

PMP9256 REV B Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB	1		PMP9256	Any	Printed Circuit Board	
C8	1	560pF	GRM1885C1H561JA01D	MuRata	CAP, CERM, 560pF, 50V, +/-5%, C0G/NP0, 0603	0603
C11, Chf	2	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603	0603
C12	1	0.047uF	GRM188R71E473KA01D	MuRata	CAP, CERM, 0.047uF, 25V, +/-10%, X7R, 0603	0603
C13	1	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47uF, 25V, +/-10%, X7R, 0603	0603
C14, C15	2	47pF	GRM1885C1H470JA01D	MuRata	CAP, CERM, 47pF, 50V, +/-5%, C0G/NP0, 0603	0603
C19, C20	2	0.047uF	GRM188R71E473KA01D	MuRata	CAP, CERM, 0.047 uF, 25 V, +/- 10%, X7R, 0603	0603
C21	1	1uF	C1608X7R1C105K	TDK	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	0603
C23	1	10uF	GRM21BR61C106KE15L	MuRata	CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805	0805
C25	1	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603
C26, C27	2	2200pF	VJ1210Y222KXGAT5Z	Vishay-Vitramon	CAP, CERM, 2200pF, 1000V, +/-10%, X7R, 1210	1210
Cin1, Cin2, Cin3	3	220uF	EEV-FK1J221Q	Panasonic	CAP, AL, 220uF, 63V, +/-20%, 0.16 ohm, SMD	SMT Radial H13
Cin4, Cin5	2	1uF	C3216X7R2A105M	TDK	CAP, CERM, 1uF, 100V, +/-20%, C Series, 1206	1206
COMP, EN, SS	3	White	5002	Keystone	Test Point, TH, Miniature, White	Keystone5002
Cout1, Cout2, Cout3	3	120uF	20SVPF120M	Sanyo	CAP, AL, 120uF, 20V, +/-20%, 0.025 ohm, SMD	F61
Cout4, Cx1	2	22uF	GRM31CR61C226KE15L	MuRata	CAP, CERM, 22uF, 16V, +/-10%, X5R, 1206	1206
Csb1	1	820pF	GRM188R72A821KA01D	MuRata	CAP, CERM, 820 pF, 100 V, +/- 10%, X7R, 0603	0603
Csb2	1	1000pF	CGA4F3C0G2E102J085AA	TDK Corporation	CAP, CERM, 4.7uF, 100V, +/-20%, X7S, 1210	0805 (2012 Metric)
Csb3	1	220pF	CGA3E3C0G2E221J080AA	TDK Corporation	CAP, CERM, 4.7uF, 100V, +/-20%, X7S, 1210	0603 (1608 Metric)
Css	1	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603
Cvcc	1	4.7uF	C0603C475K8PACTU	Kemet	CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0603	0603
D1	1	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323
D2, D3	2	1.25V	BAS 16-03W E6327	Infineon Technologies	DIODE SWITCH 80V 0.25A SOD323-2	SOD-323
Dx1	1	5.1V	MMSZ5231BS-7-F	Diodes Inc.	Diode, Zener, 5.1 V, 200 mW, SOD-323	SOD-323
H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
PGND3, PGND4, V-, VO-	4	Black	5011	Keystone	Test Point, TH, Multipurpose, Black	Keystone5011
PGND, PGND2, VIN, VOUT	4		575-4	Keystone	Standard Banana Jack, Uninsulated, 5.5mm	Keystone_575-4
PRI, SEC	2	White	5002	Keystone	Test Point, Miniature, White, TH	Keystone5002
Q1, Q2	2	150V	BSC190N15NS3 G	Infineon Technologies	MOSFET, N-CH, 150 V, 50 A, PG-TDSON-8	PG-TDSON-8
Q3	1	0.25V	MMBT3906	Fairchild Semiconductor	Transistor, PNP, 40V, 0.2A, SOT-23	SOT-23
R2, R3	2	182	CRCW0603182RFKEA	Vishay-Dale	RES, 182 ohm, 1%, 0.1W, 0603	0603
R5, R6, R11	3	0	ERJ-3GEY0R00V	Panasonic	RES, 0 ohm, 5%, 0.1W, 0603	0603
R9, Rsyn	2	40.2k	CRCW060340K2FKEA	Vishay-Dale	RES, 40.2k ohm, 1%, 0.1W, 0603	0603
R10	1	3.3	CRCW06033R30JNEA	Vishay-Dale	RES, 3.3 ohm, 5%, 0.1W, 0603	0603
R12	1	8.66k	CRCW06038K66FKEA	Vishay-Dale	RES, 8.66k ohm, 1%, 0.1W, 0603	0603
R13	1	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.1W, 0603	0603
R19, R20	2	2.2	CRCW06032R20JNEA	Vishay-Dale	RES, 2.2 ohm, 5%, 0.1W, 0603	0603
R21	1	10.0	CRCW080510R0FKEA	Vishay-Dale	RES, 10.0 ohm, 1%, 0.125W, 0805	0805
R22	1	2.49k	CRCW06032K49FKEA	Vishay-Dale	RES, 2.49 k, 1%, 0.1 W, 0603	0603
R23	1	47.5k	CRCW060347K5FKEA	Vishay-Dale	RES, 47.5k ohm, 1%, 0.1W, 0603	0603
R25	1	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, 0603	0603
R26	1	41.2k	CRCW060341K2FKEA	Vishay-Dale	RES, 41.2k ohm, 1%, 0.1W, 0603	0603
R27	1	4.75k	CRCW06034K75FKEA	Vishay-Dale	RES, 4.75 k, 1%, 0.1 W, 0603	0603
R30	1	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603	0603
R31	1	4.99k	CRCW06034K99FKEA	Vishay-Dale	RES, 4.99k ohm, 1%, 0.1W, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Rc	1	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0k ohm, 1%, 0.1W, 0603	0603
Rs1, Rs2	2	0.01	WSL2010R0100FEA18	Vishay-Dale	RES, 0.01 ohm, 1%, 1W, 2010	2010
Rsb1, Rsb2, Rsb3, Rsb4, Rsb5, Rsb6	6	34.0	ERJ-14NF34R0U	Panasonic Electronic Compon	RES 34 OHM 1/2W 1% 1210 SMD	1210
Rt	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
Rt2, Rx1	2	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
SGND	1	Black	5001	Keystone	Test Point, TH, Miniature, Black	Keystone5001
U1	1		LM5122MH/NOPB	Texas Instruments	Wide Input Synchronous Boost Controller with Multiple Phase Capability, PWP0020A	PWP0020A
U2	1		FOD817ASD	Fairchild Semiconductor	IC, Optocoupler, 5000V, 80-160% CTR	DIP-4L Gullwing
U3	1		LMV431ACM5	Texas Instruments	Low-Voltage (1.24V) Adjustable Precision Shunt Regulator, 5-pin SOT-23	MF05A
V+, VO+	2	Red	5010	Keystone	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
X1_B	1	10 uH	PA6605-AL	Coilcraft	Transformer, 10 uH, SMT	26.67x30mm
X2	1	296 uH	DA2319-ALB	Coilcraft	Transformer, 296 uH, SMT	9x5.4mm
C10	0	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0603	0603
C18	0	10uF	GRM21BR61C106KE15L	MuRata	CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805	0805
C22, C24	0	100pF	C2012Y5V1H105Z	TDK	Capacitor	
D4	0	200V	BAV21W-7-F	Diodes Inc.	Diode, Switching, 200V, 0.2A, SOD-123	SOD-123
D5	0	15V	BZG03C15G	ON Semiconductor	Diode, Zener, 15V, 1.5W, SMA	SMA
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
R4	0	158k	CRCW0603158KFKEA	Vishay-Dale	RES, 158 k, 1%, 0.1 W, 0603	0603
R8, R14	0	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R18	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R28	0	2.26k	CRCW06032K26FKEA	Vishay-Dale	RES, 2.26k ohm, 1%, 0.1W, 0603	0603
R29	0	442	CRCW0603442RFKEA	Vishay-Dale	RES, 442 ohm, 1%, 0.1W, 0603	0603
R32	0	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
X1_A	0	307 uH	PA2398NL	Pulse Electronics	Transformer, 307 uH, SMT	29.2x21.8mm

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.