



PMP10886 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	Package
C1, C2, C3, C7, C10	5	10uF	C3225X7R1E106M250AC	TDK	CAP, CERM, 10uF, 25V, +/-20%, X7R, 1210	1210
C4, C9	2	150uF	EEE-FK1E151P	Panasonic	CAP, AL, 150uF, 25V, +/-20%, 0.16 ohm, SMD	SMT Radial F
C5, C6	2	180uF	25SVPF180M	Sanyo	CAP, OS-CON, 180uF, 25V, 4.65Arms, 0.016 ohm, E12	8x10
C8	1	1uF	C2012X7R1E105K	TDK	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0805	0805
C11, C19	2	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47uF, 25V, +/-10%, X7R, 0603	0603
C12, C13	2	1000pF	GRM188R71H102KA01D	MuRata	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0603	0603
C14	1	3.3uF	C3216X7R1H335K160AC	TDK	CAP, CERM, 3.3uF, 50V, +/-10%, X7R, 1206	1206
C15	1	1uF	C1608X7R1E105K	TDK	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603
C16	1	0.033uF	C1608X7R1H333K	TDK	CAP, CERM, 0.033uF, 50V, +/-10%, X7R, 0603	0603
C17	1	100pF	C1608C0G1H101J	TDK	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603	0603
C18	1	0.1uF	C1608X7R1H104K	TDK	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C20	1	10uF	C3216X7R1E106K	TDK	CAP, CERM, 10uF, 25V, +/-10%, X7R, 1206	1206
D1, D2	2	60V	PMEG6010CEH	NXP	Diode, Schottky, 60V, 1A, SOD-123F	SOD-123F
H1, H2	2		ELDE 0553_10	Harting	Han Fast Lock Codierung, TH	Han Fast Lock Codierung, TH
J1, J2	2		ED120/2DS	On-Shore	TERMINAL BLOCK 5.08MM VERT 2POS, TH	TERM_BLK, 2pos, 5.08mm
J3	1		PEC03SAAN	Sullins	Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin
J4, J5, J6, J7	4		09 08 000 6124	Harting	Power Connector, 8AWG, SILVER W/PIN, TH	10x16.65mm
H1, H2	2		ELDE 0553_10	Harting	Han Fast Lock Codierung, Lock Ring, TH	
L1	1				Coupled inductor, 12 uH	1030mmx1050mm
L2	1	22uH	SER2918H-223KL	Coilcraft	Inductor, Shielded E Core, Ferrite, 22uH, 15A, 0.0026 ohm, SMD	SER2918
L3	1	22uH	SER1390-223MLB	Coilcraft	Inductor, SMT, Ferrite, 22uH, 7.36A, 0.021 ohm, SMD	13.5x9.0x13.5mm
Q1, Q2	2	40V	CSD18504Q5A	Texas Instruments	MOSFET, N-CH, 40V, 15A, SON 5x6mm	SON 5x6mm
R1	1	1.00	CRCW12061R00FKEA	Vishay-Dale	RES, 1.00 ohm, 1%, 0.25W, 1206	1206
R2	1	0.003	ERJ-M1WSF3M0U	Panasonic	RES, 0.003, 1%, 1 W, 2512	2512
R3	1	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603	0603
R4, R10	2	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9k ohm, 1%, 0.1W, 0603	0603
R5, R6	2	100	ERJ-3GEY0R00V	Panasonic	RES, 0 ohm, 5%, 0.1W, 0603	0603
R7	1	3.3	CRCW06033R30JNEA	Vishay-Dale	RES, 3.3 ohm, 5%, 0.1W, 0603	0603
R8	1	14.0k	CRCW060314K0FKEA	Vishay-Dale	RES, 14.0 k, 1%, 0.1 W, 0603	0603
R9	1	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5k ohm, 1%, 0.1W, 0603	0603
R11	1	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, 0603	0603
R12	1	40.2k	CRCW060340K2FKEA	Vishay-Dale	RES, 40.2 k, 1%, 0.1 W, 0603	0603
R13	1	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4 k, 1%, 0.1 W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	Package
R14	1	5.49k	CRCW06035K49FKEA	Vishay-Dale	RES, 5.49 k, 1%, 0.1 W, 0603	0603
TP1, TP2, TP3, TP4, TP7	5	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP5, TP6, TP8	3	Black	5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1	1		LM5122MH/NOPB	Texas Instruments	Wide Input Synchronous Boost Controller with Multiple Phase Capability, PWP0020A	PWP0020A

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.