

Bill of Materials

TI DESIGNS
Part #:9012
Literature #:PMP

RefDes	COUNT	Value	Description	Size	Part Number	MFR
IPC81	1		Printed Circuit Board		PWR522	Any
C1, C2	2	0.01uF	CAP, CERM, 0.01uF, 100V, +/-10%, X7R, 0603	0603	06031C103KAT2A	AVX
C3, C4	2	1000pF	Capacitor, Ceramic, 100V, X7R, 10%	0603	Std	Std
C5, C6, C15,	4	100uF	Capacitor, Ceramic, 6.3V, 20%	1210	C3225X5R0J107M	TDK
C7, C17	2	10uF	Capacitor, Ceramic Chip, X5R, 10V, 20%	0805	C2012X5R1A106M	TDK
C8, C18	2	1uF	Capacitor, Ceramic, X5R, 10V, 20%	0603	STD	STD
C9, C19, C24	3	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
C10	1	DNP	Capacitor, Ceramic, 50V, C0G, 10%	0603	Std	Std
C11	1	22uF	Capacitor, Aluminum, 25V, 20%	5x5.8mm	EEEEFK1E220R	Panasonic
C12	1	22uF	Capacitor, Aluminum, 100V, 20%	8x10.2mm	EEEEFK2A220P	Panasonic
C13	1	2.2uF	Capacitor, Ceramic, 100V, X7R, 10%	1210	C3225X7R2A225K	TDK
C14, C26	2	0.1uF	Capacitor, Ceramic, 100V, X7R, 10%	0805	Std	Std
C20	1	330pF	Capacitor, Ceramic, 50V, C0G, 10%	0603	Std	Std
C21	1	10pF	Capacitor, Ceramic, 50V, C0G, 10%	0603	Std	Std
C22	1	4700pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
C23	1	0.022uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
C25	1	1uF	Capacitor, Ceramic, 25V, X7R, 10%	0805	Std	Std
C27, C28,	4	330pF	CAP, CERM, 330pF, 100V, +/-10%, X7R, 0603	0603	06031C331KAT2A	AVX
D1, D2, D4,	8	0.79V	Diode, Schottky, 100V, 1A, SMA	SMA	B1100-13-F	Diodes Inc.
D3, D8	2	ES1D	Rectifier, Superfast Power, 200V 1A	SMA	ES1D	Diodes, Inc
D5, D6, D7	3	MMSD4148	Diode, Switching, 100V, 200mA, 400mW,	SOD-123	MMSD4148	On Semi
D9	1	BAT54H	Diode, Schottky, 200mA, 30V	SOD323	BAT54HT1	On Semi
D10	1	SMAJ58A	Diode, SMT TVS 400W, 4.3-A, 58-V	SMA	SMAJ58A	Diodes
FB1, FB2,	4	15	Bead, Ferrite, SMT, 15 Ohms, 1.5A	0805	MMZ2012R150A	TDK
J1, J2	2		RJ-45, Right Angle, No LED, tab up	RJ-45 Jack	1-406541-1	AMP
J3	1	1x3	Header, TH, 100mil, 1x3, Gold plated, 230 mil above	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions
J4, J5, J6	3		Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology, Inc.
L1	1	DNP	Inductor, SMT, 0.79A, 300milliohm	3.5x3.7mm	VL4012AT-100MR79	TDK
Q1, Q2	2		Dual N-Channel MOSFET	SO-8	FDS89161	Fairchild
Q3	1	FDC86244	Trans, Nch, 150V, 2.3A, 144milliohm	SuperSOT-6	FDC86244	Fairchild
Q4	1	MMBT3904	Trans, NPN, 40V, 200mA, 225mW	SOT23	MMBT3904LT1G	On Semi
Q5	1	IRLML0030	MOSFET, N-ch, 30V, 5.3A, 27 milliohm	SOT23	IRLML0030	IR
Q6	1	30V	MOSFET, N-CH, 30V, 65A, SON 5x6mm	SON 5x6mm	CSD17507Q5A	Texas Instruments
R1, R9, R23,	4	10K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R2, R3, R8,	4	1.0Meg	RES, 499k ohm, 1%, 0.1W, 0603	0603	CRCW0603499KFKEA	Vishay-Dale
R4, R7, R29,	4	232k	RES, 150k ohm, 1%, 0.1W, 0603	0603	CRCW0603150KFKEA	Vishay-Dale
R5, R6	2	75.0	RES, 75.0 ohm, 1%, 0.1W, 0603	0603	CRCW060375R0FKEA	Vishay-Dale
R11	1	137	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R12	1	69.8K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R13, R16,	3	10	Resistor, Chip, 1/16W, 5%	0603	Std	Std
R14	1	DNP	Resistor, Chip, 1/10W, 5%	0805	Std	Std

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R15	1	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale
R17	1	100K	Resistor, Chip, 1/10W, 5%	0805	Std	Std
R18	1	10	Resistor, Chip, 1/10W, 5%	0805	Std	Std
R20	1	0	Resistor, Chip, 1/16W, 5%	0603	Std	Std
R21	1	825	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R22	1	0.82	Resistor, Chip, 1/10W, 1%	0805	Std	Std
R25	1	59K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R26	1	150K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R27	1	6.04K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R28	1	511K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R31	1	49.9K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R32	1	68.1K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R33	1	24.9K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
R34	1	20	Resistor, Chip, 1/10W, 5%	0805	Std	Std
R35	1	3.01K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
T1	1	H2019	XFMR, 1000 Base-T, Ratio 1:1	0.500 x 0.370 inch	H2019	Pulse
T2	1	NA6056-AL	Transformer, Flyback	12.7x17.75 mm	NA6056-AL	Coilcraft
TP1, TP2,	3	Red	Test Point, TH, Multipurpose, Red	Keystone5010	5010	Keystone
TP3, TP11,	4	Orange	Test Point, TH, Multipurpose, Orange	Keystone5013	5013	Keystone
TP4, TP7,	4	Black	Test Point, TH, Multipurpose, Black	Keystone5011	5011	Keystone
TP5, TP6,	5	White	Test Point, TH, Multipurpose, White	Keystone5012	5012	Keystone
U1	1	TPS23785BPWP	IC, High Power/Efficiency PoE PD and DC/DC Controller	HTSSOP	TPS23785BPWP	TI
U2	1	TLV431ACDBVR	IC, Precision Adjustable Shunt Regulator, 1%	SOT23-5	TLV431ACDBVR	TI

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

		ALT U5	IC, Photocoupler, 80-160% CTR	SOP-4	FOD817AS	Fairchild
1	U6		IC, Precision Adjustable Shunt Regulator	SOT23-5	TLV431ACDBVR	TI
1	U4		IC, High Power/Efficiency PoE PD and DC/DC Controller	HTSSOP	TPS23785BPWP	TI

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