

AWR1843AOPEVM

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
!PCB	1		Printed Circuit Board		PROC106	Any		
A1	1		RF ANT 2.4GHZ CHIP SOLDER SMD	SMT_ANT	ANT016008LCS2442MA2	TDK Corporation		
C1, C4, C50, C51, C52, C53, C55, C59, C62, C65, C70, C76, C78, C82, C112, C113, C121	17	10uF	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805	GCM21BR71A106KE22L	MuRata		
C2, C3, C91, C92, C101, C126, C130	7	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402	GCM155R71C104KA55D	MuRata		
C6, C12, C25, C26, C27, C35, C36, C37, C40, C43, C72, C86, C105, C107, C108, C109, C117, C120, C123, C127, C128	21		Cap Ceramic 0.1uF 35V X5R 10% Pad SMD 0201 85C T/R	0201 (0603 Metric)	GRM033R6YA104KE14D	Murata Electronics North Ame		
C14, C71	2	4.7pF	Cap Ceramic 4.7pF 50V C0G 0.25pF Pad SMD 0201 125°C Automotive T/R	0201	CGA1A2C0G1H4R7C030BA	TDK		
C19, C20	2		CAP CER 12PF 25V C0G/NP0 0201	0201	250R05L120JV4T	Johanson Technology Inc.		
C21, C93	2	12pF	CAP, CERM, 12 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402	CL05C120JB5NNNC	Samsung Electro-Mechanics		
C22, C23, C41	3	1pF	CAP, CERM, 1 pF, 50 V, +/- 25%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402	GCM1555C1H1R0CA16D	MuRata		
C24, C129	2		1pF ±20% 16V Ceramic Capacitor X5R 0201	0201	CL03A105MO3NRNH	Samsung Electro-Mechanics		
C28, C29	2		CAP CER 22UF 6.3V X5R 0402	0402	CL05A226MQ5N6J8	Samsung Electro-Mechanics		
C30, C56, C57, C58, C60, C61, C63, C64, C66, C67, C68, C80, C81, C84, C85, C87, C88, C94, C95, C96, C97, C98	22	0.22uF	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	GCM155R71C224KE02D	MuRata		
C31, C32, C33, C34	4	390pF	CAP, CERM, 390 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402	CGA2B2C0G1H391J050BA	TDK		
C42, C122	2	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402	CL05A106MP5NUNC	Samsung Electro-Mechanics		
C44, C45, C46, C47, C48, C49, C54, C73, C75, C77, C111, C124, C131	13	22uF	22uF ±20% 6.3V Ceramic Capacitor X7T 0805 (2012 Metric)	0805	CGA4J1X7T0J226M125AC	TDK		
C69	1	0.047uF	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7R1H473K050BB	TDK		
C74, C79, C83, C102, C103	5	2.2uF	CAP, CERM, 2.2 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R70J225KE22D	MuRata		
C89, C90, C100	3	1uF	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R71C105KA64D	MuRata		
C99	1	1.8pF	CAP, CERM, 1.8 pF, 50 V, +/- 6%, C0G/NP0, 0402	0402	GJM1555C1H1R8BB01D	MuRata		
C106, C110	2	4700pF	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0402	0402	GRM155R71H472KA01D	MuRata		
C125	1		CAP CER 10000PF 25V X5R 0201	0201	CL03A103KA3NNNC	Samsung Electro-Mechanics		
D1	1		Diode Schottky 30V 2A Surface Mount SOD-123FL	SOD-123F	NRVB230LSFT1G	ON Semiconductor		
FL2, FL3, FL12, FL22	4		Inductor, Ferrite Bead, Ferrite, 2.2 A, 0.035 ohm, AEC-Q200 Grade 1, SMD	0402	BLM15PD300S21D	MuRata		
H1	1		AWR1843AOPEVM Heatsink		MCH065	Any	160021010002	
H2	1		Thermal Pad Pink 406.40mm x 203.20mm Rectangular Adhesive - One Side		GPVOUS-0.125-AC-0816	Bergquist		
H3	1		AWR1843AOPEVM Mounting stand		MCH066	Any	160021010001	
J1	1		Connector, Receptacle, Micro-USB Type B, R/A, Bottom Mount SMT	Micro USB receptacle	105017-0001	Molex		
J2, J11	2		Receptacle, 0.5 mm, 30x2, Gold, TH	Receptacle, 0.5 mm, 30x2, TH	QSH-030-01-L-D-A	Samtec		
J3	1		CONN HDR 1.27MM R/A AU 4POS	HDR4	M50-3930442	Harwin Inc.		
J5	1		DC Power Jack, R/A, TH	DC Power Jack, R/A, TH	PJ-051AH	CUI Inc.		
J7	1		CONN HEADER R/A 10POS 1.27MM	HDR10	GRPB052MWCN-RC	Sullins		
J8, J10	2		CONN HEADER R/A 3POS 1.27MM	HDR3	M50-3930342	Harwin		
L1, L6	2	2.4nH	Inductor, Multilayer, Air Core, 2.4 nH, 0.3 A, 0.15 ohm, SMD	0402 polarized	LOG15HS2N4S02D	MuRata		
L2, L3, L4, L5	4	470nH	Inductor, Shielded, 470 nH, 4.7 A, 0.021 ohm, SMD	1008	DPE252012PD-R47M	MuRata Toko		
L7	1	6.8uH	Inductor, Multilayer, Ferrite, 6.8 uH, 0.11 A, 0.25 ohm, SMD	0805	MLZ2012N6R8LT000	TDK		
L8	1	1500 ohm	Ferrite Bead, 1500 ohm @ 100 MHz, 0.5 A, 0603	0603	BLM18HE152SN1D	MuRata		
L9, L10	2	2nH	Inductor, Multilayer, Air Core, 2 nH, 0.3 A, 0.1 ohm, SMD	0402 polarized	LOG15HS2N0S02D	MuRata		
L11, L13, L15, L16	4		100 Ohms @ 100MHz 1 Power Line Ferrite Bead 0805 (2012 Metric) 4A 20mOhm	0805	MPZ2012S101ATD25	TDK		
L12, L14	2	120 ohm	Ferrite Bead, 120 ohm @ 100 MHz, 1.9 A, 0603	0603	BLM18KG121TH1D	MuRata		
LD1, LD2, LD3, LD4, LD5, LD6	6	Green	LED, Green, SMD	0402	APHHS1005CGCK	Kingbright		
Q1	1		MOSFET N-CH 100V 170MA SOT23-3	SOT23	BSS123-7-F	Diodes Incorporated		

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R1, R94, R95, R104, R110, R118, R122, R124, R125, R134, R177, R178	12		10 kOhms ±0.5% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Thin Film	0201	RR0306P-103-D	Susumu		
R2, R28, R31, R32, R41, R60, R61, R62, R63	9	0	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	0201	ERJ-1GN0R00C	Panasonic		
R3, R7, R8, R19, R21, R22, R23, R35, R36, R43, R44, R45, R59, R65, R83, R84, R85	17	10k	RES SMD 10K OHM 0.1% 1/20W 0201	0201	ERA-1AEB103C	Panasonic		
R4, R5, R9, R37	4	100k	100 kOhms ±1% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201	ERJ-1GNF1003C	Panasonic Electronic Compon		
R6, R46, R47, R48, R49	5	33.2	Res Thick Film 0201 33.2 Ohm 1% 0.05W(1/20W) ±200ppm/C Pad SMD Automotive T/R	0201	ERJ-1GNF33R2C	Panasonic		
R12, R14, R51, R57, R58, R67, R68, R74, R86, R87, R90, R91, R99, R100, R101, R102, R105, R112, R113, R116, R120, R121, R123, R127, R128, R129, R131, R136, R139, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151	48		RES SMD 0 OHM JUMPER 1/20W 0201	0201 (0603 Metric)	RC0201JR-070RL	Yageo		
R13, R17, R42, R111	4	220	RES, 220, 5%, 0.05 W, 0201	0201	RC0201JR-07220RL	Yageo America		
R15	1	220	220 Ohms ±5% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201	ERJ-1GNJ221C	Panasonic Electronic Compon		
R16	1	7.87k	RES, 7.87 k, 1%, 0.05 W, 0201	0201	RC0201FR-077K87L	Yageo America		
R24	1		RES SMD 200 OHM 1% 1/5W 0402	0402	CRCW0402200RFKED HP	Vishay Dale		
R25, R26, R33, R34, R40, R64	6	4.99k	4.99 kOhms ±1% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201	ERJ-1GNF4991C	Panasonic Electronic Compon		
R27, R107, R108	3	510	RES, 510, 5%, 0.05 W, 0201	0201	RC0201JR-07510RL	Yageo America		
R29, R89	2	100k	RES, 100 k, 1%, 0.05 W, 0201	0201	CRCW0201100KFED	Vishay-Dale		
R38, R69, R141	3	4.99k	RES, 4.99 k, 1%, 0.05 W, 0201	0201	RC0201FR-074K99L	Yageo America		
R39	1	510	510 Ohms ±5% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201	ERJ-1GNJ511C	Panasonic Electronic Compon		
R50, R75	2	1k	1 kOhms ±5% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Automotive AEC-Q200 Thick Film	0201	ERJ-1GNJ102C	Panasonic Electronic Compon		
R52	1	1.96k	Res Thick Film 0201 1.96K Ohm 1% 1/20W 200ppm/C Molded SMD T/R	0201	ERJ-1GNF1961C	Panasonic		
R53, R54, R55, R56	4	3.83	RES, 3.83, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04023R83FKED	Vishay-Dale		
R114, R117, R119, R126	4	61.9	RES, 61.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040261R9FKED	Vishay-Dale		
R158, R170, R172	3	82.5k	Res Thick Film 0201 82.5K Ohm 1% 1/20W ±200ppm/C Molded SMD SMD T/R	0201	ERJ-1GNF8252C	Panasonic		
R159, R171	2	750	Res Thick Film 0201 750 Ohm 5% 0.05W(1/20W) ±200ppm/C Pad SMD Automotive T/R	0201	ERJ-1GNJ751C	Panasonic Electronic Compon		
R174, R176	2	7.87k	Res Thick Film 0201 7.87K Ohm 1% 1/20W ±200ppm/C Molded SMD SMD T/R	0201	ERJ-1GNF7871C	Panasonic		
RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9	9		RES ARRAY 4 RES ZERO OHM 0502	0502	EXB-18VR000X	Panasonic Electronic Compon		
S1, S2	2		Switch, Slide, SPST 4 poles, SMT	SW, SMT Half Pitch 4SPST, 5.8x2.7x6.25 mm	218-4LPST	CTS Electrocomponents		
S3	1		SWITCH SLIDE DIP SPST 100MA 6V	SMT_SW_5MM4_2M M5	CHS-01TA	Nidec Copal Electronics		
SW2, SW3	2		SWITCH TACTILE SPST-NO 0.05A 12V	3x1.6x2.5mm	B3U-1000P	Omron Electronic Component		
TP20	1		PC Test Point, Loop Brass, Tin Plating 0.047" (1.19mm) Hole Diameter Mounting Type	HDR1	4953	Keystone Electronics		
U1	1		4-A + 2.5-A + Two 1.5-A Buck Converters With Integrated Switches, RNFO026C (VQFN-HR-26)	RNF0026C	LP87524JRNFRQ1	Texas Instruments	LP87524JRNFTQ1	Texas Instruments
U2	1		AWR1843AoPBGALP	FCBGA180	AWR1843AoPBGALP	Texas Instruments		
U3	1		I/O Controller Interface IC USB to Dual UART bridge	QFN24-EP	CP2105-F01-GMR	Silicon Labs		
U5	1		Automotive Grade, 1.4V-Capable +/-0.5degC Temperature Sensor with Alert Function and I2C/SMBus, DRL0006A (SOT-OTHER-6)	DRL0006A	TMP112AQDRLRQ1	Texas Instruments		Texas Instruments
U6	1		8KB I2C SER EEPROM TSOT 23	TSOT-23-5	CAT24C08TDI-GT3	ON Semiconductor		

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U8	1		SimpleLink(TM) Bluetooth(R) 5 low energy Wireless MCU, RGZ0048A (VQFN-48)	RGZ0048A	CC2642R1FRGZR	Texas Instruments	CC2642R1FRGZT	Texas Instruments
U9	1		2.3V-3.6V, 16M-BIT [x 1/x 2/x 4] CMOS FLASH Memory, WSON-8	WSON-8	MX25V1635FZDQ	Macronix International Co., LT		
U10	1		Low-Voltage 8-Bit I2C and SMBus I/O Expander, 1.65 to 5.5 V, -40 to 85 degC, 16-pin UQFN (RSV), Green (RoHS & no Sb/Br)	RSV0016A	TCA6408ARSVR	Texas Instruments		
U11	1		1-Channel, 2:1 Analog Switch, DSF0006A (X2SON-6)	DSF0006A	SN74LVC1G3157DSFR	Texas Instruments		
U12, U17	2		Automotive Fault Protected CAN Transceiver With Flexible Data-Rate, DRB0008F (VSON-8)	DRB0008F	TCAN1042HGVDRBRQ1	Texas Instruments	TCAN1042HGVDRBTQ1	Texas Instruments
U13	1		10-Ohm Quad SPDT Analog Switch, RSV0016A (UQFN-16)	RSV0016A	TS3A5018RSVR	Texas Instruments		Texas Instruments
U15	1		Dual 10-ohm SPDT Analog Switch, RSE0010A (UQFN-10)	RSE0010A	TS5A23157RSER	Texas Instruments		Texas Instruments
U16	1		AND Gate IC 1 Channel 6-SON (1x1)	X2SON-6	SN74LVC1G11DSFR	Texas Instruments		
U18	1		Automotive Catalog Dual 15-Ohm SPDT Analog Switch, DGS0010A (VSSOP-10)	DGS0010A	TS5A23157QDGSRQ1	Texas Instruments		Texas Instruments
U19	1		Dual In / Single Out Autoswitching Power Mux, 2.8 to 5.5 V, -40 to 85 degC, 8-pin SON (DRB), Green (RoHS & no Sb/Br)	DRB0008B	TPS2115ADRBR	Texas Instruments		
Y1	1		40MHz ±10ppm Crystal 8pF 50 Ohms 4-SMD, No Lead	4-SMD-2.0x1.6mm	FW4000044Q	Diodes		
Y2	1		48MHz ±20ppm Crystal 7pF 50 Ohms 4-SMD, No Lead	SMD4	CX2016DB48000C0WP LA2	Kyocera		
Y3	1		CRYSTAL 32.768KHZ 4PF SMD	XTAL_SMT_1MM6_1MM0	ABS05W-32.768KHZ-D-2-T	Abracon LLC		
C5, C11, C15, C16, C115, C116	0		1µF ±20% 16V Ceramic Capacitor X5R 0201	0201	CL03A105M03NRNH	Samsung Electro-Mechanics		
C7	0	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402	CL05A106MP5NUNC	Samsung Electro-Mechanics		
C8	0		CAP CER 10000PF 25V X5R 0201	0201	CL03A103KA3NNNC	Samsung Electro-Mechanics		
C9, C10, C13, C114, C118, C119	0		Cap Ceramic 0.1uF 35V X5R 10% Pad SMD 0201 85C T/R	0201 (0603 Metric)	GRM033R6YA104KE14 D	Murata Electronics North Ame		
C17, C18	0		Cap Ceramic 8pF 50V C0G 0.1pF SMD 0201 125°C Paper T/R	0201 (0603 metric)	GRM0335C1H8R0BA01 D	Murata		
C38, C39	0		CAP CER 12PF 25V C0G/NP0 0201	0201	250R05L120JV4T	Johanson Technology Inc.		
C104	0	1.8pF	CAP, CERM, 1.8 pF, 50 V, +/- 6%, C0G/NP0, 0402	0402	GJM1555C1H1R8BB01 D	MuRata		
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		
J4, J6	0		Easy-On™ Type FFC/FPC Connector, Right-Angle, Surface Mount, ZIF, Bottom Contact Style, 1.10mm Mated Height, 10 Circuits	CONN_SMD_FFC	51441-1093	Molex		
R10, R11, R88, R130, R132, R133, R135, R137, R138, R140	0		RES SMD 20 OHM 1% 1/20W 0201	0201	AC0201FR-0720RL	Yageo		
R18, R20, R77, R78, R80, R81, R82, R93, R96, R98	0		10 kOhms ±0.5% 0.05W, 1/20W Chip Resistor 0201 (0603 Metric) Thin Film	0201	RR0306P-103-D	Susumu		
R30, R66, R70, R71, R72, R73, R76, R97, R106, R115, R160, R166, R168, R182, R183, R184, R185, R188, R189	0		RES SMD 0 OHM JUMPER 1/20W 0201	0201 (0603 Metric)	RC0201JR-070RL	Yageo		
R79, R180, R181	0		RESISTOR, 0201, 0.05W, 1%, 4K7	0201	ERJ-1GNF4701C	Panasonic Electronic Compon		
R92	0	100k	RES, 100 k, 1%, 0.05 W, 0201	0201	CRCW0201100KFKED	Vishay-Dale		
R103	0	0	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	0201	ERJ-1GN0R00C	Panasonic		
U4	0		Single Output High PSRR LDO, 200 mA, Fixed 3 V Output, 2.7 to 5.5 V Input, 5-pin SOT-23 (DBV), -40 to 85 degC, Green (RoHS & no Sb/Br)	DBV0005A	TPS79330DBVR	Texas Instruments		
U7	0		IMU ACCEL/GYRO/MAG I2C 32BIT	LGA28	BNO085	Hillcrest Laboratories, Inc.		
U14	0		Automotive 4-Bit Bidirectional Voltage-Level Translator with Auto Direction Sensing and +/-15kV ESD, RUT0012A (UQFN-12)	RUT0012A	TXB0104QRUTRQ1	Texas Instruments		Texas Instruments
Y4	0		CRYSTAL 32.768KHZ 4PF SMD	XTAL_SMT_1MM6_1MM0	ABS05W-32.768KHZ-D-2-T	Abracon LLC		

Notes:

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

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