

TIDA-01602

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
!PCB1	1		Printed Circuit Board		TIDA-01602	Any	-	-
C1, C2	2	47uF	CAP, TA, 47 uF, 35 V, +/- 10%, 0.3 ohm, SMD	7343-43	T495X476K035ATE300	Kemet		
C3	1	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	0402	GRM155R71H104ME14D	MuRata		
C4, C5	2	22uF	CAP, CERM, 22 uF, 35 V, +/- 20%, X5R, 0805	0805	C2012X5R1V226M125AC	TDK		
C6, C7, C9	3	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0402	0402	C1005X7R1H104K050BB	TDK		
C8, C10	2	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402	GRM1555C1H102FA01D	MuRata		
C12, C22	2	6.8uF	CAP, CERM, 6.8 uF, 25 V, +/- 10%, X5R, 0603	0603	C1608X5R1E685K080AC	TDK		
C13, C19	2	1uF	CAP, CERM, 1 uF, 35 V, +/- 10%, JB, 0402	0402	C1005JB1V105K050BC	TDK		
C14	1	0.22uF	CAP, CERM, 0.22 uF, 10 V, +/- 20%, X5R, 0402	0402	885012105011	Würth Elektronik		
C15, C16, C17	3	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0402	0402	C1005X7R1H104K050BB	TDK		
C18	1	560pF	CAP, CERM, 560 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402	GRM1555C1H561JA01D	MuRata		
C20, C21	2	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X6S, 0201	0201	C0603X6S1C104K030BC	TDK		
C23	1	4.7uF	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X5R, 0603	0603	C1608X5R1V475K080AC	TDK		
C24, C25, C26, C27	4	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7R1H103K050BB	TDK		
C28	1	0.1uF	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0402	0402	C1005X5R1A104K050BA	TDK		
D2	1	40V	Diode, Schottky, 40 V, 5 A, AEC-Q101, SOD-128	SOD-128	PMEG4050EP,115	Nexperia		
D3	1	30V	Diode, Schottky, 30 V, 2 A, 2-XFDFN	2-XFDFN	NSR20F30NX15G	ON Semiconductor		
D4, D5, D6, D7, D8, D9, D10	7	Green	LED, Green, SMD	LED_0805	150080GS75000	Würth Elektronik		
D11, D12	2		1-Channel ESD Protection Diode With Low Dynamic Resistance and Low Clamping Voltage, DPY0002A (X1SON-2)	DPY0002A	TPD1E1B04DPYR	Texas Instruments	TPD1E1B04DPYT	Texas Instruments
J1	1		Plug, USB3.1 TypeC, 22 Position, R/A, SMT	Plug, USB3.1 TypeC, 22 Position, R/A, SMT	632 712 000 011	Würth Elektronik		
J2	1		Connector, Receptacle, USB Type C, R/A	Connector, Receptacle, USB Type C, R/A, THT/SMT	632 723 300 011	Würth Elektronik		
J3	1		Plug, USB 2.0 Type A, Gold, R/A, SMT	Plug, USB 2.0 Type A, R/A, SMT	629004113921	Würth Elektronik		
L1	1	10uH	Inductor, Wirewound, Metal Composite, 10 uH, 5 A, 0.0265 ohm, SMD	6.65x6.45mm	74439346100	Würth Elektronik		
L2, L3	2	100 ohm	Ferrite Bead, 100 ohm @ 100 MHz, 8 A, 1812	1812	74279226101	Würth Elektronik		
Q1	1	-30V	MOSFET, 2-CH, P-CH, -30 V, -60 A, 610x604x515mm	610x604x515mm	SI7997DP-T1-GE3	Vishay-Siliconix		None
Q2	1	30V	MOSFET, N-CH, 30 V, 0.35 A, AEC-Q101, SOT-323	SOT-323	NX3008NBKW,115	NXP Semiconductor		None
Q3, Q4, Q5, Q6, Q7, Q8, Q9	7	30V	MOSFET, N-CH, 30 V, 5.9 A, YJK0003A (PICOSTAR-3)	YJK0003A	CSD17585F5T	Texas Instruments		None
R1	1	26.1k	RES, 26.1 k, 1%, 0.063 W, 0402	0402	CRCW040226K1FKED	Vishay-Dale		
R2	1	10	RES, 10, 5%, 0.063 W, 0402	0402	CRCW040210R0JNED	Vishay-Dale		
R3	1	60.4k	RES, 60.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2RFK6042X	Panasonic		
R4, R8	2	10k	RES, 10 k, 5%, 0.063 W, 0402	0402	CRCW040210K0JNED	Vishay-Dale		
R5	1	270	RES, 270, 5%, 0.063 W, 0402	0402	CRCW0402270R0JNED	Vishay-Dale		
R6	1	4.75k	RES, 4.75 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	RMCF0402FT4K75	Stackpole Electronics Inc		
R7	1	2.94k	RES, 2.94 k, 1%, 0.063 W, 0402	0402	CRCW04022K94FKED	Vishay-Dale		
R9	1	14.0k	RES, 14.0 k, 1%, 0.063 W, 0402	0402	CRCW040214K0FKED	Vishay-Dale		
R10	1	19.1k	RES, 19.1 k, 1%, 0.063 W, 0402	0402	CRCW040219K1FKED	Vishay-Dale		
R11	1	49.9	RES, 49.9, 1%, 0.063 W, 0402	0402	RC0402FR-0749R9L	Yageo America		
R12	1	3.16k	RES, 3.16 k, 1%, 0.063 W, 0402	0402	CRCW04023K16FKED	Vishay-Dale		
R13	1	3.32k	RES, 3.32 k, 1%, 0.063 W, 0402	0402	CRCW04023K32FKED	Vishay-Dale		
R14	1	100k	RES, 100 k, 1%, 0.063 W, 0402	0402	CRCW0402100KFKED	Vishay-Dale		
R15	1	100	RES, 100, 5%, 0.063 W, 0402	0402	CRCW0402100R0JNED	Vishay-Dale		
R16	1	120	RES, 120, 5%, 0.5 W, 0805	0805	ERJ-P06J121V	Panasonic		
R17, R18, R27	3	2.2	RES, 2.2, 5%, 0.05 W, 0201	0201	RC0201JR-072R2L	Yageo America		
R19	1	100k	RES, 100 k, 1%, 0.1 W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R20, R21	2	10.0k	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	RMCF0402FT10K0	Stackpole Electronics Inc		
R22, R23, R24	3	100k	RES, 100 k, 5%, 0.1 W, 0603	0603	CRCW0603100KJNEA	Vishay-Dale		
R25, R26, R33	3	249k	RES, 249 k, 1%, 0.1 W, 0603	0603	RC0603FR-07249KL	Yageo America		
R29, R30, R31	3	0	RES, 0, 5%, 0.1 W, 0603	0603	ERJ-3GEY0R00V	Panasonic		
R32, R34	2	0	RES, 0, 5%, 0.1 W, 0603	0603	RC0603JR-070RL	Yageo America		
R35, R36, R37, R54	4	10.0k	RES, 10.0 k, 1%, 0.05 W, 0201	0201	RC0201FR-0710KL	Yageo America		
R38, R43, R46, R50	4	10.0k	RES, 10.0 k, 0.1%, 0.063 W, 0402	0402	MCR01MRTF1002	Rohm		
R39, R42, R48, R52	4	249k	RES, 249 k, 1%, 0.063 W, 0402	0402	CRCW0402249KFKED	Vishay-Dale		
R40	1	10.5k	RES, 10.5 k, 1%, 0.05 W, 0201	0201	RC0201FR-0710K5L	Yageo America		
R41	1	15.4k	RES, 15.4 k, 1%, 0.05 W, 0201	0201	RC0201FR-0715K4L	Yageo America		
R44	1	30.9k	RES, 30.9 k, 1%, 0.05 W, 0201	0201	RC0201FR-0730K9L	Yageo America		
R45	1	10.7k	RES, 10.7 k, 1%, 0.05 W, 0201	0201	RC0201FR-0710K7L	Yageo America		
R47	1	11.5k	RES, 11.5 k, 1%, 0.05 W, 0201	0201	RC0201FR-0711K5L	Yageo America		
R49	1	2.00k	RES, 2.00 k, 1%, 0.05 W, 0201	0201	RC0201FR-072KL	Yageo America		
R51	1	26.7k	RES, 26.7 k, 1%, 0.05 W, 0201	0201	RC0201FR-0726K7L	Yageo America		
R53	1	3.00k	RES, 3.00 k, 1%, 0.05 W, 0201	0201	RC0201FR-073KL	Yageo America		
U1	1		Connector, DC Power Jack, R/A, 3 Pos, TH	Power connector	JPD1135-509-7F	Foxconn		
U2	1		Hysteretic PFET Buck Controller with Enable Pin, 8-pin MSOP, Pb-Free	DGK0008A	LM3489QMMX/NOBP	Texas Instruments		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
U3	1		USB Type-C and USB PD Source Controller, RGE0024H (VQFN-24)	RGE0024H	TPS25740BRGER	Texas Instruments	TPS25740BRGET	Texas Instruments
U4	1		USB Type-C 1.5 A DFP Controller and Power Switch, DSS0012B (WSON-12)	DSS0012B	TPS25820DSS	Texas Instruments		Texas Instruments
U5, U6	2		Low Power Low Offset Voltage Dual Comparator, 8-pin Micro SMD	TLA08AAA	LM393TL/NOPB	Texas Instruments		
U7	1		SPST USB 2.0 High-Speed Switch With Battery Charging Detection, RSE0010A (UQFN-10)	RSE0010A	BQ24392RSEER	Texas Instruments		Texas Instruments
U8	1		33V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A	TVS3300DRVR	Texas Instruments	TVS3300DRVT	Texas Instruments
FID1, FID2, FID3, FID4, FID5, FID6	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		

Notes:

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

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