

Variant: 001  
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## TIDA-050082 REV A Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	C1, C7, C13, C20	4	0.01uF	GRM155R71E103KA01D	MuRata	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	0402
2	C2, C3	2	0.1uF	CGA3E2X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
3	C4	1	0.01uF	GCM188R71H103KA37D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
4	C5	1	10uF	GRT188R61E106ME13D	MuRata	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	0603
5	C6	1	10uF	GRM31CR71E106KA12L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 1206	1206
6	C8	1	1uF	C4AQSBU4100A1WJ	KEMET	1 uF Film Capacitor 1500V (1.5kV) Polypropylene (PP), Metallized Radial	RADIAL
7	C9, C11, C15	3	10uF	GRM21BZ71E106KE15L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805
8	C10, C17, C18, C22	4	0.1uF	C1210C104KBRAC7800	Kemet	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, 1210	1210
9	C12, C14, C24	3	2200pF	8.85012E+11	Würth Elektronik	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0402	0402
10	C16	1	22uF	GRM21BR61E226ME44L	MuRata	CAP, CERM, 22 uF, 25 V, +/- 20%, X5R, 0805	0805
11	C19	1	1uF	CGA3E1X7R1C105K080AC	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C21, C23	2	10pF	C0402C100K5RAC7867	KEMET	10 pF ±10% 50V Ceramic Capacitor X7R 0402 (1005 Metric)	0402
13	C25	1	2.2nF	C1206X222KGRACAUTO	KEMET	2200 pF ±10% 2000V (2kV) Ceramic Capacitor X7R 1206 (3216 Metric)	1206
14	D1	1		VS-8EWF12SLHM3	Vishay	Diode 1200 V 8A Surface Mount TO-252AA (DPAK)	DPAK
15	D2	1		STTH1512GY-TR	STMicroelectronics	Rectifier Diode Switching 1.2KV 15A 75ns Automotive 3-Pin(2+Tab) D2PAK T/R	D2PAK
16	D3	1		SMF18CA	Littelfuse	Diode TVS Single Bi-Dir 18V 200W 2-Pin SOD-123FL T/R	SOD-123FL
17	FB1, FB2	2		BLM21HE802SH1L	Murata	8 kOhms @ 100 MHz 1 Signal Line Ferrite Bead 0805 (2012 Metric) 650mA 700mOhm	0805
18	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
19	J2, J3, J4	3		6.91251E+11	Würth Electronics	2 Position Wire to Board Terminal Block Horizontal with Board 0.250" (6.35mm) Through Hole	CONN_TERM_BLOC K2
20	L1, L2	2	1000 ohm	BLM21AG102SN1D	MuRata	Ferrite Bead, 1000 ohm @ 100 MHz, 0.5 A, 0805	0805
21	L3	1	100uH	ZG3718	Coilcraft	Power inductor, 100uH-9.6A, Flat wire, TH, PQ26	PTH6
22	Q1	1		UF3C120150B7S	UnitedSiC	N-Channel 1200 V 17A (Tc) 136W (Tc) Surface Mount D2PAK-7	D2PAK7
23	R1	1	294k	ERJ-2RKF2943X	Panasonic	RES, 294 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
24	R2	1	90.9k	ERJ-2RKF9092X	Panasonic	RES, 90.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
25	R3, R4, R5, R7, R14, R15	6	180k	CRCW1206180KJNEA	Vishay-Dale	RES, 180 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
26	R6	1	1.1k	CRCW04021K10JNED	Vishay-Dale	RES, 1.1 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
27	R8	1	10k	ERJ-2GEJ103X	Panasonic	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
28	R9	1	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
29	R10	1	100k	ERJ-3GEYJ104V	Panasonic	RES, 100 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
30	R11	1	0.06	WSL2512R0600FEA	Vishay-Dale	RES, 0.06, 1%, 1 W, 2512	2512
31	R12	1	80m	TLRP3A20CR080FTE	TE Connectivity	80 mOhms ±1% 2W Chip Resistor 2512 (6432 Metric) Anti-Sulfur, Automotive AEC-Q200, Current Sense Metal Element	2512
32	R13	1	56	CRCW120656R0JNEA	Vishay-Dale	RES, 56, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
33	TP1, TP6, TP7	3		5011	Keystone Electronics	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint
34	TP2	1		5010	Keystone Electronics	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
35	TP4	1		5014	Keystone Electronics	Test Point, Multipurpose, Yellow, TH	Yellow Multipurpose Testpoint
36	U1	1		TPS7A4901DRBR	Texas Instruments	Vin 3V to 36V, 150mA, Ultra-Low-Noise, High-PSRR Low-Dropout (LDO) Linear Regulator, DRB0008A (VSON-8)	DRB0008A
37	U2	1		TPSI31P1QDVXRQ1	Texas Instruments	Isolated Automotive Active Pre-charge Controller with Integrated Gate Driver and Bias Supply	SSOP16