

AWR1843BOOST

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPCB	1		Printed Circuit Board		TIDEP-01011	Any		
C1, C13, C14, C33, C36, C54, C94	7	1uF	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R71C105KA64D	MuRata		
C2	1	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7R1H104K050BB	TDK		
C3, C5, C7, C10, C12, C39, C47, C48, C51, C53, C56, C57, C84, C90	14	0.22uF	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	GCM155R71C224KE02D	MuRata		
C4, C6, C11, C22	4	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402	GCM155R71C104KA55D	MuRata		
C8	1	0.1uF	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7S, 0201	0201	GRM033C71A104KE14D	MuRata		
C9, C15	2	4.7pF	CAP, CERM, 4.7 pF, 50 V, +/- 2%, C0G/NP0, 0402	0402	GJM1555C1H4R7BB01D	MuRata		
C16, C20, C42, C43, C49, C64, C67, C71, C75, C91, C92, C97	12	0.1uF	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402	C0402C104K8RACTU	Kemet		
C17, C45, C52, C58, C59, C65, C98, C103, C104	9	10uF	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805	GCM21BR71A106KE22L	MuRata		
C18	1	0.47uF	CAP, CERM, 0.47 uF, 6.3 V, +/- 10%, X7R, 0402	0402	JMK105B7474KVHF	Taiyo Yuden		
C21, C25	2	10uF	CAP, CERM, 10 uF, 25 V, +/- 20%, X7R, AEC-Q200 Grade 1, 1210	1210	CGA6P1X7R1E106M250AC	TDK		
C23, C27	2	0.047uF	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0603	0603	C1608X7R1H473K080A	TDK		
C24	1	4700pF	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0402	0402	GRM155R72A472KA01D	MuRata		
C26	1	47uF	CAP, TA, 47 uF, 10 V, +/- 10%, SMD	3528-21	T491B476K010AT	Kemet		
C28, C34, C77, C78, C82	5	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402	0402YC104KAT2A	AVX		
C29, C30, C31	3	22uF	CAP, CERM, 22 uF, 16 V, +/- 10%, X7R, 1210	1210	C3225X7R1C226K250A	TDK		
C32, C79	2	4.7uF	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	CGA4J1X7R1E475K125AC	TDK		
C35, C46, C81	3	10uF	CAP, CERM, 10 uF, 16 V, +/- 10%, X7R, 0805	0805	CL21B106KOQNNNE	Samsung Electro-Mechanics		
C38, C44, C60, C68	4	22uF	CAP, CERM, 22 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206	GCM31CR70J226KE23L	MuRata		
C41, C61, C62, C76	4	1uF	CAP, CERM, 1 uF, 10 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0402	0402	GCM155C71A105KE38D	MuRata		
C50, C66, C69	3	0.01uF	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	0402	C0402C103K4RACTU	Kemet		
C63, C70	2	8pF	CAP, CERM, 8 pF, 50 V, +/- 6%, C0G/NP0, 0402	0402	GRM1555C1H8R0DA01D	MuRata		
C72, C73	2	0.01uF	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C103KA01D	MuRata		
C74, C86	2	2.2uF	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7S, 0402	0402	C1005X7S1A225K050B	TDK		
C85	1	1uF	CAP, CERM, 1 uF, 6.3 V, +/- 20%, X7R, 0402	0402	GRM155R70J105MA12D	MuRata		
C87, C89	2	2.2uF	CAP, CERM, 2.2 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R70J225KE22D	MuRata		
C88	1	33pF	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402	C0402C330J5GAC	Kemet		
C93	1	22uF	CAP, CERM, 22 uF, 10 V, +/- 20%, X7R, 0805	0805	GRM21BZ71A226ME15L	MuRata		
C101	1	0.01uF	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	0402	GCM155R71E103KA37D	MuRata		
D2	1	V	Diode, Schottky, V, 0.01 A, SOD-882	SOD-882	SMS3923-040LF	Skyworks Solutions		
D5	1	Green	LED, Green, SMD	0402	APHHS1005CGCK	Kingbright		
DS1, DS2	2	Red	LED, Red, SMD	SMD, 2-Leads, Body 1.3x0.8mm	LS L29K-G1J2-1-Z	OSRAM		
DS3, DS4	2	Yellow	LED, Yellow, SMD	1.6x0.8mm	SML-E12Y8WT86	Rohm		
F1	1		Fuse, 5 A, 32VAC/DC, SMD	1206	0440005.WR	Littelfuse		
J1	1		Receptacle, 0.5 mm, 30x2, Gold, TH	Receptacle, 0.5 mm, 30x2, TH	QSH-030-01-L-D-A	Samtec		
J2	1		UMC Straight Jack Receptacle, 50 Ohm, Gold, SMT	UMC Straight Jack Receptacle, SMT	128-0711-201	Cinch Connectivity		
J3	1		Terminal Block, 3.5mm, 3x1, Tin, R/A, TH	Terminal Block, 3.5mm, 3x1, TH	OSTTE030161	On-Shore Technology		
J5, J6	2		Receptacle, 2.54mm, 10x2, Gold with Tin tail, SMT	Receptacle, 2.54mm, 10x2, SMT	SSM-110-S-DV	Samtec		
J8	1		Connector, Receptacle, Micro-USB Type B, R/A, Bottom Mount SMT	Micro USB receptacle	105017-0001	Molex		
L1	1	2.2uH	Inductor, Shielded, Composite, 2.2 uH, 9.2 A, 0.01 ohm, AEC-Q200 Grade 1, SMD	5.3x31.x5.5mm	XAL5030-222MEB	Coilcraft		
L2, L3	2	470nH	Inductor, Shielded, 470 nH, 4.7 A, 0.021 ohm, SMD	1008	DFE252012PD-R47M	MuRata Toko		
L4	1	1uH	Inductor, Shielded, 1 uH, 3.8 A, 0.035 ohm, AEC-Q200 Grade 1, SMD	1008	DFE252012PD-1R0M	MuRata Toko		
L5, L6, L8, L9, L10	5	100nH	Inductor, Wirewound, Ferrite, 100 nH, 2.85 A, 0.024 ohm, AEC-Q200 Grade 1, SMD	3.2x2.2x2.5mm	NLCV32T-R10M-EFRD	TDK		
L7	1	600 ohm	Ferrite Bead, 600 ohm @ 100 MHz, 4 A, 2220	2220	HI2220P601R-10	Laird-Signal Integrity Products		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch	THT-14-423-10	Brady		
P6	1		DC Power Jack, R/A, TH	DC Power Jack, R/A, TH	PJ-051AH	CUI Inc.		
Q1, Q2	2	100V	MOSFET, N-CH, 100 V, 0.17 A, SOT-23	SOT-23	BSS123	Fairchild Semiconductor		None

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R1, R2, R4, R5, R6, R7, R10, R17, R18, R19, R20, R22, R23, R24, R25, R27, R28, R29, R30, R31, R32, R35, R36, R48, R49, R50, R51, R52, R53, R58, R59, R60, R62, R63, R64, R65, R66, R67, R69, R70, R71, R72, R75, R76, R94, R104, R105, R106, R111, R136, R162, R163, R165, R167, R168, R198, R199, R201	58	0	RES, 0, 5%, 0.05 W, 0201	0201	CRCW02010000Z0ED	Vishay-Dale		
R3, R13, R14, R15, R16, R41, R43, R73, R74, R86, R89, R91, R98, R113, R155, R158, R194, R197, R208	19	10.0k	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R11, R12, R37, R78, R107, R128, R129, R141, R152, R196, R200	11	0	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GE0R00X	Panasonic		
R34, R156	2	0	RES, 0, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010	CRCW20100000Z0EF	Vishay-Dale		
R38	1	47.5k	RES, 47.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040247K5FKED	Vishay-Dale		
R39, R40, R42, R44, R45	5	33.2	RES, 33.2, 1%, 0.05 W, 0201	0201	CRCW020133R2FNED	Vishay-Dale		
R47, R81, R119, R120, R121, R143, R144, R148, R149, R157, R189	11	0	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04020000Z0ED	Vishay-Dale		
R54, R55, R56, R57, R179, R180, R181, R182, R183, R184	10	20.0	RES, 20.0, 1%, 0.05 W, 0201	0201	CRCW020120R0FNED	Vishay-Dale		
R61	1	10.0k	RES, 10.0 k, 1%, 0.1 W, 0402	0402	ERJ-2RKF1002X	Panasonic		
R68, R77, R79, R80, R154	5	100	RES, 100, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GEJ101X	Panasonic		
R82, R142, R186	3	10k	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040210K0JNED	Vishay-Dale		
R84	1	100k	RES, 100 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402100KJNED	Vishay-Dale		
R85, R87	2	61.9	RES, 61.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040261R9FKED	Vishay-Dale		
R88, R96, R114	3	82.5k	RES, 82.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040282K5FKED	Vishay-Dale		
R90, R103, R117, R202	4	360	RES, 360, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GEJ361X	Panasonic		
R92, R95, R99	3	7.87k	RES, 7.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04027K87FKED	Vishay-Dale		
R93, R101, R112	3	750	RES, 750, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402750RFKED	Vishay-Dale		
R110, R138, R172, R173	4	100k	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402100KFKED	Vishay-Dale		
R116, R160	2	510	RES, 510, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GEJ511X	Panasonic		
R118	1	220	RES, 220, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402220RJNED	Vishay-Dale		
R122	1	12.1k	RES, 12.1 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	ERA-2AEB1212X	Panasonic		
R123, R124, R126, R127, R140	5	1.00k	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04021K00FKED	Vishay-Dale		
R125	1	4.87k	RES, 4.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04024K87FKED	Vishay-Dale		
R131, R132	2	3.3k	RES, 3.3 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04023K30JNED	Vishay-Dale		
R133, R137, R161, R175	4	0	RES, 0, 5%, 0.125 W, 0603	0603	MCT0603020000ZP500	Vishay/Beyschlag		
R134	1	49.9	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040249R9FKED	Vishay-Dale		
R139	1	4.87k	RES, 4.87 k, 0.1%, 0.062 W, AEC-Q200 Grade 0, 0402	0402	ERA-2AEB4871X	Panasonic		
R145	1	48.7k	RES, 48.7 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	ERA-2AEB4872X	Panasonic		
R146	1	4.42k	RES, 4.42 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	ERA-2ARB4421X	Panasonic		
R150	1	100	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402100RFKED	Vishay-Dale		
R151, R153	2	330k	RES, 330 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW0402330KFKED	Vishay-Dale		
R170, R171	2	2.94k	RES, 2.94 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04022K94FKED	Vishay-Dale		
R174	1	30.0k	RES, 30.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040230K0FKED	Vishay-Dale		
R193	1	26.1k	RES, 26.1 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040226K1FKED	Vishay-Dale		
S1	1		Switch, SPST, Slide, Off-On, 3 Pos, 0.1A, 20V, SMD	6.7x9.09mm	219-3MST	CTS Electrocomponents		
S2	1		Slide SW, SPDT 0.1A 50VDC	SW, 3.1x2.5x6 mm	CJS-1201TA	Copal Electronics		
SW1, SW2	2		Switch, SPST-NO, Off-Mom, 0.01 A, 32 VDC, SMD	4.2x2.8mm	KMR243GLFG	C&K Components		

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TP1	1		Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone		
U1	1		2.3V-3.6V, 16M-BIT [x 1/x 2/x 4] CMOS FLASH Memory, WSON-8	WSON-8	MX25V1635FZNQ	Macronix International Co., LTD		
U2	1		AWR1843ABL, ABL0161B (FCBGA-161)	ABL0161B	AWR1843ABL	Texas Instruments		Texas Instruments
U3	1		Automotive Fault Protected CAN Transceiver With Flexible Data-Rate, D0008A (SOIC-8)	D0008A	TCAN1042HGVDQ1	Texas Instruments	TCAN1042HGVDQ1	Texas Instruments
U4	1		Boost and Dual Buck Regulators With Diagnostic Functions, RHB0032N (VQFN-32)	RHB0032N	LP87702DRHBRQ1	Texas Instruments		Texas Instruments
U5	1		Automotive 3A High-Accuracy Low-Noise Low-Dropout (LDO) Voltage Regulator, RGR0020A (VQFN-20)	RGR0020A	TPS7A5301QRGRRQ1	Texas Instruments		
U6	1		Tiva C Series Microcontroller, 1024 KB Flash, 256 KB SRAM, 12 Bit, 20 Channels, -40 to 105 degC, 128-Pin TQFP (PDT), Green (RoHS & no Sb/Br), Tray	PDT0128A	TM4C1294NCPDTT3	Texas Instruments		
U7	1		Precision Micropower Shunt Voltage Reference, 0.5% accuracy, 2.5 V, 15 ppm / degC, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A	LM4040C25QDBZR	Texas Instruments		
U8	1		2.5A, 36 V Synchronous, 2.1MHz, Automotive Step Down DC-DC Converter, RNL0022A (VQFN-HR-22)	RNL0022A	LM536253QRNLRQ1	Texas Instruments	LM536253QRNLTQ1	Texas Instruments
U10	1		4-Channel ESD Protection Array for High-Speed Data Interfaces, DRY0006A (USON-6)	DRY0006A	TPD4E004DRYR	Texas Instruments		
U11	1		Single Output High PSRR LDO, 1 A, Adjustable 1.2 to 5.5 V Output, 2.7 to 5.5 V Input, 8-pin SON (DRB), -40 to 125 degC, Green (RoHS & no Sb/Br)	DRB0008B	TPS79601DRBR	Texas Instruments		
U12, U13	2		1.4V-Capable +/-0.5degC Temperature Sensor with Alert Function and I2C/SMBus interface in SOT-563, DRL0006A (SOT-OTHER-6)	DRL0006A	TMP112AIDRLR	Texas Instruments	TMP112AIDRLT	Texas Instruments
U14	1		10-Ohm Quad SPDT Analog Switch, RSV0016A (UQFN-16)	RSV0016A	TS3A5018RSVR	Texas Instruments		Texas Instruments
Y1	1		Crystal, 40 MHz, 8pF, SMD	3.2x2.5mm	CX3225SA40000D0PT WCC	Kyocera		
Y2	1		Crystal, 16 MHz, 15 ppm, 8 pF, AEC-Q200 Grade 1, SMD	3.2x0.55x2.5mm	NX3225SA-16.000M-STD-CRS-2	NDK		
Z1, Z2, Z3, Z4, Z5, Z6, Z7, Z8	8		Bumpon, Cylindrical, 0.312 X 0.200, Black	Black Bumpon	SJ61A1	3M		
Z9, Z10, Z11	3		MACHINE SCREW PAN PHILLIPS 6-32		PMSSS 632 0038 PH	B&F Fastener Supply		
Z12, Z13, Z14	3		Nut, Hex, 5/16", Stainless Steel, 6-32	Hex Nut	HNSS 632	B&F Fastener Supply		
Z15, Z16, Z17, Z18	4		Aluminum Mounting Bracket		625	Keystone		
Z19	1		Cable, USB A Male to Micro B Male 3'		3025010-03	Qualtek Electronics Corporation		
Z20, Z21	2	1x2	Shunt, 100mil, Flash Gold, Black	Closed Top 100mil Shunt	SPC02SYAN	Sullins Connector Solutions		
C83	0	10uF	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805	GCM21BR71A106KE22 L	MuRata		
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		
P1	0		Header, 2.54 mm, 3x1, Tin, TH	Header, 2.54 mm, 3x1, TH	TSW-103-07-T-S	Samtec		
P7	0		Header, 100mil, 2x1, Gold, TH	2x1 Header	TSW-102-07-G-S	Samtec		
R8, R9, R21, R26, R33, R102, R108, R109, R135, R164, R166, R169	0	0	RES, 0, 5%, 0.05 W, 0201	0201	CRCW02010000Z0ED	Vishay-Dale		
R46, R100, R147, R159, R188	0	0	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04020000Z0ED	Vishay-Dale		
R97, R178	0	0	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GE0R00X	Panasonic		
R115	0	0	RES, 0, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010	CRCW20100000Z0EF	Vishay-Dale		
R130	0	0	RES, 0, 5%, 0.125 W, 0603	0603	MCT06030Z0000ZP500	Vishay/Beyschlag		
R177	0	10.0k	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R190	0	10k	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040210K0JNED	Vishay-Dale		

Notes:

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

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