

TIDA-010274EVM

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board	-	-	-		
C1, C4, C5	3	1uF	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	805	C0805C105K5RACTU	Kemet		
C2, C3	2	1000pF	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0201	201	GRM033R71E102KA01D	MuRata		
C6, C16, C17, C18, C19, C20, C21, C25, C26, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C52, C55, C56, C57, C242, C243, C244, C245, C246, C247, C271	35	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0603	603	GRM188R61A106ME69D	MuRata		
C7, C8, C9, C10, C11, C12, C13, C14, C15, C65, C66, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C83, C84, C85, C86, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C22, C23, C24, C27, C28, C29, C30, C31, C32, C48, C50, C51, C53, C54, C118, C119, C261, C265	88	0.1uF	CAP, CERM, 0.1 uF, 16 V,+/- 10%, X7R, 0201	201	GRM033Z71C104KE14D	MuRata		
C22, C23, C24, C27, C28, C29, C30, C31, C32, C48, C50, C51, C53, C54, C118, C119, C261, C265	18	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X5R, 0402	402	GRM155R61E104KA87D	MuRata		
C49, C58, C59, C60, C61, C62, C63, C64	8	1uF	CAP, CERM, 1 uF, 25 V,+/- 10%, X5R, 0402	402	GRM155R61E105KE11D	MuRata		
C168, C169, C170, C171, C179, C180, C181, C182, C193, C194, C201, C202, C203, C204, C205, C206, C214, C215, C222, C223, C224, C225, C230, C231, C232, C233	26	0.1uF	CAP, CERM, 0.1 uF, 16 V,+/- 10%, X7R, 0201	0201L	GRM033Z71C104KE14D	MuRata		

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C235, C236, C237, C238	4	100pF	CAP, CERM, 100 pF, 25 V, +/- 5%, C0G/NP0, 0201	201	C0603C0G1E101J030B A	TDK		
C240, C241, C267, C268	4	4.7uF	CAP, CERM, 4.7 uF, 10 V, +/- 20%, X5R, 0402	402	GRM155R61A475MEAA D	MuRata		
C252	1	3.3uF	CAP, CERM, 3.3 uF, 25 V, +/- 10%, X5R, 0603	603	C1608X5R1E335K080A C	TDK		
C269, C270	2	18pF	CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0402	402	C1005C0G1H180J050B A	TDK		
D1	1	15V	Diode, TVS, Bi, 15 V, 24.4 Vc, SMB	SMB	SMBJ15CA	Fairchild Semiconductor		
D2	1	30V	Diode, Schottky, 30 V, 1 A, SOD-123	SOD-123	MBR130T1G	ON Semiconductor		
D3, D4, D5, D6, D7, D8, D9, D10	8	Green	LED, Green, SMD	LED_0603	LTST-C191TGKT	Lite-On		
D11, D12, D13	3	Red	LED, Red, SMD	Red LED, 1.6x0.8x0.8mm	LTST-C190KRKT	Lite-On		
D14, D15	2	100V	Diode, Switching, 100 V, 0.15 A, SOD-123	SOD-123	1N4148W-TP	Micro Commercial Components		
FanNotes1	1		Fan Assembly note	-	-	-		
FB1, FB2, FB8, FB9, FB10, FB11, FB12, FB13, FB14, FB15, FB16, FB17, FB18, FB19, FB20, FB21, FB22, FB23	18		Chip Ferrite Bead, 0402, 120Ω @ 100MHz, 0.095Ω, 25%, 1.5A	402	BLM15EG121SN1D	Murata		
FB3, FB4, FB5, FB6, FB7	5		30 Ohms @ 100MHz 1 Power Line Ferrite Bead 0805 (2012 Metric) 8.5A 4mOhm	805	BLM21SN300SN1D	Murata		
FID1, FID2, FID3, FID4, FID5, FID6	6		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		
H1, H2, H3, H4, H5, H6, H7, H8	8		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H9, H10, H11, H12, H13, H15	6		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone		
H14	1		Exceptional Heat Dissipation for MOSFET	10x10mm	MOS-C10	Enzotech		
J1	1		Power Jack, mini, 2.1mm OD, R/A, TH	Jack, 14.5x11x9mm	RAPCT22X	Switchcraft		
J2	1		Connector, Receptacle, Mini-USB Type B, R/A, Top Mount SMT	USB Mini Type B	1734035-2	TE Connectivity		
J3	1		Header, 100mil, 8x2, Gold, TH	8x2 Header	TSW-108-07-G-D	Samtec		
J4	1		Header, 100mil, 16x2, Gold, TH	16x2 Header	TSW-116-07-G-D	Samtec		
J5, J13, J14	3		40 Position Connector Differential Pair Array, Female Surface Mount Gold	HDR40	QSH-020-01-F-D-DP-A	Samtec		
J6, J7	2		Header, 2.54mm, 2x1, Vertical, TH	Header, 2.54mm, 2x1, TH	22-23-2021	Molex		
J8, J9, J10, J11	4		CONN SMA JACK STR 50 OHM SMD	CONN_SMA_JACK	132134-15	Amphenol Connex		
J12	1		Connector, 1.27mm, 40x10, Black, SMT	-	ASP-184330-01	Samtec		
L1, L2, L3, L4	4	5.6nH	Inductor, Multilayer, Air Core, 5.6 nH, 0.3 A, 0.2 ohm, SMD	0402 polarized	LQG15HS5N6S02D	MuRata		
L5, L6	2	120 ohm	Ferrite Bead, 120 ohm @ 100 MHz, 0.5 A, 0402	402	74279271	Würth Elektronik		
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		
MP8	1		Heat Sink Passive BGA Straight Adhesive 9.3C/W Black Anodized	BGA_HEATSINK_17MM0_17MM0	ATS-54170R-C1-R0	Advanced Thermal Solutions		
MP9, MP11	2		CONN 22-30AWG CRIMP TIN	-	8500113	Molex		
MP10	1		CONN RCPT HSG 2POS 2.54MM	-	22013027	Molex		
MP12	1		Fan Tubeaxial 5VDC Square - 17mm L x 17mm H Sleeve 0.636 CFM (0.018m³/min) 2 Wire Leads	FAN_17MM0_17MM0	F17HA-05HC	Nidec Copal		
MP13, MP14	2		MACHINE SCREW PAN PHILLIPS 2-56, 0.5"	-	PMSSS 256 0050 PH	B&F Fastener Supply		
Q1	1	20V	MOSFET, N-CH, 20 V, 10 A, DQK0006C (WSON-6)	DQK0006C	CSD15571Q2	Texas Instruments		None
Q2	1	40 V	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23	MMBT3904	Fairchild Semiconductor		
R2, R3, R64, R65, R70, R73	6	10	RES, 10, 5%, 0.05 W, 0201	201	RC0201JR-0710RL	Yageo America		

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R4, R14, R15, R16, R17, R19, R20, R21, R26, R27, R36, R50, R54, R56, R59, R60, R62, R63, R67, R68, R71, R72, R75, R76, R77, R78, R81, R82, R87, R96, R98, R103, R104, R105, R107, R108, R109, R110, R111, R112, R118, R124, R128, R129, R141, R142, R145,	68	0	RES, 0, 5%, 0.05 W, 0201	201	CRCW02010000Z0ED	Vishay-Dale		
R5, R18, R22, R23, R25, R28, R30, R32, R34, R35, R37, R38, R39, R40, R42, R43, R44, R45, R46, R47, R48, R49, R51, R57, R85, R117, R133, R134, R135, R143, R144, R150, R151, R152, R154, R155, R185, R186	38	10.0k	RES, 10.0 k, 1%, 0.05 W, 0201	201	CRCW020110K0FKED	Vishay-Dale		
R6, R9, R12, R13	4	100	RES, 100, 1%, 0.05 W, 0201	201	RC0201FR-07100RL	Yageo America		
R7, R114, R115	3	1.0Meg	RES, 1.0 M, 5%, 0.05 W, 0201	201	RC0201JR-071ML	Yageo America		
R10	1	45.3k	RES, 45.3 k, 1%, 0.05 W, 0201	201	RC0201FR-0745K3L	Yageo America		
R11	1	2.2 kΩ	RES SMD 2.2K OHM 1% 1/8W 0805	805	ERJ-6ENF2201V	Panasonic Electronic Components		
R24, R29, R31, R33, R41, R97, R139, R140, R153, R165	10	0	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402	CRCW04020000Z0ED	Vishay-Dale		
R52, R127, R130, R131, R132, R136, R137, R138	8	750	RES, 750, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402	CRCW0402750RFKED	Vishay-Dale		
R58, R79	2	49.9	RES, 49.9, 1%, 0.05 W, 0201	201	CRCW020149R9FKED	Vishay-Dale		
R80, R86, R126, R179, R180, R181, R182, R183, R184	9	1.00k	RES, 1.00 k, 1%, 0.05 W, 0201	201	RC0201FR-071KL	Yageo America		
R83, R84, R102, R113	4	100 Ω	RES SMD 100 OHM 5% 1/10W 0402	402	ERJ-2GEJ101X	Panasonic Electronic Components		
R89	1	100 kΩ	RES SMD 100K OHM 5% 1/10W 0402	402	ERJ-2GEJ104X	Panasonic Electronic Components		
R116	1	1.50k	RES, 1.50 k, 1%, 0.05 W, 0201	201	RC0201FR-071K5L	Yageo America		
R125	1	3.6 kΩ	RES SMD 3.6K OHM 1% 1/10W 0402	402	ERJ-2RKF3601X	Panasonic Electronic Components		
R160	1	2.20k	RES, 2.20 k, 1%, 0.05 W, 0201	201	RC0201FR-7D2K2L	Yageo America		
R166	1	12.0k	RES, 12.0 k, 1%, 0.05 W, 0201	201	RC0201FR-0712KL	Yageo America		
R173, R174, R175, R176, R177, R178	6	47k	RES, 47 k, 5%, 0.05 W, 0201	201	RC0201JR-0747KL	Yageo America		

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SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9, SH-J10, SH-J11, SH-J12, SH-J13, SH-J14, SH-J15, SH-J16	16		Shunt, 2.54mm, Gold, Black	Shunt, 2.54mm, Black	60900213421	Würth Elektronik		
SW1	1		SWITCH TACTILE SPST-NO 0.05A 24V	-	FSMSM	TE Connectivity		
TP1, TP12, TP13	3		Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone Electronics, Keystone		
TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP14	11		Test Point, Miniature, Red, TH	Red Miniature Testpoint	5000	Keystone		
U1	1		Future Technology Devices International Ltd FT4232H Quad High Speed USB to Multipurpose UART/MPSSE IC, VQFN-56	VQFN-56	FT4232H-56Q-TRAY	FTDI		
U2	1		12V, 5A, 30mΩ eFuse with Adjustable +/-15% Accurate Current Limit, DRC0010J (VSON-10)	DRC0010J	TPS259261DRCR	Texas Instruments	TPS259261DRCT	Texas Instruments
U3	1		1K Microwire Compatible Serial EEPROM, TSSOP-8	TSSOP-8	93LC46B-I/ST	Microchip		
U4, U5, U6, U7, U8, U9, U10	7		40-V, Integrated Sense Element, 16-Bit, Precision Power/Energy/Charge Monitor With I2C Interface	VQFN14	INA745AIRELR	Texas Instruments		
U11	1				DAC39RF10ACK	Texas Instruments		
U12	1		10.4-GSPS single-channel or 5.2-GSPS dual-channel, 12-bit, RF-sampling analog-to-digital converter (ADC), AAV0144A (FCBGA-144)	AAV0144A	ADC12DJ5200RFAAV	Texas Instruments		Texas Instruments
U13, U15	2		RF IC	WQFN-FCRLF12	TRF1208RPVR	Texas Instruments		
U14, U16	2		10MHz to 12GHz 3-dB BW, Differential to Single-Ended Amplifier	WQFN-FCRLF12	TRF1108	Texas Instruments		
U17	1		Push-pull, supply voltage supervisor with manual reset	SOT-23	TPS3125J18DBV	Texas Instruments		
U18	1		Dual Micro-Power Rail-to-Rail Input CMOS Comparator with Push-Pull Output, 8-pin Narrow SOIC, Pb-Free	D0008A	LMC6762AIM/NOPB	Texas Instruments		
U19	1		+/-2degC Dual Remote and Local Temperature Sensor with TruTherm Technology and SMBus Interface, NHL0014B (WSON-14)	NHL0014B	LM95233CISD/NOPB	Texas Instruments		
U20, U21	2		Single Bus Buffer Gate With 3-State Outputs, DCK0005A, LARGE T&R	DCK0005A	SN74LVC1G125DCKR	Texas Instruments		
U22, U23	2		4-Bit Dual-Supply Bus Transceiver With Configurable Voltage-Level Shifting and 3-State Outputs, RSV0016A (UQFN-16)	RSV0016A	SN74AVC4T774RSVR	Texas Instruments		Texas Instruments
Y1	1		Crystal, 12 MHz, 18 pF, SMD	ABM3	ABM3-12.000MHZ-D2Y-T	Abracon Corporation		
C79, C80, C81, C82	0	1pF	CAP, CERM, 1 pF, 25 V,+/- 5%, C0G/NP0, 0201	201	GJM0335C1E1R0WB01D	MuRata		
C87, C88	0	3 pF	CAP CER 3PF 25V C0G/NP0 0201	201	GJM0335C1E3R0CB01D	Murata Electronics		
C89, C90	0	2 pF	CAP CER 2PF 50V C0G/NP0 0201	201	GJM0335C1H2R0WB01D	Murata Electronics		
R1	0	12.0k	RES, 12.0 k, 1%, 0.05 W, 0201	201	RC0201FR-7D12KL	Yageo America		
R8	0	4.99k	RES, 4.99 k, 1%, 0.05 W, 0201	201	RC0201FR-074K99L	Yageo America		
R53	0	100	RES, 100, 1%, 0.05 W, 0201	201	CRCW0201100RFKED	Vishay-Semiconductor		
R55, R120, R121, R167, R168, R169, R170	0	100	RES, 100, 1%, 0.05 W, 0201	201	RC0201FR-7D100RL	Yageo America		
R61, R66	0	140	RES, 140, 1%, 0.05 W, 0201	201	CRCW0201140RFKED	Vishay-Dale		
R69, R74	0	49.9	RES, 140, 1%, 0.05 W, 0201	201	CRCW020149R9FKED	Vishay-Dale		
R88, R90, R91	0	0	RES, 0, 5%, 0.063 W, 0402	402	RC0402JR-070RL	Yageo America		
R92, R94, R95, R100, R101, R106	0	0	RES, 0, 5%, 0.05 W, 0201	201	CRCW02010000Z0ED	Vishay-Dale		
R93, R99	0	0	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	201	ERJ-1GN0R00C	Panasonic		
R119, R122, R123, R171, R172	0	100	RES, 100, 1%, 0.05 W, 0201	201	RC0201FS-7D100RL	Yageo America		

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