Green, SMD	2x1.4mm
D2	1	Red	LS L29K-G1J2-1-Z	OSRAM	LED, Red, SMD	SMD, 2-Leads, Body 1.3x0.8mm
D5, D9	2	400V	SMCJ400CA	Bourns Inc	TVS DIODE 400VWM 648VC SMC	SMC
D12, D13	2	5.6V	MMSZ5232B-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
D17	1	RED	150060RS75000	Würth Elektronik Inc	LED RED CLEAR 0603 SMD	LED_0603
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
H6, H7, H8, H9	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1	1		PEC04SAAN	Sullins Connector Solutions	Header, 100mil, 4x1, Tin, TH	Header, 4x1, 100mil, TH
J2, J3, J4, J5, J6, J7, J8, J10	8		ED120/2DS	On-Shore Technology	Terminal Block, 5.08 mm, 2x1, Brass, TH	2x1 5.08 mm Terminal Block
J9, J11	2		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator
J12	1		61300211121	Würth Elektronik	Header, 2.54 mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
L2	1	1000 ohm	MMZ1608B102CTA00	TDK	Ferrite Bead, 1000 ohm @ 100 MHz, 0.3 A, 0603	0603
Q1	1	30V	CSD17571Q2	Texas Instruments	MOSFET, N-CH, 30 V, 22 A, DQK0006C (WSON-6)	DQK0006C
Q2	1	60V	CSD18534Q5A	Texas Instruments	MOSFET, N-CH, 60 V, 50 A, DQJ0008A (VSONP-8)	DQJ0008A
R1, R3, R4, R6, R7, R9, R10, R11, R12, R13, R14, R16, R17, R18, R19, R23, R25, R26, R27, R28, R29, R30, R32, R35, R47, R48, R49, R54, R62, R63, R67, R68, R99, R105, R106, R117, R145, R147, R151, R152, R155, R157, R159, R161, R165, R169, R173, R174, R175, R178, R186, R237, R250, R257, R258, R261, R262	57	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R2, R5, R115, R168, R172, R185	6	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603

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R33, R34, R45, R46, R65, R66, R84, R85, R101, R102, R160	11	2.20k	RC0603FR-072K2L	Yageo America	RES, 2.20 k, 1%, 0.1 W, 0603	0603
R36, R37, R39, R43, R55, R57, R58, R75, R76, R78, R82, R90, R94, R95, R107, R108, R109, R110, R179, R180	20	100k	RC1206FR-07100KL	Yageo America	RES, 100 k, 1%, 0.25 W, 1206	1206
R38, R44, R56, R64, R77, R83, R93, R100	8	68k	CRCW060368K0JNEA	Vishay-Dale	RES, 68 k, 5%, 0.1 W, 0603	0603
R40, R42, R59, R61, R79, R81, R96, R98, R191	9	47.0k	RC0603FR-0747KL	Yageo America, Yageo	RES, 47.0 k, 1%, 0.1 W, 0603	0603
R41, R60, R80, R97	4	10.0	CRCW060310R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.1 W, 0603	0603
R69, R176, R177, R239	4	1.00k	ERJ-2RKF1001X	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0402	0402
R70, R71, R72, R73, R74	5	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R88, R89, R91, R92	4	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50k ohm, 1%, 0.1W, 0603	0603
R103, R104	2	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R111, R112, R113, R114	4	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.125 W, 0805	0805
R116	1	300	CRCW0603300RJNEA	Vishay-Dale	RES, 300, 5%, 0.1 W, 0603	0603
R153	1	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.1W, 0603	0603
R156, R162, R163, R170	4	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R167, R234	2	100k	RC0603FR-07100KL	Yageo America	RES, 100 k, 1%, 0.1 W, 0603	0603
R182	1	68.0k	RC0603FR-0768KL	Yageo America	RES, 68.0 k, 1%, 0.1 W, 0603	0603
R183, R184	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R187	1	470k	RC0603FR-07470KL	Yageo	RES, 470 k, 1%, 0.1 W, 0603	0603
R188	1	5.10k	CR0603-JW-512ELF	Bourns Inc.	RES, 5.10 k, 1%, 0.1 W, 0603	0603
R189	1	52.3k	CRCW060352K3FKEA	Vishay-Dale	RES, 52.3 k, 1%, 0.1 W, 0603	0603
R190	1	95.3k	RC0603FR-0795K3L	Yageo	RES, 95.3 k, 1%, 0.1 W, 0603	0603
R205	1	16.5k	RC0603FR-0716K5L	Yageo	RES, 16.5 k, 1%, 0.1 W, 0603	0603
R206	1	9.53k	RC0603FR-079K53L	Yageo America	RES, 9.53 k, 1%, 0.1 W, 0603	0603
R208	1	118k	CRCW0603118KFKEA	Vishay-Dale	RES, 118 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R209	1	150k	CRCW0603150KFKEA	Vishay-Dale	RES, 150 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R210	1	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0, 5%, 0.125 W, 0805	0805
R242, R243, R244, R245	4	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R259	1	2.55k	CRCW06032K55FKEA	Vishay-Dale	RES, 2.55 k, 1%, 0.1 W, 0603	0603
TP8, TP10, TP30, TP31, TP32, TP36, TP44	7		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP28, TP29	2		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1, U19, U37	3		SN74LVC1G17DCKR	Texas Instruments	Single Schmitt-Trigger Buffer, DCK0005A, LARGE T&R	DCK0005A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U2	1		ISO6740DWR	Texas Instruments	High-Speed, Low-Power, Robust EMC Quad-Channel Digital Isolator, DW0016B (SOIC-16)	DW0016B
U3	1		SN74LVC1G14DCKR	Texas Instruments	Single Schmitt-Trigger Inverter, DCK0005A (SOT-SC70-5)	DCK0005A
U4	1		ADS7128RTE	Texas Instruments	Small, 8-Channel, 12-bit ADC with I2C Interface, GPIOs & CRC, RTE0016K (WQFN-16)	RTE0016K
U5	1		ADS7028IRTE	Texas Instruments	Small, 8-Channel, MUX, 12-bit ADC with SPI Interface, GPIOs & CRC, RTE0016K (WQFN-16)	RTE0016K
U6	1		ISO6741QDWRQ1	Texas Instruments	Low Speed, General Purpose, Robust EMC, Triple and QuadChannel Digital Isolator	SOIC16
U7	1		DRV5032FBDBZR	Texas Instruments	Ultra-Low Power Digital-Switch Hall Effect Sensor, DBZ0003A (SOP-3)	DBZ0003A
U8, U14	2		TLV6002IDR	Texas Instruments	General Purpose Amplifier 2 Circuit Rail-to-Rail 8-SOIC	D0008A
U10	1		ISO1640D	Texas Instruments	Robust-EMC Bidirectional I2C Digital Isolator	SOIC8
U11	1		ISO7710DR	Texas Instruments	High Speed, Robust EMC Dual-Channel Digital Isolator, D0008B (SOIC-8)	D0008B
U18	1		ISO6742DWR	Texas Instruments	5.7 kVrms, 100 Mbps, Reinforced 4-Channel 2/2 Digital Isolator, DW0016B (SOIC-16)	DW0016B
U20, U21	2		P82B96DGKR	Texas Instruments	Dual Bidirectional Bus Buffer, 2 Channel Width, 2.0 to 15.0 V, -40 to 85 degC, 8-pin MSOP (DGK), Green (RoHS & no Sb/Br)	DGK0008A
U25	1		TPS73801DCQR	Texas Instruments	Single Output Fast Transient Response LDO, 1 A, Adjustable 1.2 to 20 V Output, 2.2 to 20 V Input, 6-pin SOT-223 (DCQ), -40 to 125 degC, Green (RoHS & no Sb/Br)	DCQ0006A
U26	1		TLV74233PDQNR	Texas Instruments	200-mA, Small Size, Low-Dropout Linear Voltage Regulator, DQN0004A (X2SON-4)	DQN0004A
U27	1		LM74700QDBVTQ1	Texas Instruments	Low Iq Always ON Smart Diode Controller, DBV0006A (SOT-23-6)	DBV0006A
U28	1		TLV90011DBVR	Texas Instruments	Low-Power, Rail-to-Rail In and Out, 1-MHz Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
U29	1		REF3425QDBVRQ1	Texas Instruments	Series Voltage Reference, DBV0006A (SOT-23-6)	DBV0006A
U31	1		UCC12040DVER	Texas Instruments	Isolated Module DC DC Converter 1 Output 3.3V, 5V 140mA, 100mA 4.5V 5.5V Input	DVE0016A
U32	1		SN74LVC2G34DCKR	Texas Instruments	Dual Buffer Gate, DCK0006A (SOT-SC70-6)	DCK0006A
U33	1		TMP235DCK	Texas Instruments	TMP235DCK, DCK0005A (SOT-5)	DCK0005A
U34	1		TLV70450DBV	Texas Instruments	Regulator, LDO, 5V, 0.15A, SOT23-5	DBV0005A
U35	1		DRV5053RAEDBZRQ1	Texas Instruments	Automotive Analog-Bipolar Hall Effect Sensor, DBZ0003A (SOT-23-3)	DBZ0003A
U36	1		TPS3897ADRYR	Texas Instruments	Single-Channel Ultra-Small Adjustable Supervisory Circuit With Active-High Open-Drain Output, DRY0006A (USON-6)	DRY0006A
U38	1		TPS25921ADR	Texas Instruments	18V, 1.6A, 90mΩ eFuse with Adjustable +/-2% Accurate Current Limit, D0008A (SOIC-8)	D0008A
U40	1		LMZ10501SIL	Texas Instruments	1A SIMPLE SWITCHER® Nano Module with 5.5V Maximum Input Voltage, SIL0008A	SIL0008A
U41	1		LMZM23601V5SILR	Texas Instruments	36-V 1-A Step-Down DC-DC Nano Module, SIL0010A (uSIP-10)	SIL0010A
U44	1		TPS22919DCKT	Texas Instruments	5.5-V, 1.5-A, 100-mohm Load Switch with Output Discharge, DCK0006A (SOT-SC70-6)	DCK0006A
U46	1		TVS1400DRVR	Texas Instruments	14-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
U48	1		LM4040AIM3-2.5/NOPB	Texas Instruments	Precision Micropower Shunt Voltage Reference, 3-pin SOT-23, Pb-Free	MF03A
C55, C56, C57	0	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
D3, D7	0	400V	SMCJ400CA	Bourns Inc	TVS DIODE 400VWM 648VC SMC	SMC
D4, D6, D8, D10	0	5.1V	PTZTE255.1B	Rohm Semiconductor	DIODE ZENER 5.4V 1W PMDS	SMA
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
R8, R15	0	100k	RC1206FR-07100KL	Yageo America	RES, 100 k, 1%, 0.25 W, 1206	1206

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R20, R21, R22, R24, R31, R50, R51, R52, R53, R148, R154, R158, R171, R200, R207, R236, R260	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R86, R87	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R141, R142	0	10k	CRCW060310K0FKEA	Stackpole Electronics Inc	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R143, R144	0	2.20k	RC0603FR-072K2L	Yageo America	RES, 2.20 k, 1%, 0.1 W, 0603	0603
R164, R166	0	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R201, R202, R203, R204	0	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.1W, 0603	0603
U9, U13, U15, U17	0		TVS0701DRBT	Texas Instruments	7 V Bidirectional Flat-Clamp Surge Protection Device, DRB0008A (VSON-8)	DRB0008A
U23	0		TCA9517DGKR	Texas Instruments	LEVEL-TRANSLATING I2C BUS REPEATER, DGK0008A	DGK0008A
U24	0		HDC1080DMBR	Texas Instruments	HDC1080 Low Power, High Accuracy Digital Humidity Sensor with Temperature Sensor, DMB0006A (WSON-6)	DMB0006A
U30	0		TPS22944DCKR	Texas Instruments	LOW-INPUT-VOLTAGE CURRENT-LIMITED LOAD SWITCHES WITH SHUT OFF AND AUTO-RESTART FEATURE, DCK0005A (SOT-5)	DCK0005A