

TIDA-050024

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
C1	1	47uF	CAP, TA, 47 µF, 25 V, +/- 20%, 0.12 ohm, SMD	7343-31	T495D476M025ATE120	Kemet
C2, C6, C7, C8, C9, C25	6	22uF	CAP, CERM, 22 µF, 25 V, +/- 10%, X5R, 1210	1210	GRM32ER61E226KE15L	MuRata
C3, C4, C17, C18, C20, C21	6	10uF	CAP, CERM, 10 µF, 25 V, +/- 20%, X5R, 0603	0603	GRM188R61E106MA73D	MuRata
C5, C22	2	1uF	CAP, CERM, 1 µF, 25 V,+/- 10%, X5R, 0402	0402	C1005X5R1E105K050BC	TDK
C10, C14, C23	3	100pF	CAP, CERM, 100 pF, 50 V,+/- 5%, C0G/NP0, 0402	0402	GRM1555C1H101JA01D	MuRata
C11, C12, C15, C16, C19	5	0.1uF	CAP, CERM, 0.1 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7R1H104K050BB	TDK
C13	1	0.022uF	CAP, CERM, 0.022 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	GCM155R71E223KA55D	MuRata
C26, C27, C31, C38, C41, C42, C43	7	1uF	CAP, CERM, 1 µF, 25 V, +/- 10%, X5R, 0603	0603	GRM188R61E105KA12D	MuRata
C29, C34, C35, C36, C37, C55	6	0.1uF	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603	GCM188R71H104KA57D	MuRata
C30, C56	2	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H102JA01D	MuRata
C32, C39, C44, C51	4	0.68uF	CAP, CERM, 0.68 µF, 50 V, +/- 10%, X7R, 1206	1206	GRM31MR71H684KA88L	MuRata
C33, C40, C45, C52	4	0.01uF	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H103KA01D	MuRata
C46	1	47pF	CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H470JA01D	MuRata
C47, C48, C49, C50	4	330pF	CAP, CERM, 330 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H331JA01D	MuRata
C53, C54	2	220uF	CAP, AL, 220 µF, 35 V, +/- 20%, 0.09 ohm, TH	10x12.5mm	EEU-FC1V221	Panasonic
D1	1	4.3V	Diode, Zener, 4.3 V, 225 mW, SOT-23	SOT-23	BZX84C4V3LT1G	ON Semiconductor
D2, D3, D4	3	75V	Diode, Switching, 75 V, 0.3 A, SMD, 2-Leads, Body 1.2x0.8mm	SMD, 2-Leads, Body 1.2x0.8mm	1N4148WT	Fairchild Semiconductor
H1	1		Heatsink FOR TI MOD, 50x13.9mm	HEAT SINK, 50x13.9mm	ATS-TI10P-521-C1-R1	Advanced Thermal Solu
J1, J2, J3, J4	4		Terminal, Turret, TH, Double	Keystone1502-2	1502-2	Keystone
J5, J6, J17	3		Header, 100mil, 3x1, Gold, TH	3x1 Header	TSW-103-07-G-S	Samtec
J7, J8, JP1, JP2, JP3	5		Header, 100mil, 2x1, Gold, TH	2x1 Header	TSW-102-07-G-S	Samtec
J9	1		RCA Jack, Red, R/A, TH	PC Mount Phono Jack-Red, TH	971	Keystone
J10	1		RCA Jack, White, R/A, TH	PC Mount Phono Jack-White, TH	970	Keystone
J11, J13	2		Binding Post, RED, TH	11.4x27.2mm	7006	Keystone
J12, J14	2		Binding Post, BLACK, TH	11.4x27.2mm	7007	Keystone
J15	1	Double	Terminal, Turret, TH, Double	Keystone1502-2	1502-2	Keystone
J16	1		Header, 100mil, 3x1, Gold, TH	PBC03SAAN	PBC03SAAN	Sullins Connector Soluti
L1	1	3uH	Inductor, Shielded, Composite, 3 µH, 21 A, 0.0059 ohm, SMD	13x14mm	XAL1350-302MEB	Coilcraft
L2	1	2.2uH	Inductor, Shielded, Powdered Iron, 2.2 µH, 2.3 A, 0.082 ohm, SMD	2.5x1.2x2mm	DFE252012F-2R2M=P2	MuRata Toko
L11, L12, L21, L22	4	10uH	Inductor, Shielded, Ferrite, 10 µH, 4.2 A, 0.037 ohm, AEC-Q200 Grade 1, SMD	8x8.4mm	SRT8045-103MEB	Coilcraft
Q1	1	30V	MOSFET, 2-CH, N-CH, 30 V, 35 A, DQY0008A (LSON-CLIP-8)	DQY0008A	CSD87351Q5D	Texas Instruments
Q2, Q4	2	45 V	Transistor, NPN, 45 V, 0.1 A, SOT-23	SOT-23	BC850CLT1G	ON Semiconductor
Q3	1	50V	MOSFET, N-CH, 50 V, 0.22 A, SOT-23	SOT-23	BSS138	Fairchild Semiconductor
R0	1	0.002	RES, 0.002, 1%, 2 W, 2512	2512	CSNL2512FT2L00	Stackpole Electronics In
R01, R02, R5, R6	4	10.0	RES, 10.0, 1%, 0.063 W, 0402	0402	CRCW040210R0FKED	Vishay-Dale
R1	1	49.9	RES, 49.9, 1%, 0.063 W, 0402	0402	CRCW040249R9FKED	Vishay-Dale
R2	1	200k	RES, 200 k, 1%, 0.1 W, 0402	0402	ERJ-2RKF2003X	Panasonic
R3	1	56.2k	RES, 56.2 k, 1%, 0.063 W, 0402	0402	CRCW040256K2FKED	Vishay-Dale
R7	1	7.50k	RES, 7.50 k, 1%, 0.063 W, 0402	0402	CRCW04027K50FKED	Vishay-Dale
R8	1	137k	RES, 137 k, 1%, 0.063 W, 0402	0402	CRCW0402137KFKED	Vishay-Dale
R9	1	100k	RES, 100 k, 1%, 0.063 W, 0402	0402	CRCW0402100KFKED	Vishay-Dale
R10, R11	2	0	RES, 0, 0%, 0.25 W, AEC-Q200 Grade 0, 0603	0603	RCS06030000Z0EA	Vishay-Dale
R13, R19, R27, Rg1, Rg2	5	0	RES, 0, 5%, 0.063 W, 0402	0402	CRCW04020000Z0ED	Vishay-Dale
R14, R18, R20	3	100k	RES, 100 k, 0.5%, 0.063 W, 0402	0402	CRCW0402100KDHP	Vishay-Dale
R15, R16, R21, R22	4	10.2k	RES, 10.2 k, 1%, 0.063 W, 0402	0402	CRCW040210K2FKED	Vishay-Dale
R17	1	3.01k	RES, 3.01 k, 1%, 0.063 W, 0402	0402	CRCW04023K01FKED	Vishay-Dale
R23	1	12.1	RES, 12.1, 1%, 0.063 W, 0402	0402	CRCW040212R1FKED	Vishay-Dale
R24	1	1.00Meg	RES, 1.00 M, 1%, 0.1 W, 0402	0402	ERJ-2RKF1004X	Panasonic
R25, R?	2	16.9k	RES, 16.9 k, 1%, 0.063 W, 0402	0402	CRCW040216K9FKED	Vishay-Dale
R26	1	10.5k	RES, 10.5 k, 1%, 0.1 W, 0603	0603	CRCW060310K5FKEA	Vishay-Dale
R28	1	39k	RES, 39 k, 5%, 0.063 W, 0402	0402	CRCW040239K0JNED	Vishay-Dale
R29	1	4.70k	RES, 4.70 k, 0.1%, 0.1 W, 0603	0603	RG1608P-472-B-T5	Susumu Co Ltd

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R30, R32, R37, R38, R44	5	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	RC0603FR-07100KL	Yageo America
R31	1	499k	RES, 499 k, 1%, 0.1 W, 0603	0603	RC0603FR-07499KL	Yageo America
R33, R34, R35, R36	4	10	RES, 10, 5%, 0.125 W, 0805	0805	CRCW080510R0JNEA	Vishay-Dale
R39, R40, R41, R42	4	3.3	RES, 3.3, 5%, 0.1 W, 0603	0603	CRCW06033R30JNEA	Vishay-Dale
R43	1	0	RES, 0, 5%, 0.063 W, 0402	0402	ERJ-2GE0R00X	Panasonic
TP2, TP3, TP5, TP6, TP7	5	Orange	Test Point, Miniature, Orange, TH	Orange Miniature Testpoint	5003	Keystone
U1	1		Low Iq, Synchronous Boost Controller with Wide Input Voltage and 5.5V Gate Drive for Low Qg NexFETs, RTE0016E (WQFN-16)	RTE0016E	TPS43061RTER	Texas Instruments
U2	1		Low-Cost, Low Noise, 5.5 MHz CMOS Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 14-pin SOP (PW0014A), Green (RoHS & no Sb/Br)	PW0014A	TLV9064IPWR	Texas Instruments
U3	1		6.5-µA Quiescent Current, 1.8-A Switch Current Boost Converter, DBV0005A (SOT-23-5)	DBV0005A	TPS613222ADBVR	Texas Instruments
U4	1		2x30-W Class-D Amplifier With Low Idle Power Dissipation, DAP0032A (TSSOP-32)	DAP0032A	TPA3128D2DAPR	Texas Instruments
R47	0	20.5k	RES, 20.5 k, 1%, 0.063 W, 0402	0402	CRCW040220K5FKED	Vishay-Dale

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.