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TIDA-060054 Bill of Materials

Designator	Quantity	Description	Manufacturer	PartNumber	Alternate Manufacturer	Alternate PartNumber
C1, C2, C3, C4, C5, C6, C7, C8, C22, C24, C27, C28, C30	13	CAP, CERM, 0.1 µF, 16 V,+/- 5%, X7R, AEC-Q200 Grade 1, 0402	MuRata	GCM155R71C104JA55D		
C9, C32	2	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	Taiyo Yuden	UMK107AB7105KA-T		
C10, C15	2	CAP, CERM, 0.22 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	MuRata	GCJ188R71H224KA01D		
C11, C20	2	CAP, CERM, 0.01 µF, 50 V,+/- 10%, X8R, AEC-Q200 Grade 0, 0402	TDK	CGA2B3X8R1H103K050BB		
C12	1	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	MuRata	GCM188R71H104KA57D		
C13, C14, C19	3	CAP, CERM, 1 µF, 50 V,+/- 20%, X7R, AEC-Q200 Grade 1, 0805	MuRata	GCJ21BR71H105MA01L		
C16, C17	2	CAP, CERM, 1 uF, 10 V, +/- 10%, X7T, 0603	MuRata	GRM185D71A105KE36D		
C18	1	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	MuRata	GRM155R71A104KA01D		
C21, C23, C31, C46	4	CAP, CERM, 1 µF, 16 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	Kemet	C0603C105K4RACAUTO		
C25	1	CAP, CERM, 10 µF, 10 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0805	MuRata	GCJ21BR71A106KE01L		
C26, C29	2	CAP, CERM, 10 uF, 10 V, +/- 20%, X6S, AEC-Q200 Grade 2, 0603	MuRata	GRT188C81A106ME13D		
C33	1	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	TDK	CGA3E2X7R1H104K080AA		
C34	1	CAP, AL, 330 uF, 50 V, +/- 20%, SMD	Nichicon	UCM1H331MNL1GS		
C35	1	CAP, CERM, 4.7 µF, 50 V,+/- 20%, X7R, AEC-Q200 Grade 1, 1210	Taiyo Yuden	UMK325B7475MMHT		
C36	1	CAP, CERM, 8200 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	MuRata	GCD188R71H822KA01D		
C37	1	CAP, CERM, 4700 pF, 100 V, +/- 5%, C0G/NP0, 0603	Kemet	C0603C472J1GAC7867		
C38	1	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	Kemet	C0603X222K5RACTU		
C39, C40	2	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	TDK	CGA6P3X7R1H475K250AB		
C41	1	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	Kemet	C0603C104K5RACTU		
C42	1	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	AVX	06035C104KAT2A		
C43, C44	2	CAP, CERM, 33 uF, 10 V, +/- 20%, X5R, 0805	TDK	C2012X5R1A336M125AC		
C45	1	CAP, CERM, 33 pF, 50 V,+/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	MuRata	GCM1555C1H330JA16D		
C47	1	CAP, CERM, 2.2 µF, 16 V,+/- 20%, X6S, AEC-Q200 Grade 2, 0402	MuRata	GRT155C81C225ME13D		
D1	1	LED, Green, SMD	Lite-On	LTST-C170KGKT		
D2	1	LED, Red, SMD	Lite-On	LTST-C170KRKT		
J1	1	Binding Post, RED, TH	Keystone	7006		
J2	1	Binding Post, BLACK, TH	Keystone	7007		
J3	1	Header, 100mil, 4x2, Gold, TH	Samtec	TSW-104-07-G-D		
J4	1	Header, 2.54mm, 2x2, Gold, TH	Sullins Connector Solutions	PBC02DAAN		
J5	1	Connector, Header, High Speed, 20 pairs, SMT	Samtec	QTE-020-01-L-D-A		
J6	1	Standard Banana Jack, Uninsulated, 5.5mm	Keystone	575-4		
J7	1	Standard Banana Jack, Uninsulated, 5.5mm	Keystone	575-4		
L1, L2	2	Inductor, Shielded, Metal Composite, 3.3 µH, 3.3 A, 0.051 ohm, SMD	MuRata Toko	DFE322520FD-3R3M=P2		
L3	1	FIXED IND 150NH 16A 4.1 MOHM SMD	Bourns	SRP5015TA-R15Y		
L4	1	Ferrite Bead, 180 ohm @ 100 MHz, 3.4 A, 0806	MuRata	NFZ2MSM181SN10L		
L5	1	Inductor, Wirewound, 4.7 uH, 1.01 A, 0.1 ohm, SMD	Taiyo Yuden	CBC3225T4R7MR		
R1, R2, R3, R4	4	RES, 22.0, 1%, 0.1 W, 0603	Yageo	RC0603FR-0722RL		
R5, R6	2	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Stackpole Electronics Inc	RMCF0402FT10K0		
R7	1	RES, 4.99 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Vishay-Dale	CRCW04024K99FKED		
R8	1	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	KOA Speer	RK73H1ETTP1002F		
R9, R10	2	RES, 2.2 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	Vishay-Dale	CRCW06032K20JNEA		
R11	1	RES, 1.0 k, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	Vishay-Dale	CRCW08051K00JNEA		
R12	1	RES, 100 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	Vishay-Dale	CRCW0402100KJNED		
R13	1	RES, 1.00 k, 0.1%, 0.1 W, AEC-Q200 Grade 0, 0603	Panasonic	ERA3AEB102V		
R14	1	RES, 442, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Vishay-Dale	CRCW0603442RFKEA		
R15	1	RES, 19.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Vishay-Dale	CRCW060319K1FKEA		
U1, U2, U3, U4, U5, U6, U7, U8	8	Digital, PDM Microphone MEMS (Silicon) Omnidirectional (-37dB ±1dB @ 94dB SPL) Solder Pads	Knowles	SPH9855LM4H-1		
U9	1	45-W, 2-MHz Digital Input 1-Channel Automotive Heatsink-Free Class-D Audio Amplifier with Current Sense and Real-time Load Diagnostics	Texas Instruments	TAS6511RGE		

Designator	Quantity	Description	Manufacturer	PartNumber	Alternate Manufacturer	Alternate PartNumber
U10	1	Octal-Channel, PDM Input to TDM or I 2S Output Converter	Texas Instruments	PCMD3180QRGERQ1		
U11	1	36-V, 4-A/5-A Synchronous Step-Down DC/DC Converter With Low IQ	Texas Instruments	LMR51450SQDRRRQ1		
U12	1	Linear Voltage Regulator IC Positive Fixed 1 Output 3.3V 1A 8-SON (3x3)	Texas Instruments	TLV76733QWDRBRQ1		
Y1	1	Oscillator, 12.288 MHz, SMD	SiTime	SIT8008BC-71-33E-12.288000G		

Notes:

Substitutions made according to Alternate PartNumber must meet datasheet parameters, not just the Description specified.

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