

Bill of Materials

TI DESIGNS
Part #: PMP5411
Literature #

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	MANUFACTURER	PART NUMBER	SIZE
C1	1	100uF	Capacitor, Electrolytic, 400V, 20%	Nichicon	LLS2G101MELY	20x30
C10	1	1500pF	CAP, CERM DISC Y1, 250Vac, 20%	Panasonic	ECKDNA152ME	.500 X .310
C11	1	DNP	Do Not Populate	N/A	N/A	0603
C12	1	0.022uF	Capacitor, Ceramic, 50V, X7R, 10%	TDK	C1608X7R1H223K	0603
C14	1	56uF	Capacitor, Aluminum Electrolytic, 35V	Rubycon	35V ZL 56uF 6.3 X 11	0.248 inch
C16	1	100pF	Capacitor, Ceramic, 50V, X7R, 10%	TDK	C1608X7R1H101K	0603
C17, C18, C27, C28, C37	5	10uF	Capacitor, Ceramic, 16V, X7R, 15%	STD	STD	1206
C19, C21, C29, C31, C38	5	1uF	Capacitor, Ceramic, 16V, X7R, 20%	Std	Std	0603
C2	1	0.01uF	Capacitor, Polyester Film, 400V, 10%	Panasonic	ECQ-E4103KB	0.311 x 0.213 inch
C24, C26, C34, C36, C41	5	22uF	Capacitor, Ceramic, 6.3V, X5R, 15%	Std	Std	0805
C3	1	0.22 uF	Capacitor, Film, 250VAC, 20%	Panasonic	STD	0.689 x 0.217
C4, C5, C6, C7	4	22uF	Capacitor, Ceramic, 16V, X7R, 20%	TDK	C3225X7R1C226MT	1210
C8	1	470uF	Capacitor, Aluminum Electrolytic, 16V	Rubycon	16V ZL 470uF 10 X 12.5	0.315 inch
C9, C13, C15, C20, C22, C23, C25, C30, C32, C33, C35, C39, C40	13	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	TDK	C1608X7R1H104K	0603
D1	1	DF04S	Bridge Rectifier, 400V, 1A, SMD	Diodes	DF04S	DF-S
D100	1	18V	Diode, Zener, 18V, 3W	On Semi	1SMB5931BT3	SMB
D2	1	US1K-13	Diode, Rectifier, 1A, 800V	Diodes Inc	US1K-13	SMA
D3	1	SBR2060CT	Diode, Dual Schottky, 20A, 60V	Diodes Inc.	SBR2060CT	TO-220
D4	1	MMSD914	Diode, Switching, 100-V, 200-mA, 225-mW	On Semi	MMSD914T1	SOD-123
D5	1	MBR0520L	Diode, Schottky, 0.5A, 20V	Fairchild	MBR0520L	SOD-123
F1	1	2A	Fuse, TR5 Series, 2A, 250V	Wickmann	3701200041	0.335
HS1, HS2	2	576802B00000G	Heatsink, TO-220 Vertical-mount,	Thermalloy	576802B00000G	0.500 x 0.570 inch
J1, J2, J3, J4, J7, J8, J11	7	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	OST	ED1514	0.27 x 0.25
J5, J6, J9, J10, J12	5	PTC36SAAN	Header, Male 2-pin, 100mil spacing, (36-pin strip)	Sullins	PTC36SAAN	0.100 inch x 2
JP1, JP2, JP3	3	923345-02-C	Jumper, 0.200 inch length, PVC Insulation, AWG 22,	3M	923345-02-C	0.035 inch Dia.
L1	1	1.3mH	Inductor, 0.7A, 0.5ohm	GCI	UU9.8H-132LF	0.433 x 0.670 inch

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	MANUFACTURER	PART NUMBER	SIZE
L2	1	2.2uH	Inductor, Power, 5A	Coilcraft	RFB0807-2R2L	0.350 x 0.300 inch
L3, L4, L5, L6, L7	5	2.2uH	Inductor, Shielded Drum Core, 4A, 20milliohms	Würth	7447789002	0.300 sq"
Q1	1	SPP06N80C3	Trans, Nchan, 800V, 6A, 900 millohm	Infineon	SPP06N80C3	TO-220AB
R1, R2	2	249k	Resistor, 1W, 5%	STD	STD	2512
R10	1	2k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R100	1	51.1	Resistor, 1/4 watt, 5%	Std	Std	1206
R101	1	200	Resistor, 1/4 watt, 5%	Std	Std	1206
R11	1	49.9k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R12	1	60.4k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R13, R16, R17, R18, R23, R24, R27, R28, R33, R34, R37, R40	12	100k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R14	1	2.61k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R15	1	20k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R20	1	34.0k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R22	1	54.9k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R3, R4	2	3MEG	Resistor, 1/4 watt, 5%	Std	Std	1206
R30	1	23.2k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R32	1	13.7k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R39	1	5.62k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R42	1	0	Resistor, Chip, 1/16W, 1%	Std	Std	0805
R43	1	0	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R5	1	0.22	Resistor, 1/4W, 5%	Std	Std	1210
R6	1	169k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R8	1	4.99k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
R9, R19, R21, R29, R31, R38	6	10k	Resistor, Chip, 1/16W, 1%	Std	Std	0603
RT1	1	4.7 Ohms	Thermistor, NTC, 4.7 Ohms, 3-A	Epcos	B57153S0479M000	0.590 x 0.276
T1	1	290 uH	Xfmr, Flyback, 12%	GCI	G104046LF	26.00 x 29.00 mm
TP1, TP2, TP3, TP5, TP7, TP8, TP9, TP10, TP15, TP16, TP17, TP18, TP23, TP24, TP27	15	5000	Test Point, Red, Thru Hole Color Keyed	Keystone	5000	0.100 x 0.100 inch
TP4, TP6, TP13, TP14, TP21, TP22, TP26	7	5001	Test Point, Black, Thru Hole Color Keyed	Keystone	5001	0.100 x 0.100 inch
U1	1	UCC28610D	IC, Flyback Green-Mode Controller	TI	UCC28610D	SO8
U2	1	H11A817A	IC, Optocoupler, 5300-V, 80-160% CTR	Fairchild	H11A817A	0.380 x 0.180 inch
U3	1	TL431AIDBZ	IC, Precision Adjustable Shunt Regulator	TI	TL431AIDBZ	SOT23-3
U4, U5, U6, U7, U8	5	TPS54325PWP	IC, 3-A Switcher W/ Integrated FET	TI	TPS54325PWP	HTSSOP-14

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.