

Bill of Materials

TI DESIGNS

PMP-9548A

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
1	1	C1	2.2uF	CAP, CERM, 2.2uF, 6.3V, +/-20%, X5R, 0402	MuRata	GRM155R60J225ME15D	0402
2	1	C2	0.22uF	CAP, CERM, 0.22uF, 6.3V, +/-20%, X5R, 0402	TDK	C1005X5R0J224M	0402
3	6	C3, C4, C5, C6, C7, C10	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0402	TDK	C1005X5R1E105K050BC	0402
4	1	C8	10uF	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M	0603
5	1	C9	4.7uF	CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0603	TDK	CGB3B1X5R1A475K055AC	0603
6	4	C11, C19, C23, C29	0.1uF	CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402	TDK	C1005X5R0J104K	0402
7	1	C12	0.47uF	CAP, CERM, 0.47uF, 6.3V, +/-10%, X5R, 0402	MuRata	GRM155R60J474KE19D	0402
8	6	C13, C14, C15, C18, C22, C28	1uF	CAP, CERM, 1uF, 6.3V, +/-20%, X5R, 0402	TDK	C1005X5R0J105M	0402
9	9	C16, C17, C30, C37, C38, C43, C44, C49, C50	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	MuRata	GRM21BR61E106KA73	0603-0805
10	3	C21, C31, C45	1uF	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0603	MuRata	GRM188R61A105KA61D	0603
11	1	C24	47uF	CAP, CERM, 220uF, 4V, X5R, 20%, 1206	Murata	ZRB18AR60G476ME01	0805-1206-0603
12	4	C25, C40, C41, C47	220uF	CAP, CERM, 220uF, 4V, X5R, 20%, 1206	Murata	GRM31CR60G227ME11	0805-1206-0603
13	4	C27, C42, C48, C60	0.1uF	CAP, CERM, 0.1uF, 10V, +/-10%, X5R, 0402	TDK	C1005X5R1A104K	0402
14	5	C33, C34, C35, C36, C61	47uF	CAP, CERM, 47uF, 4V, X5R, 20%, 0603	Murata	ZRB18AR60G476ME01	0603
15	8	C52, C53, C54, C55, C56, C57, C58, C59	47uF	CAP, CERM, 47uF, 10V, X5R, 20%, 0805	Murata	GRM21BR61A476ME15	0805-1206-0603
16	1	C62	10uF	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0402	MuRata	GRM155R60J106ME44	0402
17	1	C63	6.8uF	CAP, TA, 6.8uF, 20V, +/-10%, 1 ohm, SMD	AVX	TPSA685K020R1000	3216-18
18	3	D1, D2, D3	30V	Diode, Schottky, 30V, 0.2A, SOT-23	Diodes Inc.	BAT54-7-F	SOT-23
19	1	J1		Receptacle, 50 mil, 50x8, SMT	Samtec, Inc.	SEAM-50-01-S-08-2-RA-K-TR	CONN_SEAM-50-01-X-08-2-RA
20	2	L1, L4	560nH	Inductor, Drum Core, Powdered Iron, 560nH, 9.5A, 0.008 ohm, SMD	Cyntec	PIMB051H-R56MS	IND_PIMB051H
21	1	L2	680nH	Inductor, Drum Core, Powdered Iron, 680nH, 4.3A, 0.027 ohm, SMD	Cyntec	PIFE32251B-R68MS-63	IND_PIFE32251B

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
22	1	L3	1uH	Inductor, Drum Core, Powdered Iron, 1uH, 8.1A, 0.014 ohm, SMD	Cyntec	PIME051H-1R0MS-63	PIMB5-6
23	1	L5	1uH	Inductor, Drum Core, Powdered Iron, 1uH, 8.1A, 0.014 ohm, SMD	Cyntec	PIME051B-2R2MS	IND_PIME051H
24	1	LBL1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Brady	THT-14-423-10	Label_650x200
25	2	Q1, Q2		5.5-V, 6-A, 4.4-mO On-Resistance Load Switch, DNY0008A	Texas Instruments	TPS22969DNY	DNY0008A
26	4	Q3, Q5, Q6, Q7		Synchronous Buck NexFET Power Block II, MPC0005A	Texas Instruments	CSD87381P	MPC0005A_100um
27	1	Q4		5.5-V, 6-A, 4.4-mO On-Resistance Load Switch, DNY0008A	Texas Instruments	TPS22961DNY	DNY0008A
28	53	R1, R2, R8, R9, R15, R16, R22, R24, R26, R28, R34, R46, R61, R62, R67, R68, R69, R72, R75, R76, R77, R79, R82, R83, R85, R88, R90, R94, R95, R96, R99, R102, R103, R105, R109, R111, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R133	0	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED	0402
29	3	R3, R4, R37	10k	RES, 10k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040210K0JNED	0402
30	17	R21, R25, R27, R29, R30, R31, R32, R33, R35, R36, R38, R40, R41, R47, R48, R49, R50	100k	RES, 100k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402100KJNED	0402
31	2	R39, R55	1.0k	RES, 1.0k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04021K00JNED	0402
32	1	R43	267k	RES, 267 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402267KFKED	0402
33	2	R44, R45	237k	RES, 237 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW0402237KFKED	0402
34	1	R51	31.6k	RES, 31.6 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040231K6FKED	0402
35	2	R52, R53	61.9k	RES, 61.9 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040261K9FKED	0402
36	6	R60, R71, R78, R87, R98, R107	0.002	RES, 0.002 ohm, 2%, 1W, 0508	Susumu Co Ltd	KRL2012E-M-R002-G-T5	0508

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
37	11	R64, R65, R73, R74, R80, R81, R92, R93, R100, R101, R108	100	RES, 100 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402100RJNED	0402
38	1	R70	9.53k	RES, 9.53k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04029K53FKED	0402
39	1	R84	22.6k	RES, 22.6k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040222K6FKED	0402
40	1	R86	8.66k	RES, 8.66k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04028K66FKED	0402
41	1	R97	10.5k	RES, 10.5k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K5FKED	0402
42	1	R104	10.2k	RES, 10.2k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K2FKED	0402
43	1	R106	4.87k	RES, 4.87k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04024K87FKED	0402
44	1	R130	0	RES, 0 ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW08050000Z0EA	0805_HV
45	1	S1		Switch, Slide, SPST 2 poles, SMT	CTS Electrocomponents	219-2LPST	SW_219-2LPST
46	1	S2		Switch, Tactile, SPST-NO, SMT	C&K Components	KST221JLFS	SW_KST221JLFS
47	1	TP23	Red	Test Point, Miniature, Red, TH	Keystone	5000	Keystone5000
48	1	TP33	Orange	Test Point, Miniature, Orange, TH	Keystone	5003	Keystone5003
49	4	TP34, TP37, TP54, TP55	Black	Test Point, Miniature, Black, TH	Keystone	5001	Keystone5001
50	1	TP35	White	Test Point, Miniature, White, TH	Keystone	5002	Keystone5002
51	1	TP36	Yellow	Test Point, Miniature, Yellow, TH	Keystone	5004	Keystone5004
52	1	U1		SkyLake PMIC	Texas Instruments	TPS650830	ZAJ0168A

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. **TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.** TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have **not** been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.