

XXX### REV E1 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB	1		XXX###	Any	Printed Circuit Board	
2	0V8, GND, Vn	3		1929517	Phoenix Contact	Fixed Terminal Blocks MKDSP 10 HV/2-10	HDR2
3	C1	1	0.47uF	C2012X6R1H474K125AB	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X5R, 0805	0805
4	C2, C9	2	1uF	CGA3E2X7R1G106K080A2	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
5	C3	1	10uF	GRM32ER71H106KA12L	MuRata	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, 1210	1210
6	C4, C7, C22, C29	4	0.1uF	C0603C104K5RACAUTO	Kemet	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
7	C5	1	100pF	06033C101KA12A	AVX	CAP, CERM, 100 pF, 25 V, +/- 10%, X7R, 0603	0603
8	C6	1	4700pF	GCM188R72A472KA37D	MuRata	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
9	C8	1	0.033uF	CGA3E3X7S2A333K080AB	TDK	CAP, CERM, 0.033 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0603	0603
10	C10	1	82pF	GRM1885C2A820JA01D	MuRata	CAP, CERM, 82 pF, 100 V, +/- 5%, COG/NPO, 0603	0603
11	C11	1	0.01uF	CGA3E2X7R2A103K080AA	TDK	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C12, C13	2	0.1uF	06035C104K2ZA	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
13	C14, C15, C123, C124, C125, C126, C127, C128	8	0.1uF	GCM188R71E104KA57D	MuRata	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
14	C16	1	22uF	CL32B226K0JN9NE	Samsung	CAP, CERM, 22 uF, 16 V, +/- 10%, X7R, 1210	1210
15	C17, C23, C30, C32	4	10uF	C3216X7R1A106K085AC	TDK	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 1206	1206
16	C18, C20, C21, C24, C25, C27, C28, C31	8	1uF	08055C105K4Z2A	AVX	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
17	C29, C33	2	2.2uF	CGA4J3X7R1H225K125AB	TDK	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
18	C33, C34, C35, C36	4	4.7uF	8.85012E+11	Würth Elektronik	CAP, CERM, 4.7 uF, 10 V, +/- 10%, XFR, 0805	0805
19	C37, C38, C39	3	2.2uF	GRM21BR71A225KA01L	MuRata	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0805	0805
20	C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C76, C90, C91, C92, C93	16	1500uF	2R5TPE1500MF	Panasonic	CAP, Tantalum Polymer, 1500 uF, 2.5 V, +/- 20%, 0.015 ohm, 7343-40 SMD	7343-40
21	C51, C52, C53, C54, C56, C77	6	1uF	C0805C105K4RACAUTO	Kemet	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
22	C55, C57, C58, C61, C62, C63	6	1000pF	06031C102KA12A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0603	0603
23	C59, C59, C60, C64, C78, C83	6	1000pF	12061C102KA12A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 1206	1206
24	C66, C67, C68, C69, C70, C71, C72, C73, C74, C75	10	220uF	T541X22M016AH6710	Kemet	220 uF Molded Tantalum Polymer Capacitor 16 V 2917 (7343 Metric) 40mOhm @ 100kHz	2917
25	C79, C80, C84, C89	4	0.01uF	C1206C103KARACTU	Kemet	CAP, CERM, 0.01 uF, 250 V, +/- 10%, X7R, 1206	1206
26	C81, C82, C86, C87	4	0.1uF	GRM31CR72E104KW03L	MuRata	CAP, CERM, 0.1 uF, 250 V, +/- 10%, X7R, 1206	1206
27	C88, C112, C113, C114, C115, C116	6	0.47uF	C0603C474K8RACTU	Kemet	CAP, CERM, 0.47 uF, 10 V, +/- 10%, X7R, 0603	0603
28	C89	1	2200pF	0805A222JAT2A	AVX	CAP, CERM, 2200 pF, 50 V, +/- 5%, COG/NPO, 0805	0805
29	C117, C118, C119, C120, C121, C122	6	0.1uF	8.85012E+11	Würth Elektronik	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0603	0603
30	D1, D5	2	50V	ES3AB-13-F	Diodes Inc.	Diode, Superfast Rectifier, 50 V, 3 A, SMB	SMB
31	D2, D6	2		BCT12B13-E3-08	Vishay	Diode Zener Single 13V 500mW 2-Pin SOD-123 T/R	SOD123
32	D7, D8	2		8N184340T3G	QY Semiconductor	Diode Schottky 40V 24 Surface Mount SMA	SMA
33	GND1, GND2, GND3, GND4, GND5	5		5001	Keystone Electronics	Test Point, Miniature, Black, TH	Black Miniature Testpoint
34	H1, H2, H3, H4	4		NY PMS 440 0025 PH	BAF Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
35	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5" L, #4-40 Nylon	Standoff
36	J1, J2, J4, J5	4		131-5031-00	Tektronik	Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe
37	J3	1		CON5MAD02-G	Linx Technologies	JACK, SMA, 50 Ohm, Gold, R/A, TH	SMA Jack, 50 Ohm, R/A, TH
38	L1, L2	2	0.45uH	XAL1010-451MEB	Coilcraft	Shielded Power Inductors - XAL1010 0.45uH AEC Q-200 20% 0.2mohm SRF: 66MHz 40A	SMD2
39	LBL1	1		THF-14-423-10	Brady		PCB Label 0.650 x 0.200 inch
40	Q1, Q3, Q4, Q6, Q7, Q8, Q9, Q10	8		EPC7019GC	EPC Space	MOSFET N-Channel 40 V 80A (Tc) Surface Mount 5-SMD	FSMD-G
41	Q11	1	25V	CSD16408G5	Texas Instruments	MOSFET, N-CH, 25 V, 113 A, DQH0008A (VSON-CLIP-S)	DQH0008A
42	R1, R5, R12, R14, R18, R24, R46, R71, R74, R75, R76, R77, R78, R79, R84, R87, R88, R89, R90, R91, R92	21	0	RMCF0603ZTOR00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
43	R2	1	49.9k	RC0603FR-0749K9L	Yageo	RES, 49.9 k, 1%, 0.1 W, 0603	0603
44	R3	1	10	RC0603FR-0710RL	Yageo	RES, 10.0, 1%, 0.1 W, 0603	0603
45	R4	1	49.9	RC0603FR-0749K9L	Yageo	RES, 49.9, 1%, 0.1 W, 0603	0603
46	R6	1	3.09k	RC0603FR-073K09L	Yageo	RES, 3.09 k, 1%, 0.1 W, 0603	0603
47	R7	1	110.0k	RG1608P-103-B-T5	Susumu Co Ltd	RES, 110.0 k, 0.1%, 0.1 W, 0603	0603
48	R8	1	392k	RC0603FR-07392KL	Yageo	RES, 392 k, 1%, 0.1 W, 0603	0603
49	R9	1	18.7k	CR06030318K7PKEA	Vishay-Dale	RES, 18.7 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
50	R10	1	33.2k	RG1608P-332-B-T5	Susumu Co Ltd	RES, 33.2 k, 0.1%, 0.1 W, 0603	0603
51	R11, R13	2	49.9k	RT0603DRE0749K9L	Yageo America	RES, 49.9 k, 0.5%, 0.1 W, 0603	0603
52	R15, R16, R19, R20	4	41.2k	RT06056RD0741K2L	Yageo America	RES, 41.2 k, 0.1%, 0.125 W, 0805	0805
53	R17, R21	2	1.50k	RT0603BRD071K5L	Yageo America	RES, 1.50 k, 0.1%, 0.1 W, 0603	0603
54	R23, R45	2	2	RC50603ZROOFKEA	Vishay Dale	2 Ohms +/- 0.25W, 1/4W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200, Pulse Withstanding Thick Film	0603
55	R28, R29, R30, R31, R32, R33	6	0.007	KRLB432E-M-R007-F-T1	Susumu Co Ltd	RES, 0.007, 1%, 3 W, 2512 WIDE	2512 WIDE
56	R67	1	831	RT0603BRD07931RL	Yageo America	RES, 831, 0.1%, 0.1 W, 0603	0603
57	R68, R69, R81, R82	4	10.0k	RC060310K0PKEA	Vishay Draloric	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603
58	R70, R83	2	3	CR060303000JNEA	Vishay-Dale	RES, 3.0, 0.5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
59	R94	1	0	RC50603000J02EA	Vishay-Dale	RES, 0, 0%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
60	R95	1	10.0k	PH0603Y1002G1200	Vishay-Siemens	RES, 10.0 k, 0.1%, 0.0375 W, 0603	0603
61	R96, R97	2	0.04	WLS12512R0400FEA18	Vishay-Dale	RES, 0.04, 1% 2W, AEC-Q200 Grade 0, 2512	2512
62	R99	1	1.00Meg	RC0603FR-071ML	Yageo	RES, 1.00 M, 1%, 0.1 W, 0603	0603
63	TP3, TP4, TP5	3		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
64	TP7, TP8, TP10	3		5000	Keystone Electronics	Test Point, Miniature, Red, TH	Red Miniature Testpoint
65	TP13	1		5015	Keystone Electronics	Test Point, Miniature, SMT	Testpoint_Keystone_Minature
66	U1	1		TPS7H5004HFT/EM	Texas Instruments	Radiation-Hardness-Assured Current Mode PWM Controllers	CFP-22
67	U3, U4	2		TPS7H023/EMF	Texas Instruments	Radiation-Hardness-Assured 200-V, 1.5-A 3-A, Half Bridge GaN FET Gate Driver	CFP48
68	C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109	0	1500uF	2R5TPE1500MF	Panasonic	CAP, Tantalum Polymer, 1500 uF, 2.5 V, +/- 20%, 0.015 ohm, 7343-40 SMD	7343-40
69	C110, C111	0	0.01uF	06032C103KA12A	AVX	CAP, CERM, 0.01 uF, 10 V, +/- 10%, X7R, 0603	0603
70	FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
71	R100, R101	0	0.5	VMS-R500-1.0-U	Isabellenhuette	500 mOhms +/- 4W Chip Resistor 2512 (8432 Metric) Automotive AEC-Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Foil	2512

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](#) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265

Copyright © 2025, Texas Instruments Incorporated

DRAFT
TI Confidential – NDA Restrictions

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on ti.com or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265

Copyright © 2025, Texas Instruments Incorporated