Variant: None
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TID #: TIDA011063

1 REV A Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB1	1		1	Any	Printed Circuit Board	
2	+5V, VCC1, VDD1, VIN, Vout_Sense_Lug_P_out1, Vref1	6		5005	Keystone Electronics	Test Point, Compact, Red, TH	Red Compact Testpoint
3	C1, C2, C3, C4, C5, C6, C86, C87, C88, C89, C90, C91	12	10uF	GRM21BC81E106KE51L	MuRata	CAP, CERM, 10 µF, 25 V,+/- 10%, X6S, 0805	0805
4	C7, C19, C20, C31, C39, C54	6	100uF	C1210C107M4PAC7800	Kemet	CAP, CERM, 100 uF, 16 V, +/- 20%, X5R, 1210	1210
5	C8	4	0.1uF	GRM155R71H104ME14D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	0402
6	C9	4	10uF	0402ZD106MAT2A	AVX	CAP, CERM, 10 uF, 10 V,+/- 20%, X5R, 0402	0402
7	C9_P_out1, C40_P_out1, C41_P_out1, C42_P_out1, C43_P_out1, C44_P_out1, C45_P_out1, C46_P_out1	8	10µF	GRM155D70G106ME18D	Murata	Chip Multilayer Ceramic Capacitors for General Purpose 10uF ±20% X7T SMD 0402 4VDC	0402
8	C10, C11, C13, C17, C51, C52, C53, C55	8	22µF	GRM31CZ71C226ME15L	Murata	Chip Multilayer Ceramic Capacitors for General Purpose, 1206, 22uF, X7R, 15%, 20%, 16V	1206
9	C12	1	1µF	GMC04X7R105K10NT	Cal-Chip Electronics	1µF ±10% 10V Ceramic Capacitor X7R 0402 (1005 Metric)	0402
10	C14, C15, C16	3	1uF	CGA3E1X7R1E105K080AC	TDK	CAP, CERM, 1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
11	C18	1	1000pF	04022C102KAT2A	AVX	CAP, CERM, 1000 pF, 10 V,+/- 10%, X7R, 0402	0402
12	C24_P_out1, C25_P_out1, C26_P_out1, C27_P_out1, C28_P_out1, C29_P_out1, C30_P_out1, C36_P_out1, C37_P_out1, C38_P_out1, C48_P_out1, C49_P_out1, C50_P_out1, C51_P_out1, C52_P_out1, C53_P_out1, C84_P_out1, C95_P_out1, C96_P_out1, C97_P_out1, C98_P_out1, C99_P_out1, C100_P_out1, C101_P_out1, C104_P_out1, C105_P_out1, C106_P_out1, C107_P_out1, C108_P_out1, C109_P_out1, C110_P_out1, C111_P_out1,	64	47uF	GRM188R60G476ME15D	MuRata	CAP, CERM, 47 uF, 4 V, +/- 10%, X6R, 0603	0603
13	C47, C48, C49, C50, C133, C134, C142, C143	8	220uF	F930G227MBA	AVX	CAP, TA, 220 µF, 4 V, +/- 20%, SMD	3528-21
14	C56, C57	2	220µF	T541X227M016AHB710	KEMET	220 µF Molded Tantalum Polymer Capacitor 16 V 2917 (7343 Metric) 40mOhm @ 100kHz	2917
15	C58_P_out1, C59_P_out1, C62_P_out1, C63_P_out1, C73_P_out1, C74, C81_P_out1, C131	8	1000uF	T495X108K004ATE040	Kemet	CAP, TA, 1000 uF, 4 V, +/- 10%, 0.04 ohm, SMD	7343-43
16	C60	1	2.2µF	GRM155Z71A225KE01D	Murata	Chip Multilayer Ceramic Capacitors for General Purpose, 0402, 2.2uF, X7R, 15%, 10%, 10V	0402
17	C70	1	0.1uF	C0603C104J4RAC7867	Kemet	CAP, CERM, 0.1 uF, 16 V, +/- 5%, X7R, 0603	0603
18	C71	1	1000pF	GRM033R71C102KA01D	MuRata	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0201	0201
19	C72	1	1nF	04025A102FAT2A	KYOCERA AVX	1000 pF ±1% 50V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	0402
20	C78, C80, C84, C85	4	2.2uF	C1005X6R1A225K050BC	TDK	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X6R, 0402	0402
21	CSP1, CSP2, CSP3, CSP4, EN_A1, IIN_c1, Vout_FB, Vout_LS	8		HB3902U	Foxconn	Header, 2.54mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
22	GND1, GND_Sense_Lug_P_out1	2		5006	Keystone Electronics	Test Point, Compact, Black, TH	Black Compact Testpoint
23	GND_JW1, GND_JW2, GND_JW3, GND_JW5	4		D3082-05	Harwin	1mm Uninsulated Shorting Plug, 10.16mm spacing, TH	Shorting Plug, 10.16mm spacing, TH
24	GND_L1, GND_L2, VIN_M, Vout_L1	4		5017	Keystone Electronics	PC Test Point, SMT	PC Test Point, SMT
25	H1, H2, H3, H4	4		3483	Keystone	Standoff, Threaded, 1.5", 4-40, Aluminum	1/4 Round Female Standoff
26	H5, H6, H7, H8	4		PMSSS 440 0025 PH	B&F Fastener Supply	MACHINE SCREW PAN PHILLIPS 4-40	Machine Screw, 4-40, 1/4 inch
27	Isense_In, PWM1, PWM2, PWM3, PWM4, PWM_In, TSEN	7		5007	Keystone Electronics	Test Point, Compact, White, TH	White Compact Testpoint
28	J1, J2, J3_P_out1, J4_P_out1, J5_P_out1, J6_P_out1	6		B1/0-PCB-L	INTERNATIONAL HYDRAULI	1/0 AWG High AMP PCB Wire Lugs 1/0-8 AWG	WIRE_LUG_150A_1-0AWG
29	J7	1		TSW-105-07-G-D	Samtec	Header, 100mil, 5x2, Gold, TH	5x2 Header
30	J33 - ISense Average_A_P_out1, Transient_A_PWM_P_out1	2		131-3711-201	Cinch Connectivity	Connector, SMT, SMB Jack Assembly 50 ohm	Connector, SMT, SMB Jack Assembly
31	Q1	4	40 V	MMBT3904T-7-F	Diodes Inc.	Transistor, NPN, 40 V, 0.2 A, SOT-523	SOT-523
32	Q2	4	25V	CSD16556Q5B	Texas Instruments	MOSFET, N-CH, 25 V, 40 A, DNK0008A (VSON-CLIP-8)	DNK0008A
33	Q3	4	40 V	MMBT3906-7-F	Diodes Inc.	Transistor, PNP, 40 V, 0.2 A, SOT-23	SOT-23
34	R1	4	1	CRCW04021R00JNED	Vishay-Dale	RES, 1.0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
35	R1_P_out1, R24, R26, R27, R36, R37, R46, R57, R58	9	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
36	R2	1	0uΩ	CR0603-10W-000T	Venkel	0 Ohms Jumper 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) - Thick Film	0603
37	R3, R4, R5, R6, R7, R8, R9, R11, R12, R13, R19, R20, R28, R29, R30, R31, R32, R33, R34, R38, R39, R40, R41, R42, R43, R44, R45, R47, R48, R49, R50, R55, R56	33	0	ERJ-1GN0R00C	Panasonic	RES, 0, 5%, .05 W, AEC-Q200 Grade 0, 0201	0201
38	R10	1	49.9	ERJ-1GEF49R9C	Panasonic	RES, 49.9, 1%, 0.05 W, AEC-Q200 Grade 1, 0201	0201
39	R14, R15, R16, R17, R18	5	10k	RC0201JR-0710KL	Yageo America	RES, 10 k, 5%, 0.05 W, 0201	0201
40	R21, R25	2	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
41	R22, R23	2	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
42	R35	1	0	RMCP0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
43	R51	4	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
44	R52	4	1.5	CRCW04021R50JNED	Vishay-Dale	RES, 1.5, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
45	R53	4	0.003	LVK25R003FER	Ohmite	RES, 0.003, 1%, 2 W, 1224	1224
46	R93_P_out1, R97_P_out1, R101_P_out1, R107_P_out1	4	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
47	SR1	1	2.3m	CSS2H-2512K-2L30F	Bourns	Res Metal Strip 2512 2.3MilliOhm 1% 5W ±75ppm/°C Molded T/R	2512
48	U1	1		TPS53689T	Texas Instruments	Dual-channel (N + M ≤ 8 phase) D-CAP+™, Step-down, Multiphase Controller with TLVR support, PMBus and VR14 SVID Interfaces	WQFN40
49	U2, U3	2		CSDM65295TVCQR	Texas Instruments	CSDM65295TVCQR	QFN-FCMOD72
50	VDD1-1	1		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator

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