

Variant: 001
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TID #: TIDA-010282

TIDA-010282 REV C Bill of Materials



Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	Package/Reference
1	PCB1	1		TIDA-010282	Any	Printed Circuit Board	
2	C1, C78, C83	2	2.2uF	GRM155R61A225ME35	MuRata	CAP, CERM, 2.2 uF, 10 V, +/- 20%, X5R, 0402	0402
3	C2, C4, C5, C21, C24, C29, C30, C42, C43, C58, C65, C70, C71, C74, C79, C80, C81, C82	18	0.1uF	GRM155R71H010A1E14D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	0402
4	C3, C34, C32, C35, C36, C68, C72, C78	8	10uF	GRM218R9Y1A109KE43L	MuRata	CAP, CERM, 10 uF, 35 V, +/- 10%, X5R, 0805	0805
5	C6	1	470uF	8.61141E+11	Wurth Electronics	470 uF 450 V Aluminum Electrolytic Capacitors Radial, Can - Snap-In	RADIAL
6	C8, C9, C23, C33, C37, C39, C48, C50, C52, C53, C61, C63, C64, C79	14	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
7	C10, C11, C16	3	2200pF	DE2BKV222MA28M01F	MuRata	CAP, CERM, 2200 pF, X1 250 VAC/V2 250 VAC, +/- 20%, E, 8x5mm	8x5mm
8	C12, C13	2	1uF	880414026007C-3	Wurth Electronics	1 uF Film Capacitor, 310V 630V Polypropylene (PP), Metallized Radial	RADIAL
9	C14, C59	2	270pF	GRM155R71H071KA01D	MuRata	CAP, CERM, 270 pF, 50 V, +/- 10%, X7R, 0402	0402
10	C15, C25, C27, C32, C46, C47, C69	7	1000pF	GCM155R71H020KA37D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
11	C17, C18, C40, C41, C57, C59	6	100nF	8.85382E+11	Wurth Electronics	Multilayer Ceramic Chip Capacitor 1812 100V +/-10% X7R	1812
12	C19, C20	2	22nF	8.85342E+11	Wurth Electronics	0.022 uF +/-10% 630V Ceramic Capacitor X7R 1206 (3216 Metric)	1206
13	C26, C31	2	0.01uF	GRM155R71H03KA88D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0402	0402
14	C34, C44, C45, C59	4	2.2uF	C2012X7R1V225K08SAC	TDK	CAP, CERM, 2.2 uF, 35 V, +/- 10%, X7R, 0805	0805
15	C38, C54, C55, C56	4	0.047uF	C1005X7R1H473K050BB	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0402	0402
16	C58	1	0.33uF	C1608X7R1H334K080AC	TDK	CAP, CERM, 0.33 uF, 50 V, +/- 10%, X7R, 0603	0603
17	C67	1			Wurth Elektronik	WCAP-ATG5 Aluminum Electrolytic Capacitor, Radial, THT, D6.3 x H11mm, 100uF, 30V	
18	C73, C77	2	10uF	GRM155R61A100ME11D	MuRata	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402
19	D1, D11, D15	3	18V	MMS25248B5-7-F	Diodes Inc.	Diode, Zener, 18 V, 200 mW, SOD-323	SOD-323
20	D2, D10, D14, D18	4	600V	UFM152PL-TP	Micro Commercial Component	Diode, Ultrafast, 600 V, 1 A, SOD-123FL	SOD-123FL
21	D4, D6	2		S3JB-13-F	Diodes Inc.	Diode 600 V 3A Surface Mount SMB	SMB
22	D5, D7, D9, D12, D13	5	30V	BAT54WS-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323
23	F1	1		0673010 MXE	Littelfuse Inc	10 A 250 V AC Fuse Cartridge, Glass Through Hole Cartridge, Non-Standard (Axial)	AXIAL
24	J1	1		83P-VH(LF)(S/N)	JST Manufacturing	Header (Shrouded), 3.96mm, 3x1, Tin, TH	Header (Shrouded), 3.96mm, 3x1, TH
25	J2	1		61300411121	Wurth Elektronik	Header, 2.54 mm, 4x1, Gold, TH	Header, 2.54mm, 4x1, TH
26	J3	1		1-1318300-3	TE Connectivity	Header, 312mil, 3x1, Tin, TH	19.7x10.7 x8.5 mm
27	J4	1		TSW-107-07-G-5	Santec	Header, 100mil, 7x1, Gold, TH	7x1 Header
28	J5	1		SSD-C-2C-BM-45-20P-X025	Samtec	5mm B1B Plug 50 Pins	CONN PLUG, 50
29	K1	1		GSQ-144-EU DC12	Ontron	Electromechanical Relay SPST-NO 5(N/O)3(NC)ADC10(N/O)3(NC)AAC	PTH_RELAY_20MM0.10MM0
30	L1	1	1.03mH	YAS20586AT	Yazhi	RF-COIL CHOKES 1.03mH 12m 100MHz TH	RADIAL
31	L2	1		7448041104	Wurth Electronics	Common Mode Chokes Dual 4mH 10mHz 11A 8.5mOhm DCR Thru-Hole TIR	PTH_CMC_28MM0.18MM0
32	L3, L6	2	100 ohm	742792723	Wurth Elektronik	Resistor Bland, 100 ohm @ 100 MHz, 1.2 A, 0402	0402
33	L4	1	1.8mH	768772182	Wurth Elektronik	Inductor, Shielded Drum Core, Metal Composite, 1.8 mH, 0.35 A, 2.7 ohm, TH	Dia 8x10mm
34	L5	1	4.7uH	78438325047	Wurth Elektronik	Inductor, Shielded, Powdered Iron, 4.7 uH, 1.5 A, 0.162 ohm, AEC-Q200 Grade 1, SMD	SMD, 2-Leads, Body 3x3mm
35	LBL1	1		TH1-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
36	MP1, MP2, MP3, MP4	4		970130365	Wurth Electronics		SFCAER_M3
37	MP5, MP6, MP7, MP8	4		RM3X8MM 2701	APM HEXSEAL	MACHINE SCREW PAN PHILLIPS M3	M3 Screw
38	Q1, Q3	2	600V	JPL60R18SC7AUMAL	Infineon Technologies	MOSFET, N-CH, 600 V, 13 A, PG-VSON-4	PG-VSON-4
39	Q2	1	60V	2N7000P-215	Neoprene	MOSFET, N-CH, 60 V, 0.36 A, SOT-23	SOT-23
40	R1	3		RC-0603FR-07JRL	Yageo America	RES, 100, 1%, 0.125 W, 0603	0603
41	R2, R4, R13, R21, R30, R38, R41, R42, R48, R50, R57, R58, R62, R63, R69, R70, R77, R78, R80, R94, R95	21	100	RC0402FR-07100RL	Yageo America	RES, 100, 1%, 0.063 W, 0402	0402
42	R3, R12, R16, R22, R25, R36, R52, R53	8	1.00k	RC0402FR-071KL	Yageo America	RES, 1.00 k, 1%, 0.0625 W, 0402	0402
43	R5, R22, R25, R29, R32	5	4.99k	RC0402FR-074K99L	Yageo America	RES, 4.99 k, 1%, 0.063 W, 0402	0402
44	R6, R8, R10	3	100k	RC1206FR-07100KL	Yageo America	RES, 100 k, 1%, 0.25 W, 1206	1206
45	R7, R24	2	34.8k	CRW04027348K-FED	Veihay-Dale	RES, 34.8 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R9	1	300k	RC0402FR-07300KL	Yageo America	RES, 300 k, 1%, 0.063 W, 0402	0402
47	R11	1	500	PPL16500A267Y	Thinking Electronic	3.1A Vantec's Circuit Through Hole Resc 13.2mm	RADIAL
48	R14	1	180	RC1210FR-07180RL	Yageo	Ceramic PTC Thermistor	RADIAL
49	R15, R31, R33, R34, R37, R43, R49, R84, R89	9	10.0k	RC0402FR-0710KL	Yageo America	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
50	R17, R24, R75, R81	4	0.02	ERJ-12KF20MU	Panasonic	RES, 0.02, 1%, 0.5 W, 1812	1812
51	R18, R19, R20, R27, R28, R29, R45, R46, R47, R54, R55, R56, R59, R60, R61, R64, R65, R66	18	332k	RC1206FR-07332KL	Yageo America	RES, 332 k, 1%, 0.25 W, 1206	1206
52	R39, R40, R51	3	20	CRW0402720R-FED	Veihay-Dale	RES, 20.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
53	R44, R71, R72, R73	4	7.32k	CRW0402732K-FED	Veihay-Dale	RES, 7.32 k, 1%, 0.063 W, 0402	0402
54	R52, R53, R67, R69, R76, R79	6	100k	RC0603FR-07100KL	Yageo	RES, 100 k, 1%, 0.1 W, 0603	0603
55	R82	1	133k	RC0603FR-07133KL	Yageo	RES, 133 k, 1%, 0.1 W, 0603	0603
56	R83, R88	2	0	RC0402FR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
57	R87	1	1.00M	RC0402FR-071ML	Yageo America	RES, 1.00 M, 1%, 0.063 W, 0402	0402
58	R89, R90	2	100k	RC0402FR-07100KL	Yageo America	RES, 100 k, 1%, 0.0625 W, 0402	0402
59	R91	1	13.7k	RC-0603FR-0713K7L	Yageo	RES, 13.7 k, 1%, 0.1 W, 0603	0603
60	R71	1		TMPS1112CER	Texas Instruments	Thermistor, DTC0020A (X50N-2)	DTC0020A
61	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9	9		5015	KeyStone, Keystone Electronic	Test Point, Miniature, SMT	Testpoint_Keystone_Miniature
62	TP10	1		5010	KeyStone	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
63	TP11	1		5011	KeyStone	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint
64	U2, U14	2		ISO6721BQDRQ1	Texas Instruments	Low Speed, General Purpose, Robust EMC, Dual-Channel Digital Isolators	SOIC8
65	U3, U5	2		LMC3651R025	Texas Instruments	650V 25mD GaN FET With Integrated Driver and Protection	TOLL9
66	U4	1		TMCS1128B4QDVGR	Texas Instruments	TMCS1128B4QDVGR	SOIC10
67	U6	1		LMC02080DR	Texas Instruments	Comparator General Purpose Open-Collector S-SOIC	SOIC9
68	U7	1		UCC27122DR	Texas Instruments	620-V High-Side Low-Side Gate Driver with 2.5A Peak Output and RobustDrive, D0008A (SOIC-8)	D0008A
69	U8, U9, U10	3		LMC2650	Texas Instruments	650-V 100-mA GaN Half Bridge with Integrated Driver and Current Sense Emulation	VQFN9
70	U11	1		UCC28B01DR	Texas Instruments	700-V Lowest Quiescent Current Off-Line Switcher, D0007A (SOIC-7)	D0007A
71	U12	1		TPS56320300A1R	Texas Instruments	2.5-Vm 1.5V Input, 2-A, Synchronous Buck Converter in SOT160	SOT160
72	U13	1		TLV47033P0B0VR	Texas Instruments	300-mA low-dropout (LDO) regulator with loadback current limit S-SOT-23	SOT23-5
73	C7	0	10uF	ECQ-E2108KF	Panasonic	CAP, Film, 10 uF, 250 V, +/- 10%, TH	31x15, 8x27.3mm
74	C49, C51, C62	0	1000pF	C0805C-102JBRAC1V	Kemet	CAP, CERM, 1000 pF, 630 V, +/- 5%, X7R, 0805	0805
75	FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
76	R86	0	0	RC0402FR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402

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