

** TEXAS INSTRUMENTS Bill of Materials

TI DESIGNS
Part #:8408
Literature #:PMP

COUNT	RefDes	Value	Description	Size	Part Number	MFR
1	C35	68pF	Capacitor, Ceramic, 50V, C0G, 10%	603	STD	Std
4	C5, C6, C7, C8	330pF	Capacitor, Ceramic, 50V, C0G, 10%	603	STD	Std
2	C20, C30	1000pF	Capacitor, Ceramic, 50V, C0G, 10%	603	STD	Std
2	C4, C9	1000pF	Capacitor, Ceramic, 100V, X7R, 10%	603	STD	Std
1	C100	1500pF	Capacitor, Ceramic, 50V, X7R, 10%	603	STD	Std
2	C1, C2	0.01uF	Capacitor, Ceramic, 100V, X7R, 10%	603	STD	Std
5	C13, C19, C29, C36, C38	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	603	STD	Std
1	C34	0.15uF	Capacitor, Ceramic, 50V, X7R, 10%	603	STD	Std
2	C32, C33	0.47uF	Capacitor, Ceramic, 16V, X7R, 10%	603	STD	Std
4	C12, C18, C28, C39	1uF	Capacitor, Ceramic, X7R, 16V, 10%	603	STD	Std
0	C20	DNP	Capacitor, Ceramic, 50V, C0G, 10%	603	STD	Std
2	C24, C40	0.1uF	Capacitor, Ceramic, 100V, X7R, 10%	805	STD	Std
1	C37	1uF	Capacitor, Ceramic, 25V, X7R, 10%	805	STD	Std
2	C10, C11	3.3uF	Capacitor, Ceramic, 16V, X7R, 10%	805	STD	Std
3	C3, C14, C15	1000pF	Capacitor, Ceramic, 2KV, X7R, 10%	1210	STD	Std
2	C22, C23	2.2uF	Capacitor, Ceramic, 100V, X7R, 10%	1210	C3225X7R2A225K	TDK
4	C16, C17, C26, C27	100uF	Capacitor, Ceramic, 6.3V, 20%	1210	C3225X5R0J107M	TDK
1	C25	DNP	Capacitor, Ceramic, 6.3V, 20%	1210	C3225X5R0J107M	TDK
1	C31	22uF	Capacitor, Aluminum, 25V, 20%	5x5.8mm	EEEFK1E220R	Panasonic
1	C21	22uF	Capacitor, Aluminum, 100V, 20%	8x10.2mm	EEEFK2A220P	Panasonic
4	D1, D2, D3, D4		Diode, Schottky, 1A, 100V	SMA	B1100	Diodes, Inc
0	Alternate D1, D2, D3, D4		Diode, Schottky, 1A, 100V	SMA	S100	WTE
1	D13		Diode, Switching, 100V, 200mA, 400mW,	SOD-123	MMSD4148	On Semi
1	D15		Diode, Dual Schottky, 200-mA, 30-V	SOT23	BAT54S	Zetex
1	D16		Diode, SMT TVS 400W, 4.3-A, 58-V	SMA	SMAJ58A	Diodes
2	D6, D10		Rectifier, Superfast Power, 200V 1A	SMA	ES1D	Diodes, Inc
1	D7		Diode, Schottky, 1A, 40V	SMA	B140	Diodes, Inc
1	D8	10V	Diode, Zener, 10V, 250mW	SOT-23	BZX84C10LT1	On Semi
4	D9, D11, D12, D14		Diode, Schottky, 0.5A, 30V	SOD-123	MBR0530	On Semi
4	FB1, FB2, FB3, FB4	15	Bead, Ferrite, SMT, 15 Ohms, 1.5A	805	MMZ2012R150A	TDK
2	J1, J3		Connector, Jack, Modular, 8 POS	0.705 x 0.820	520252	AMP
4	J6, J7, J8, J9		Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED555/2DS	OST
0	L1	DNP	Inductor, SMT, 0.79A, 300milliohm	3.5x3.7mm	VLF4012AT-100MR79	TDK
4	Q1, Q2, Q3, Q4		Transistor, NFET, 100V, 1.5A, 250 milliohm	SOT-23	Si2328DS	Vishay
0	Alternate, Q1, Q2, Q3, Q4		Transistor, NFET, 100V, 1.7A, 240 milliohm	SOT-23	AP2330GN-HF	APEC
2	Q6, Q9		Transistor, MOSFET, N-Chan, 30V, 65A, 11.8milliOhm	QFN-8 Power	CSD17507Q5A	TI
2	Q7, Q10		Transistor, PNP, 40V, 200mA, 225mW	SOT23	MMBT3906LT1G	On Semi
1	Q8		Trans, Nch, 150V, 2.3A, 144milliohm	SuperSOT-6	FDC86244	Fairchild
2	R16, R30	0	Resistor, Chip, 1/16W, 5%	603	STD	Std

COUNT	RefDes	Value	Description	Size	Part Number	MFR
3	R20, R21, R25	10	Resistor, Chip, 1/16W, 5%	603	STD	Std
1	R17	49.9	Resistor, Chip, 1/16W, 1%	603	STD	Std
2	R3, R4	75	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R44	90.9	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R37	237	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R40	402	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R22	825	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R41	1K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R38	2K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R50	3.01K	Resistor, Chip, 1/16W, 1%	603	STD	Std
3	R31, R34, R39	10K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R42	68.1K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R43	24.9K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R47	5.90K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R48	20K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R46	69.8K	Resistor, Chip, 1/16W, 1%	603	STD	Std
1	R49	100K	Resistor, Chip, 1/16W, 1%	603	STD	Std
4	R11, R12, R13, R14	150K	Resistor, Chip, 1/16W, 1%	603	STD	Std
4	R7, R8, R9, R10	499K	Resistor, Chip, 1/16W, 1%	603	STD	Std
2	R23, R24	1	Resistor, Chip, 1/10W, 1%	805	STD	Std
2	R19, R26	10	Resistor, Chip, 1/10W, 5%	805	STD	Std
1	R27	20	Resistor, Chip, 1/10W, 5%	805	STD	Std
1	R18	39K	Resistor, Chip, 1/10W, 5%	805	STD	Std
1	T1		XFMR, 1000 Base-T, Ratio 1:1	0.500 x 0.370 inch	H2019	Pulse
1	T2		Transformer, Flyback	13.5x17.75 mm	NA6069-AL	Coilcraft
0	Alternate T2		Transformer, Flyback	13.5x17.75 mm	LDT0571-50	LinkCom
1	T3		Transformer, Gate Drive, 1mH	9.7x7.8mm	LTC0266-50	LinkCom
1	U5		IC, Photocoupler, 80-160% CTR	SOP-4	LTV817AS	Lite-on
1	U6		IC, Precision Adjustable Shunt Regulator, 1%	SOT23-5	TLV431ACDBVR	TI
1	U4		IC, High Power/Efficiency PoE PD and DC/DC Controller	HTSSOP-24	TPS23785BPWP	TI

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, 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.