

PMP5754_REV_B_SCH BOM

COUNT	RefDes	Value	Description	Size	Part Number	MFR	AREA
2	C1, C2	10uF	Capacitor, Ceramic, 25V, X7R, 10%	1210	Std	Std	28000
5	C10, C23, C38, C49, C64	OPEN	Capacitor, Ceramic, 50V, X7R, 10%	1206	Std	Std	15390
5	C11, C24, C39, C50, C63	1uF	Capacitor, Ceramic, Low Inductance, 16V, X7R, 10%	0603	Std	Std	5650
5	C12, C25, C40, C51, C67	1uF	Capacitor, Ceramic, 10V, X7R, 20%	0402	Std	Std	2800
11	C13, C14, C15, C16, C26, C27, C28, C29, C30, C41, C42	22uF	Capacitor, Ceramic, 25V, X7R, 10%	1210	Std	Std	28000
2	C18, C31	560pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C19	47pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
2	C21, C22	100uF	Capacitor, Aluminum, 8V, 105C, 8%	6032 (C)	8TPE100MPC2	Sanyo	41850
1	C3	OPEN	OPEN	1210	Std	Std	28000
1	C32	1000pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
5	C35, C36, C37, C47, C48	220uF	Capacitor, Aluminum, SMT, 10V, 105C, 10%	7343(D)	10TPE220M	Sanyo	62100
2	C4, C17	820pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C43	3300pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C44	1500pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C45	33pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C5	680pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
3	C52, C53, C54	22uF	Capacitor, Ceramic, 16V, X7R, 15%	1210	C3225X7R1C226V	TDK	28000
2	C55, C60	330uF	Capacitor, Aluminum, SMT, 10V, 105C, 15%	7343(D)	STD	Sanyo	62100
1	C56	100nF	Capacitor, Ceramic, 25V, X5R, 20%	0603	Std	Std	5650
1	C57	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std	5650
2	C58, C59	47uF	Capacitor, Ceramic, 16V, X7R, 15%	1210	C3225X7R1C226V	TDK	28000
2	C6, C33	12pF	Capacitor, Ceramic, 25V, X7R, 10%	0402	Std	Std	2800
1	C61	4.7uF	Capacitor, Ceramic, 25V, X7R, 15%	1206	C3216X7R1E475V	TDK	15390
1	C62	100nF	Capacitor, Ceramic, 50V, X7R, 15%	0603	C1608X7R1H104V	TDK	5650
1	C65	3300pF	Capacitor, Ceramic, 50V, C0G, 5%	0603	Std	Std	5650
1	C66	4700pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std	5650
4	C7, C20, C34, C46	0.1uF	Capacitor, Ceramic, 16V, X7R, 20%	0402	Std	Std	2800
2	C8, C9	33uF	Capacitor, Ceramic, 10V, X7R, 20%	1210	Std	Std	28000
1	J1	OSTT7022150	Terminal Block, 2-pin, 32-A, 9.5mm	0.75 x 0.49 incl	OSTT7022150	OST	368508
1	J14	D120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 incl	ED1609-ND	DIGIKEY	141600
4	J2, J5, J8, J11, J3, J4, J6, J7, J9, J10, J12, J13, J15,	ED120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 incl	ED120/2DS	OST	141600
10	J16	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins	20000
1	L1	6.8uH	Inductor, Low Profile High Current, 18A, ±20%	0.51 x 0.52 incl	IHLP5050FDER6R	Vishay	342000
4	L2, L3, L4, L5	3.3uH	Inductor, Low Profile High Current, 18A, ±20%	0.51 x 0.52 incl	IHLP5050FDER3R	Vishay	342000
10	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10	CSD16322Q5C	MOSFET, DualCool N-Chan, 25V, 21 A, 4.6 milli-ohm	QFN-8 POWEI	CSD16322Q5C	TI	86800
1	R1	487	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
5	R10, R20, R30, R40, R52	10.0k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R11	237	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R14	80.6k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R15	2.21k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
4	R2, R12, R22, R32	49.9	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R21	562	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R24	100k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R25	1.76k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R28	6.65k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
4	R3, R13, R23, R33	10k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R31	84.5	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R34	49.9k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R35	20k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
1	R4	35.7k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
2	R41, R43	3.32	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
1	R42	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
1	R45	6.19k	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
1	R46	1.87k	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
1	R47	1.78k	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
1	R48	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
2	R49, R50	49.9	Resistor, Chip, 1/16W, 1%	0603	Std	Std	5,650
2	R5, R18	3.16k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
4	R6, R16, R26, R36, R7, R17, R27, R37,	0	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
5	R44	OPEN	Resistor, Chip, 1/8W, 5%	1206	Std	Std	20000
2	R8, R38	3.24k	Resistor, Chip, 1/16W, 1%	0402	Std	Std	2800
5	R9, R19, R29, R39, R51	267k	Resistor, Chip, 1/16W, 10%	0402	Std	Std	2800
5	TP1, TP5, TP10, TP15, TP20	5005	Test Point, Red, Thru Hole Compact Style	0.125 x 0.125 i	5005	Keystone	
16	TP2, TP4, TP6, TP7, TP9, TP11, TP12, TP14, TP16, TP17, TP19, TP21, TP22, TP23, TP24,	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 i	5001	Keystone	10
1	TP25	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 i	5000	Keystone	10
1	U1	TPS40304DRC	IC, 3V-20V sync. Buck controller/Enable Light Load/Fq Spread DRC10		TPS40305DRC	TI	30400
2	U2, U5	TPS40304DRC	IC, 3V-20V sync. Buck controller/Enable Light Load/Fq Spread DRC10		TPS40304DRC	TI	30400
2	U3, U4	TPS40303DRC	IC, 3V-20V sync. Buck controller/Enable Light Load/Fq Spread DRC10		TPS40303DRC	TI	30400

- Notes:
1. These assemblies are ESD sensitive, ESD precautions shall be observed.
 2. These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.
 3. These assemblies must comply with workmanship standards IPC-A-610 Class 2.
 4. Ref designators marked with an asterisk (*) cannot be substituted. All other components can be substituted with equivalent MFG's components.

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.