

TIDA-01214_ISOW_ADS8688 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C2, C3, C6, C7, C36, C48	7	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603
C4	1	220pF	06031C221KAT2A	AVX	CAP, CERM, 220pF, 100V, +/-10%, X7R, 0603	0603
C5	1	10uF	C0603C106M9PACTU	Kemet	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	0603
C8	1	22uF	GRM32ER71C226MEA8L	Murata	CAP CER 22UF 16V X7R 1210	1210
C9, C24, C25, C45, C46, C63	6	1uF	CC0603KRX7R7BB105	Yageo America	CAP CER 1UF 16V X7R 0603	0603
C10	1	1uF	C0603C105K4PACTU	Kemet	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	0603
C11	1	3000pF	GRM1885C1H302JA01D	MuRata	CAP, CERM, 3000pF, 50V, +/-5%, C0G/NP0, 0603	0603
C16	1	0.022uF	C0603C223K3RACTU	Kemet	CAP, CERM, 0.022uF, 25V, +/-10%, X7R, 0603	0603
C17	1	10uF	C1608X5R1A106M080AC	TDK	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	0603
C22, C26, C27, C32, C42	5	10uF	T491B106K016AT	Vishay-Sprague	CAP, TA, 10 µF, 16 V, +/- 10%, 2 ohm, SMD	3528-21
C23, C30, C31, C38, C39, C40, C41, C69	8	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C29, C34, C52, C58	4	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C33	1	0.01uF	C1608C0G1E103J	TDK	CAP, CERM, 0.01uF, 25V, +/-5%, C0G/NP0, 0603	0603
C35, C55, C57, C60	4	10uF	CL21B106KOQNNNE	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 16 V, +/- 10%, X7R, 0805	0805
C43, C49, C65	3	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 µF, 25 V, +/- 5%, X7R, 0603	0603
C44	1	1000pF	GRM1885C1H102JA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C47, C51	2	10uF	GRM31CR61H106KA12L	MuRata	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206	1206
C53	1	0.22uF	C0603C224J3RAC7867	Kemet	CAP, CERM, 0.22 µF, 25 V, +/- 5%, X7R, 0603	0603
C54	1	15pF	GRM1885C1H150JA01D	MuRata	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C56	1	47uF	GRM32ER70J476KE20L	MuRata	CAP, CERM, 47 µF, 6.3 V, +/- 10%, X7R, 1210	1210
C59	1	2.2uF	GRM21BR71E225KA73L	MuRata	CAP, CERM, 2.2 µF, 25 V, +/- 10%, X7R, 0805	0805
C61	1	0.01uF	GRM188R71E103KA01D	MuRata	CAP, CERM, 0.01 µF, 25 V, +/- 10%, X7R, 0603	0603
C62	1	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805
C64	1	0.1uF	06035C104KAT2A	AVX	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C66	1	0.1uF	C0603C104J4RACTU	Kemet	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	0603
C67, C68	2	1uF	C0805C105K8RACTU	Kemet	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0805	0805
C70	1	0.1uF	C0603C104K8RACTU	Kemet	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	0603
C71	1	10uF	EMK107BBJ106MA-T	Taiyo Yuden	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0603	0603
D1, D2, D5	3	3.9V	PTZTE253.9B	Rohm Semiconductor	DIODE ZENER 4.1V 1W PMDS	DO-214AC, SMA
D3	1	20V	MBR0520LT1G	ON Semiconductor	Diode, Schottky, 20 V, 0.5 A, SOD-123	SOD-123
D4	1	30V	BAT54C-7-F	Diodes Inc.	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23
D6, D7, D9	3	Green	SML-D12M8WT86	ROHM Semiconductor	LED GREEN DIFFUSED 0603 SMD	0603
D8	1	5.6V	MMSZ5232B-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123
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	1		961104-6404-AR	3M	CONN HEADER VERT SGL 4POS GOLD	4x1 Header
J5, J12	2		961102-6404-AR	3M	CONN HEADER VERT SGL 2POS GOLD	2x1 Header
J8, J11	2		68602-108HLF	Amphenol	8 Positions Header, Unshrouded Connector 0.100" (2.54mm) Through Hole Gold or Gold, GXT™	4x2 Header
J19	1		ERF8-025-01-L-D-RA-L-TR	Samtec, Inc.	Receptacle, Micro High Speed Socket Strip, 0.8mm, 25x2, R/A, SMT	Conn Micro High Speed Socket Strip SKT 50 POS 0.8mm, RA
J20	1		502570-0893	Molex	SD Memory Card Connector	N/A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Q1, Q2	2	30V	CSD17571Q2	Texas Instruments	MOSFET, N-CH, 30 V, 22 A, DQK0006C (WSON-6)	DQK0006C
R1, R86, R109	3	390	CRCW0603390RFKEA	Vishay-Dale	RES, 390, 1%, 0.1 W, 0603	0603
R2, R4	2	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100k ohm, 5%, 0.1W, 0603	0603
R3, R121, R123, R124, R125	5	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R5, R12, R17, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R34, R35, R37, R38, R40, R47, R50, R54, R63, R64, R69, R111, R117, R118	27	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R6, R8	2	499	CRCW0402499RFKED	Vishay-Dale	RES, 499 ohm, 1%, 0.063W, 0402	0402
R9, R22	2	4.02k	CRCW04024K02FKED	Vishay-Dale	RES, 4.02k ohm, 1%, 0.063W, 0402	0402
R11, R21, R78	3	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00k ohm, 1%, 0.1W, 0603	0603
R13, R15	2	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47k ohm, 5%, 0.063W, 0402	0402
R14, R120	2	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9 ohm, 1%, 0.063W, 0402	0402
R16, R51, R55, R58, R60, R61, R62, R110	8	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, 0603	0603
R19	1	4.12k	RG1608P-4121-B-T5	Susumu Co Ltd	RES, 4.12k ohm, 0.1%, 0.1W, 0603	0603
R33, R36, R39, R42, R43, R44, R45, R46	8	249	RG1608P-2490-B-T5	Susumu Co Ltd	RES, 249 ohm, 0.1%, 0.1W, 0603	0603
R52	1	49.9k	RC0603FR-0749K9L	Yageo America	RES, 49.9 k, 1%, 0.1 W, 0603	0603
R53	1	0.5	CSR1206FKR500	Stackpole Electronics Inc	RES, 0.5, 1%, 0.5 W, 1206	1206
R57	1	360k	RC0603FR-07360KL	Yageo America	RES, 360k ohm, 1%, 0.1W, 0603	0603
R59	1	200k	CRCW0603200KFKEA	Vishay-Dale	RES, 200k ohm, 1%, 0.1W, 0603	0603
R65	1	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R66	1	2.20k	RC0603FR-072K2L	Yageo America	RES, 2.20 k, 1%, 0.1 W, 0603	0603
R68, R73, R97, R104	4	0	RC0402JR-070RL	Yageo America	RES, 0 ohm, 5%, 0.063W, 0402	0402
R70, R72	2	162k	RC0603FR-07162KL	Yageo America	RES, 162 k, 1%, 0.1 W, 0603	0603
R74, R75, R79, R80, R81, R82, R83, R84, R85, R116, R119	11	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0k ohm, 1%, 0.063W, 0402	0402
R87, R88, R89, R90, R91, R92, R93, R101, R105, R106, R128	11	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0 ohm, 5%, 0.063W, 0402	0402
R114	1	51.1k	CRCW060351K1FKEA	Vishay-Dale	RES, 51.1 k, 1%, 0.1 W, 0603	0603
R115	1	30.1k	CRCW060330K1FKEA	Vishay-Dale	RES, 30.1 k, 1%, 0.1 W, 0603	0603
SD1	1		SDSDQ-002G	SanDisk	SanDisk MicroSD Card, 2GB	N/A
SH-J2, SH-J3, SH-J4	3	1x2	969102-0000-DA	3M	Shunt, 100mil, Gold plated, Black	Shunt
TP1, TP4, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17	12	5001	5001	Keystone	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch
TP2, TP3, TP5, TP6, TP7	5				Pad, SMT 0.23 mm	
TP21	1	Double	1573-2	Keystone	Terminal, Turret, TH, Double	Keystone1573-2
U1, U4	2		OPA376AIDBVR	Texas Instruments	Precision, Low Noise, Low Iq Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U2	1		ADS8688AIDBT	TI	IC ADC 16BIT 500KSPS 8CH 38TSSOP	TSSOP-38
U3	1	OPA320AIDBVR	OPA320AIDBVR	TI	IC, Precision, 20MHz, 0.9pA, Low-Noise, RRIO, CMOS Op-Amp	SOT23-5
U5	1		INA333AIDGKR	Texas Instruments	Micro-Power (50mA), Zero-Drift, Rail-to-Rail Out Instrumentation Amplifier	DGK0008A
U6	1		TLV3012AIDCKR	Texas Instruments	Nanopower, 1.8V, Comparator with Voltage Reference, DCK0006A	DCK0006A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U7	1		TPS7A4901DGN	Texas Instruments	+36V, +150mA, Ultralow-Noise, Positive LINEAR REGULATOR, DGN0008D	DGN0008D
U8	1		ISOW7841DWER	Texas Instruments	ISOW7841DWE, DW0016B (SOIC-16)	DW0016B
U9, U17	2		TPS3836K33DBVR	Texas Instruments	NanoPower Supervisory Circuits, DBV0005A (SOT-5)	DBV0005A
U10	1		SN74LVC1G17DCKR	Texas Instruments	SINGLE SCHMITT-TRIGGER BUFFER, DCK0005A (SOT-5)	DCK0005A
U11	1	AT24C02B	AT24C02D-SSHM-T	Atmel	IC EEPROM 2KBIT 1MHZ 8SOIC	SO-8
U12	1		REG71055DDCR	Texas Instruments	5.5 V, Buck / Boost Charge Pump, 60 mA, 3 to 5.5 V Input with 2-Cell Alkaline / Nixx Input, -40 to 85 degC, 6-pin SOT23 (DDC6), Green (RoHS & no Sb/Br)	DDC0006A
U13	1		TPS79101DBVR	Texas Instruments	Single Output High PSRR LDO, 100 mA, Adjustable 1.2 to 5.5 V Output, 2.7 to 5.5 V Input, 6-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0006A
U14	1		SN6505BDBVR	Texas Instruments	Low-Noise 1 A, 420 kHz Transformer Driver, DBV0006A (SOT-6)	DBV0006A
U15	1		TPS22944DCKR	Texas Instruments	LOW-INPUT-VOLTAGE CURRENT-LIMITED LOAD SWITCHES WITH SHUT OFF AND AUTO-RESTART FEATURE, DCK0005A (SOT-5)	DCK0005A
U16	1		TPS60241DGKR	Texas Instruments	5 V, Boost Charge Pump, 25 mA, 2.7 to 5.5 V Input with 2-Cell Alkaline / Nixx Input, -40 to 85 degC, 8-pin SOP (DGK8), Green (RoHS & no Sb/Br)	DGK0008A
U18	1		OPA322AIDBVR	Texas Instruments	20 MHz, Low Noise, RRIO, CMOS Operational Amplifier with Shutdown, 1.8 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U19	1		REF5040AIDGKT	Texas Instruments	Low Noise, Very Low Drift, Precision Voltage Reference, -40 to 125 degC, 8-pin MSOP(DGK), Green (RoHS & no Sb/Br)	DGK0008A
C12, C13, C14, C15, C18, C19, C20, C21	0	0.01uF	C1608C0G1H103J080AA	TDK	CAP, 10000pF, 0603, 5%, 50V, C0G	0603
C28	0	0.01uF	C1608C0G1E103J	TDK	CAP, CERM, 0.01uF, 25V, +/-5%, C0G/NP0, 0603	0603
C37, C50	0	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
J2, J3, J4, J6, J7, J9, J10, J15, J16, J21, J22	0		961102-6404-AR	3M	CONN HEADER VERT SGL 2POS GOLD	2x1 Header
R7, R10	0	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9 ohm, 1%, 0.063W, 0402	0402
R18	0	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47k ohm, 5%, 0.063W, 0402	0402
R20, R56, R112, R113, R127	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R41, R108	0	300	CRCW0603300RJNEA	Vishay-Dale	RES, 300 ohm, 5%, 0.1W, 0603	0603
R48, R71	0	0	RC0402JR-070RL	Yageo America	RES, 0 ohm, 5%, 0.063W, 0402	0402
R49	0	4.7k	RC0603JR-074K7L	Yageo America	RES, 4.7 k, 5%, 0.1 W, 0603	0603
R67	0	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R76, R122, R126	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R77, R98, R99, R100, R103, R107	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0 ohm, 5%, 0.063W, 0402	0402
R94, R95, R96, R102	0	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0k ohm, 1%, 0.063W, 0402	0402
T1	0		750313638	TE connectivity	TRANSFORMER SMD	