

PMP9091 Rev A Bill Of Materials

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer
C1	1	22uF	CAP, CERM, 10V, +/-10%, X7R, 1210	1210	STD	STD
C2	1	33uF	CAP, AL, 33uF, 25V, +/-20%, 0.36 ohm, SMD	SMT Radial D	EEE-FK1E330P	Panasonic
C3, C4	2	10uF	CAP, CERM, 25V, +/-10%, X7R, 1210	1210	STD	STD
C5, C7, C8, C9	4	0.1uF	CAP, CERM, 25V, +/-10%, X7R, 0603	0603	STD	STD
C6	1	220uF	CAP, TA, 220uF, 10V, +/-20%, 0.04 ohm, SMD	Tant Cap, 7343_38	10TPB220M	Panasonic
C10	1	27pF	CAP, CERM, 25V, +/-10%, X7R, 0603	0603	STD	STD
C11	1	1800pF	CAP, CERM, 25V, +/-10%, X7R, 0603	0603	STD	STD
D1, D2	2	20V	Diode, Schottky, 20V, 1A, SMA	SMA	B120-13-F	Diodes Inc.
J1, J2, J3	3		Terminal Block, 2x1, 3.81mm, 24-16 AWG, 10A, 300VAC, TH	2x1 Terminal Block	691214310002	Wurth Elektronik
L1	1	2.2uH	Inductor, Shielded Drum Core, Ferrite, 2.2uH, 1.8A, 0.057 ohm, SMD	Inductor, 2.8x2.8x2.8mm	744025002	Wurth Elektronik
L2	1	47uH	Coupled inductor, 47uH, 0.9A, 0.75 ohm, SMD	7 x 4 x 7 mm	744878470	Wurth Elektronik
R1	1	1k	RES, 1%, 0.125W, 0805	0805	STD	STD
R2, R4, R5	3	10k	RES, 1%, 0.1W, 0603	0603	STD	STD
R3	1	1.62k	RES, 1%, 0.1W, 0603	0603	STD	STD
R6	1	1.91k	RES, 1%, 0.1W, 0603	0603	STD	STD
R7	1	255k	RES, 1%, 0.1W, 0603	0603	STD	STD
R8	1	316k	RES, 1%, 0.1W, 0603	0603	STD	STD
TP1, TP3, TP4, TP7	4	Red	Test Point, Miniature, Red, TH	Red Miniature Testpoint	5000	Keystone
TP2, TP5, TP6	3	Black	Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone
U1	1		Buck Inverting Buck-Boost Step Down Regulator with 3.5 to 60 V Input and 0.8 to 58 V Output, -40 to 150 degC, 10-Pin MSOP-PowerPAD (DGQ), Green (RoHS & no Sb/Br)	DGQ0010D	TPS54160DGQ	Texas Instruments

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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.