

PMP442									
Item	Qty	Reference	Type	Part Name	MFR	Value	Package	Description	
1	8	C1, C2, C23, C42, C43, C50, C52, C54	Ceramic Capacitor	STD	STD	NA	603	CAP, CERM, NA, +/-10%, X7R	
2	11	C3, C4, C14, C17, C24, C27, C31, C36, C3	Ceramic Capacitor	STD	STD	0.1uF, 25V	603	CAP, CERM, 0.1uF, 25V, +/-10%, X7R	
3	3	C5, C6, C7	Ceramic Capacitor	STD	STD	4.7uF, 50V	1210	CAP, CERM, 4.7uF, 50V, +/-10%, X7R	
4	1	C8	Ceramic Capacitor	STD	STD	0.1uF, 50V	603	CAP, CERM, 0.1uF, 50V, +/-10%, X7R	
5	6	C9, C10, C11, C15, C16, C28	Ceramic Capacitor	STD	STD	47uF, 6.3V	1210	CAP, CERM, 47uF, 6.3V, +/-10%, X7R	
6	8	C12, C13, C25, C26, C35, C37, C39, C41	Ceramic Capacitor	STD	STD	10uF, 10V	1206	CAP, CERM, 10uF, 10V, +/-10%, X7R	
7	1	C18	Ceramic Capacitor	STD	STD	47pF, 50V	603	CAP, CERM, 47pF, 25V, +/-10%, X7R	
8	1	C19	Ceramic Capacitor	STD	STD	560pF, 25V	603	CAP, CERM, 560pF, 25V, +/-10%, X7R	
9	2	C20, C33	Ceramic Capacitor	STD	STD	18pF, 50V	603	CAP, CERM, 18pF, 25V, +/-10%, X7R	
10	1	C21	Ceramic Capacitor	STD	STD	6.8nF, 25V	603	CAP, CERM, 6.8nF, 25V, +/-10%, X7R	
11	1	C22	Ceramic Capacitor	STD	STD	470pF, 25V	603	CAP, CERM, 470pF, 25V, +/-10%, X7R	
12	2	C29, C30	Ceramic Capacitor	STD	STD	22uF, 10V	1210	CAP, CERM, 22uF, 10V, +/-10%, X7R	
13	1	C32	Ceramic Capacitor	STD	STD	10uF, 50V	603	CAP, CERM, 10uF, 50V, +/-10%, X7R	
14	1	C34	Ceramic Capacitor	STD	STD	1nF, 25V	603	CAP, CERM, 1nF, 25V, +/-10%, X7R	
15	1	C40	Ceramic Capacitor	STD	STD	0.47uF, 50V	805	CAP, CERM, 0.47uF, 50V, +/-10%, X7R	
16	4	C45, C46, C47, C48	Ceramic Capacitor	STD	STD	22uF, 10V	1206	CAP, CERM, 22uF, 10V, +/-10%, X7R	
17	3	C51, C53, C55	Ceramic Capacitor	STD	STD	1nF, 50V	603	CAP, CERM, 1nF, 50V, +/-10%, X7R	
18	5	R1, R2, R18, R31, R32	Resistor	STD	STD	NA	1206	Resistor, Chip, 1/4W, 1%	
19	5	R3, R4, R20, R40, R41	Resistor	STD	STD	51R	603	Resistor, Chip, 1/10W, 1%	
20	1	R5	Resistor	STD	STD	10R	603	Resistor, Chip, 1/10W, 1%	
21	1	R6	Resistor	STD	STD	180k	603	Resistor, Chip, 1/10W, 1%	
22	1	R7	Resistor	STD	STD	36k	603	Resistor, Chip, 1/10W, 1%	
23	3	R8, R10, R47	Resistor	STD	STD	51k	603	Resistor, Chip, 1/10W, 1%	
24	7	R9, R13, R22, R23, R42, R43, R44,	Resistor	STD	STD	20k	603	Resistor, Chip, 1/10W, 1%	
25	1	R11	Resistor	STD	STD	91k	603	Resistor, Chip, 1/10W, 1%	
26	1	R12	Resistor	STD	STD	200k	603	Resistor, Chip, 1/10W, 1%	
27	4	R14, R25, R35, R37	Resistor	STD	STD	10k	603	Resistor, Chip, 1/10W, 1%	
28	3	R15, R26, R38	Resistor	STD	STD	270k	603	Resistor, Chip, 1/10W, 1%	
29	2	R16, R24	Resistor	STD	STD	82k	603	Resistor, Chip, 1/10W, 1%	
30	2	R17, R33	Resistor	STD	STD	30k	603	Resistor, Chip, 1/10W, 1%	
31	1	R19	Resistor	STD	STD	24k	603	Resistor, Chip, 1/10W, 1%	
32	1	R21	Resistor	STD	STD	7.5k	603	Resistor, Chip, 1/10W, 1%	
33	2	R27, R28	Resistor	STD	STD	15k	603	Resistor, Chip, 1/10W, 1%	
34	1	R33	Resistor	STD	STD	31k	603	Resistor, Chip, 1/10W, 1%	
35	1	R34	Resistor	STD	STD	12k	603	Resistor, Chip, 1/10W, 1%	
36	1	R36	Resistor	STD	STD	300k	603	Resistor, Chip, 1/10W, 1%	
37	1	R39	Resistor	STD	STD	100k	603	Resistor, Chip, 1/10W, 1%	
38	1	R45	Resistor	STD	STD	1k	603	Resistor, Chip, 1/10W, 1%	
39	1	R46	Resistor	STD	STD	120k	603	Resistor, Chip, 1/10W, 1%	
40	1	R48	Resistor	STD	STD	240k	603	Resistor, Chip, 1/10W, 1%	
41	3	R49, R51, R53	Resistor	STD	STD	4.7k	603	Resistor, Chip, 1/10W, 1%	
42	3	R50, R52, R54	Resistor	STD	STD	NA	603	Resistor, Chip, 1/10W, 1%	
43	1	U1	Converter	TPS54388	TI		QFN-16	2.95Vto6V, 3A output, 2MHz, Synchronous Step-down Switcher with Intergrated FETs	
44	1	U2	Converter	TPS54540	TI		SOIC-8	4.5Vto42V, 5A, Step-down DC-DC Converter with Eco-mode	
45	1	U3	Converter	TPS57114	TI		QFN-16	2.95Vto6V, 4A output, 2MHz, Synchronous Step-down Switcher with Intergrated FETs	
46	1	U4	LDO	TLV70030	TI		SOT23-5	200mA, Low Dropout Regulator	
47	1	U5	Converter	LM26420X	TI		QFN-16	Dual 2.0A High Frequency Step-down DC-DC Regulator	
48	1	D1	Diode	PDS760	Diodes	7A, 60V	PowerD15	7A Schottky Barrier Rectifier	
49	1	L1	Inductor	744311220	Würth Elektronik	2.2uH	7040	Rated Current9A, Saturation Current13A	
50	1	L2	Inductor	744310095	Würth Elektronik	0.95uH	7030	Rated Current11A, Saturation Current13A	
51	1	L3	Inductor	744310095	Würth Elektronik	0.95uH	7030	Rated Current11A, Saturation Current13A	
52	1	L4	Inductor	744311220	Würth Elektronik	1.5uH	7030	Rated Current7.5A, Saturation Current12.0A	
53	1	L5	Inductor	744310200	Würth Elektronik	2.0uH	7030	Rated Current6.5A, Saturation Current9.0A	

## 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.