

TPS40422 & CSD87384 2 Phases

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC B1	1		Printed Circuit Board		PMP8999 rev B	Any	-	-
C1, C4, C5	2	1000pF	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0402	0402	GRM155R71H102KA01D	MuRata		
C1	1	1500pF	CAP, CERM, 1500pF, 50V, +/-10%, X7R, 0402	0402	GRM155R71H152KA01D	MuRata		
C2	1	2200pF	CAP, CERM, 2200pF, 50V, +/-10%, X7R, 0402	0402	GRM155R71H222KA01D	MuRata		
C3, C6, C7	3	15pF	CAP, CERM, 15pF, 50V, +/-5%, COG/NP0, 0402	0402	GRM1555C1H150JA01D	MuRata		
C8	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
C9, C10, C12, C13, C201, C202, C203, C204	8	0.1uF	CAP, CERM, 0.1uF, 50V, +/-20%, X7R, 0402	0402	C1005X7R1H104M	TDK		
C11, C14, C15, C16, C17, C18, C19, C20, C21	9	10uF	CAP, CERM, 10uF, 25V, +/-20%, X7R, 1210	1210	C3225X7R1E106M	TDK		
C22, C23	2	1500pF	CAP, CERM, 1500pF, 50V, +/-10%, X7R, 0603	0603	GRM188R71H152KA01D	MuRata		
C24, C25	2	0.22uF	CAP, CERM, 0.22uF, 10V, +/-10%, X5R, 0402	0402	GRM155R61A224KE19D	MuRata		
C26, C29, C31, C32	4	470uF	CAP, AL, 470uF, 2.5V, +/-20%, 9 ohm, SMD	7.3x1.8x4.3mm	EEFSX0E471ER	Panasonic		
C28, C30, C33, C35, C43	5	100uF	CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1210	1210	C1210C107M9PACTU	Kemet		
C40, C45	2	470uF	CAP, AL, 470uF, 35V, +/-20%, TH	10x20	35ZL470MEFC10X20	Rubycon		
C205	1	1uF	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	0402	GRM155R61A105KE15D	MuRata		
C37, C39, C44	0	DNP	unused 1210 output cap placeholders					
C27, C34, C36, C38, C41, C42	0	DNP	unused 7343 output cap placeholders					
D201	1	30V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54WS-7-F	Diodes Inc.		
D1*, D2*, D202, D203	4	30V	Diode, Schottky, 30V, 0.5A, SOD-123	SOD-123	MBR0530T1G see smaller alt to right	ON Semiconductor	smaller alternative: NSR05F30NX '0402'	ON Semiconductor
D204	1	LTST-C150KRKT	LED SUPER RED CLEAR 1206 SMD	1206	LTST-C150KRKT	LiteOn		
FID1, FID2, FID3	3		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
H1, H2, H5, H6	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply	-	-
H3, H4, H7, H8	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone	-	-
J1	1	N2510-6002RB	Connector, Male Straight 2x5 pin, 100mil spacing, 4 Wall	0.338 x 0.788 inch	N2510-6002RB	3M		
J2, J203	2	PEC03SAAN	Header, Male 3-pin, 100mil spacing,	0.100 inch x 3	PEC03SAAN	Sullins		
J3	1	ED120/4DS	Terminal Block, 4-pin, 15-A, 5.1mm	0.80 x 0.35 inch	ED120/4DS	OST		
J4, J201	2	ED555/2DS	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25 inch	ED555/2DS	OST		
J5, J7	2	CX35-36-CY	Lug, Copper, 35A,	0.380 x 1.020 inch	CX35-36-CY	Panduit		
J202, J204	2	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins		
L1, L2	2	330 nH	Inductor, 0.3mOhm, 46A sat, +/-20%	11.3 x 11 x 8.9 mm	744301033	Würth		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W	THT-14-423-10	Brady	-	-
Q1, Q2	0	OMIT	Bipolar, NPN, 40V, 200mA, 200mW	SOT-923F	MMBT3904SL	Fairchild		
Q3, Q4	2	CSD87384M	Synchronous Buck NexFET Power Block II, MPB0005A	MPB0005A	CSD87384M	Texas Instruments		None
Q201	1	25V	MOSFET, N-CH, 25V, 100A, SON 5x6mm	SON 5x6mm	CSD16325Q5	Texas Instruments		None
R1	51		RES, 51 ohm, 5%, 0.063W, 0402	0402	CRCW040251R0JNED	Vishay-Dale		
R2	1	2.49k	RES, 2.49k ohm, 1%, 0.063W, 0402	0402	CRCW04022K49FKED	Vishay-Dale		
R3	1	3.74k	RES, 3.74k ohm, 1%, 0.063W, 0402	0402	CRCW04023K74FKED	Vishay-Dale		
R4, R26, R27	3	10	RES, 10 ohm, 5%, 0.063W, 0402	0402	CRCW040210R0JNED	Vishay-Dale		
R5	1	38.3k	RES, 38.3k ohm, 1%, 0.063W, 0402	0402	CRCW040238K3FKED	Vishay-Dale		
R6	1	499	RES, 499 ohm, 1%, 0.063W, 0402	0402	CRCW0402499FKED	Vishay-Dale		
R7	1	10k	RES, 10k ohm, 1%, 0.063W, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R14, R18, R203	3	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R8, R11, R12, R13, R15, R16, R19, R20, R28, R29	10	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	RC0402JR-070RL	Yageo America		
R9	1	59.0k	RES, 59.0k ohm, 1%, 0.063W, 0402	0402	CRCW040259K0FKED	Vishay-Dale		
R10	1	11.0k	RES, 11.0k ohm, 1%, 0.063W, 0402	0402	CRCW040211K0FKED	Vishay-Dale		
R17, R21	2	5.1	RES, 5.1 ohm, 5%, 0.063W, 0402	0402	CRCW04025R10JNED	Vishay-Dale		
R22, R25	2	4.99k	RES, 4.99k ohm, 1%, 0.063W, 0402	0402	CRCW04024K99FKED	Vishay-Dale		
R23, R24	2	0.3	RES, 0.3 ohm, 5%, 1W, 2010	2010	CRCW2010R300JNEFHP	Vishay-Dale		
R30*, R31*	2	24.9	RES, 24.9 ohm, 1%, 0.063W, 0402	0402	CRCW040224R9FKED	Vishay-Dale		
R201	1	8.06k	RES, 8.06k ohm, 1%, 0.063W, 0402	0402	CRCW04028K06FKED	Vishay-Dale		
R202	1	200k	RES, 200k ohm, 1%, 0.063W, 0402	0402	CRCW0402200KFKED	Vishay-Dale		
R204	1	330	RES, 330 ohm, 5%, 0.063W, 0402	0402	CRCW0402330R0JNED	Vishay-Dale		
R205, R206	2	1.50k	RES, 1.50k ohm, 1%, 0.063W, 0402	0402	CRCW04021K50FKED	Vishay-Dale		
R207, R208, R209	3	0.005	RES, 0.005 ohm, 1%, 2W, 2512	2512	RL3264SW4-005M-F-T5	Susumu Co Ltd		
R210	1	0.003	RES, 0.003 ohm, 1%, 1W, 2512	2512	ERJ-1M1WSF3M0U	Panasonic		
sh1, sh2, sh3, sh4, sh5, sh6	6		Short jumper					
TH1, TH2, TH3, TH4	4		Thru Hole, 15 mil, plated					
TP1, TP3, TP5, TP9, TP11, TP201	6	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone		
TP2, TP4	2	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone		
TP7, TP8, TP10, TP12	4	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone		
U1	1	TPS40422RHA	IC, PMBUS synchronous buck controller	QFN-40	TPS40422RHA	TI		None
U201	1	TLC555CD	IC, Timer, Low-Power CMOS	SO8	TLC555CD	TI		None
U202	1	UCC37324D	IC, Dual 4-A High Speed Low-Side Power MOSFET Drivers	SO-8	UCC37324D	TI		None

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