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TPS40428 / CSD95378B 4 phase 160/210A

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
!PCB1	1		Printed Circuit Board		PMP9131	Any	-	-
C101, C102, C103	3	470uF	CAP, AL, 470uF, 35V, +/-20%, TH	10x20	35ZL470MEFC10X20	Rubycon		
C112, C113, C146, C147, C206, C207, C222, C223	8	1000pF	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0402	0402	GRM155R71H102KA01 D	MuRata		
C104	1	4700pF	CAP, CERM, 4700pF, 25V, +/-10%, X7R, 0402	0402	C1005X7R1E472K	TDK		
C105	1	3300pF	CAP, CERM, 3300pF, 25V, +/-10%, X7R, 0402	0402	C1005X7R1E332K	TDK		
C106, C114, C126, C143, C148, C149, C205, C208, C210, C219, C224, C225, C301, C302, C303, C304	16	0.1uF	CAP, CERM, 0.1uF, 50V, +/-20%, X7R, 0402	0402	C1005X7R1H104M	TDK		
C107, C108, C109, C110, C139, C140, C141, C142, C201, C202, C203, C204, C215, C216, C217, C218, C306, C308	18	10uF	CAP, CERM, 10uF, 25V, +/-20%, X7R, 1210	1210	C3225X7R1E106M	TDK		
C111	1	22pF	CAP, CERM, 22pF , 50V, +/-5%, C0G/NP0, 0402	0402	GRM1555C1H220JA01 D	MuRata		
C309	1	15pF	CAP, CERM, 15pF, 50V, +/-5%, C0G/NP0, 0402	0402	GRM1555C1H150JA01 D	MuRata		

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C115, C116, C117, C118, C119, C121, C122, C123, C124, C125	10	470uF	CAP, AL, 470uF, 2.5V, +/-20%, 9 mohm, SMD	7.3x1.8x4.3mm	EEFSX0E471ER	Panasonic		
C120, C136, C137, C144, C209, C212, C213, C221, C305	9	1uF	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	0402	GRM155R61A105KE15D	MuRata		
C127, C145, C211, C220	4	1500pF	CAP, CERM, 1500pF, 50V, +/-10%, X7R, 0603	0603	GRM188R71H152KA01D	MuRata		
C128, C129, C130, C131, C132, C133, C134, C135	8	100uF	CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1210	1210	C1210C107M9PACTU	Kemet		
C138, C214, C307	3	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
D301, D303	2	30V	Diode, Schottky, 30V, 0.5A, SOD-123	SOD-123	MBR0530T1G	ON Semiconductor		
D302	1	30V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54WS-7-F	Diodes Inc.		
D304	1	Red	LED, Red, SMD	LED_0805	LTST-C170KRKT	Lite-On		
FID1, FID2, FID3	3		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
H1, H2, H5, H6	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone	-	-
H3, H4, H7, H8	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply	-	-
J101	1	ED120/4DS	Terminal Block, 4-pin, 15-A, 5.1mm	0.80 x 0.35 inch	ED120/4DS	OST		
J102	1	ED120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 inch	ED120/2DS	OST		
J103, J105, J107, J108	4	CX35-36-CY	Lug, Copper, 35A,	0.380 x 1.020 inch	CX35-36-CY	Panduit		
J104, J301	2	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins		
J106	1	PEC03SAAN	Header, Male 3-pin, 100mil spacing,	0.100 inch x 3	PEC03SAAN	Sullins		
J109	1	N2510-6002RB	Connector, Male Straight 2x5 pin, 100mil spacing, 4 Wall	0.338 x 0.788 inch	N2510-6002RB	3M		
L101, L103, L201, L203	4	210nH	Inductor, Shielded Drum Core, Metal Composite, 210nH, 68A, 0.2 ohm, SMD	FP1308	FP1308-R21-R	Coiltronics		
L102, L104, L202, L204	0	DNP	Inductor, Low-Profile, High-Current ±20%	2525/5050	IHLP-xxxx	Vishay		
L301	1	6.8 uH	Inductor, SMT, yyA, zzmilohm	0.276 sq inch	SLF7032T-xxx	TDK		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll		THT-14-423-10	Brady	-	-
Q301	1	25V	MOSFET, N-CH, 25V, 40A, SON 5x6mm	SON 5x6mm	CSD16556Q5B	Texas Instruments		None
R101, R319	2	51	RES, 51 ohm, 5%, 0.063W, 0402	0402	CRCW040251R0JNED	Vishay-Dale		
R108, R111, R124, R135, R202, R204, R220, R222	0	DNP	RES, 9.76Meg ohm, 1%, 0.063W, 0402	0402	CRCW04029M76FKED	Vishay-Dale		
R102	1	909	RES, 909 ohm, 1%, 0.063W, 0402	0402	CRCW0402909RFKED	Vishay-Dale		
R103	1	2.49k	RES, 2.49k ohm, 1%, 0.063W, 0402	0402	CRCW04022K49FKED	Vishay-Dale		

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R104	1	6.04k	RES, 6.04k ohm, 1%, 0.063W, 0402	0402	CRCW04026K04FKED	Vishay-Dale		
R105	1	3.74k	RES, 3.74k ohm, 1%, 0.063W, 0402	0402	CRCW04023K74FKED	Vishay-Dale		
R106, R109, R118, R213	4	10	RES, 10 ohm, 5%, 0.063W, 0402	0402	CRCW040210R0JNED	Vishay-Dale		
R107, R110, R113, R117, R119, R120, R121, R122, R126, R130, R131, R132, R133, R134, R136, R201, R203, R205, R206, R208, R212, R214, R215, R216, R217, R218, R225, R226, R227, R229, R230, R231	32	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	RC0402JR-070RL	Yageo America		
R112, R127, R207, R228	4	2.2	RES, 2.2 ohm, 5%, 0.063W, 0402	0402	CRCW04022R20JNED	Vishay-Dale		
R114, R209	2	66.5k	RES, 66.5k ohm, 1%, 0.063W, 0402	0402	CRCW040266K5FKED	Vishay-Dale		
R115, R125, R210, R221	4	1.0	RES, 1.0 ohm, 5%, 1W, 2010	2010	CRCW20101R00JNEFH P	Vishay-Dale		
R128, R223	2	37.4k	RES, 37.4k ohm, 1%, 0.063W, 0402	402	CRCW040237K4FKED	Vishay-Dale		
R129	1	8.45k	RES, 8.45k ohm, 1%, 0.063W, 0402	402	CRCW04028K45FKED	Vishay-Dale		
R224	1	25.5k	RES, 25.5k ohm, 1%, 0.063W, 0402	0402	CRCW040225K5FKED	Vishay-Dale		
R301, R302, R303, R304, R306, R307, R312, R313	8	0.002	RES, 0.002 ohm, 1%, 2W, 2512	2512	CSNL2512FT2L00	Stackpole Electronics Inc		
R305	1	8.06k	RES, 8.06k ohm, 1%, 0.063W, 0402	0402	CRCW04028K06FKED	Vishay-Dale		
R116, R123, R211, R219, R308	5	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R309, R311	2	1.00k	RES, 1.00k ohm, 1%, 0.063W, 0402	0402	CRCW04021K00FKED	Vishay-Dale		
R310	1	200k	RES, 200k ohm, 1%, 0.063W, 0402	0402	CRCW0402200KFKED	Vishay-Dale		
R314	1	330	RES, 330 ohm, 5%, 0.063W, 0402	0402	CRCW0402330RJNED	Vishay-Dale		

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R315, R316, R317, R318, R320, R321	6	1.00Meg	RES, 1.00Meg ohm, 1%, 0.063W, 0402	0402	CRCW04021M00FKED	Vishay-Dale		
R322	1	261k	RES, 261k ohm, 1%, 0.063W, 0402	0402	CRCW0402261KFKED	Vishay-Dale		
R323	1	294k	RES, 294k ohm, 1%, 0.063W, 0402	0402	CRCW0402294KFKED	Vishay-Dale		
TH101, TH102, TH103, TH104, TH105, TH201, TH202, TH203, TH204, TH205, TH206, TH301, TH302	0		Thru Hole, 15 mil, plated Nothing to place in build					
TP101, TP102, TP105, TP109, TP110, TP301, TP302	7	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone		
TP103, TP107	2	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone		
TP104, TP106, TP108, TP201, TP303, TP304	6	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone		
U101, U201	2	TPS40428RHA	IC, Dual output, 2-Phase, Stackable PMBUS Synchronous Buck Driverless Controller with AVS Bus	QFN-40	TPS40428RHA	TI		None
U102, U103, U202, U203	4	CSD95378BQ5M	Synchronous Buck NexFET Power Stage, NexFET Q5M	TRANS_NexFET_Q5M	CSD95378BQ5M	Texas Instruments		None
U301	1	TLC555CD	IC, Timer, Low-Power CMOS	SO8	TLC555CD	TI		None
U302	1	UCC37324D	IC, Dual 4-A High Speed Low-Side Power MOSFET Drivers	SO-8	UCC37324D	TI		None
U303	1	TPS62110RSAR	Buck Adjustable Regulator with 3.1 to 17 V Input and 1.2 to 16 V Output, -40 to 85 degC, 16-Pin QFN (RSA), Green (RoHS & no Sb/Br)	RSA0016B	TPS62110RSAR	Texas Instruments	Equivalent	None

Notes:

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

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