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TPS544C20 EVM with Dynamic Load

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PMP10364	Any		
C1, C3	2	Open	CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402	0402	C1005X7R1E103K	TDK		
C2, C10, C16	3	1000pF	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0402	0402	C1005X7R1H102K	TDK		
C4	1	0.01uF	CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0402	0402	C1005X7R1E103K	TDK		
C5	1	330pF	CAP, CERM, 330pF, 50V, +/-5%, C0G/NP0, 0402	0402	C1005C0G1H331J	TDK		
C6	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
C7	1	4.7uF	CAP, CERM, 4.7uF, 10V, +/-20%, X5R, 0402	0402	GRM155R61A475M	MuRata		
C8, C23	2	1uF	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	0402	GRM155R61A105KE15D	MuRata		
C9	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X5R, 0402	0402	GRM155R61E104KA87D	MuRata		
C11, C12, C13, C14	4	22uF	CAP, CERM, 22 uF, 16 V, +/- 20%, X5R, 1210	1210	C3225X5R1C226M	TDK	C3225X5R1C226K or C3225X7R1C226M or C3225X7R1C226K OK	must have at least 10uF with 12V bias
C15	1	0.1uF	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603	C0603C104J3RACTU	Kemet		
C17, C18	2	100uF	CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1210	1210	C1210C107M9PACTU	Kemet		
C19, C20	2	470uF	CAP, AL, 470uF, 2.5V, +/-20%, 9 ohm, SMD	7.3x1.8x4.3mm	EEFSX0E471ER	Panasonic		
C21	1	470uF	CAP, AL, 470uF, 25V, +/-20%, 0.03 ohm, TH	8.0x20mm	EEU-FM1E471LBJ	Panasonic	see note 2 below	
C22, C24, C25, C26	4	0.1uF	CAP, CERM, 0.1uF, 50V, +/-20%, X7R, 0402	0402	C1005X7R1H104M	TDK		
C27	0	DNP						
D1, D2	2	30V	Diode, Schottky, 30V, 0.5A, SOD-123	SOD-123	MBR0530T1G	ON Semiconductor		
D3	1	Red	LED, Red, SMD	LED_0805	LTST-C170KRKT	Lite-On		
D4	1	30V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54WS-7-F	Diodes Inc.		
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H5, H6, H7, H8	4		Standoff, Hex, 0.5" L #4-40 Nylon	Standoff	1902C	Keystone		
H9, H10, H11, H12	4		Bump on, Hemisphere, 0.44 X 0.20, Clear	Transparent Bump on	SJ-5303 (CLEAR)	3M		
J1	1		Header (shrouded), 100mil, 5x2, Gold, TH	5x2 Shrouded header	5103308-1	TE Connectivity		
J2	1		Connector, DC Jack 2.1X5.5 mm, TH	POWER JACK, 14.4x1.1x9mm	PJ-102A	CUI Inc.		
J3	1		TERMINAL BLOCK 5.08MM VERT 2POS	TERM_BLK, 2pos, 5.08mm	ED120/2DS	On-Shore Technology		
J4	1	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins		
L1	1	330nH	Inductor, Ferrite, 330nH, 32.8A, 0.00033 ohm, SMD	SMD, 2-Leads, Body 10.2x10mm	VLB10090HT-R33K-B2	TDK		
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	1	0.2V	Transistor, NPN, 40V, 0.2A, SOT-23	SOT-23	MMBT3904	Fairchild Semiconductor		
Q2	1	25V	MOSFET, N-CH, 25V, 40A, SON 5x6mm	SON 5x6mm	CSD16556Q5B	Texas Instruments		None
R1	1	100k	RES, 100k ohm, 1%, 0.063W, 0402	0402	CRCW0402100KFED	Vishay-Dale		
R2, R4	2	Open	RES, 20.0k ohm, 1%, 0.063W, 0402	0402	CRCW040220K0FKED	Vishay-Dale		
R3	1	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	ERJ-2GE0R00X	Panasonic		
R5	1	Open	RES, 0 ohm, 5%, 0.063W, 0402	0402	ERJ-2GE0R00X	Panasonic		
R6	1	20.0k	RES, 20.0k ohm, 1%, 0.063W, 0402	0402	CRCW040220K0FKED	Vishay-Dale		
R7, R13, R15	3	49.9	RES, 49.9 ohm, 1%, 0.063W, 0402	0402	CRCW040249R9FKED	Vishay-Dale		
R8	1	27.4k	RES, 27.4 k, 1%, 0.063 W, 0402	0402	CRCW040227K4FKED	Vishay-Dale		
R9	1	30.1k	RES, 30.1k ohm, 1%, 0.063W, 0402	0402	CRCW040230K1FKED	Vishay-Dale		
R10, R17	2	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	RC0402JR-070RL	Yageo America		
R11, R12	2	38.3k	RES, 38.3k ohm, 1%, 0.063W, 0402	0402	CRCW040238K3FKED	Vishay-Dale		
R14	1	2.2	RES, 2.2 ohm, 5%, 0.063W, 0402	0402	CRCW04022R20JNED	Vishay-Dale		
R16	1	1	RES, 1.0 ohm, 5%, 0.25W, 1206	1206	CRCW12061R00JNEA	Vishay-Dale		
R18, R20, R21	3	0.02	RES, 0.02 ohm, 1%, 2W, 2512	2512	CSRN2512FK20L0	Stackpole Electronics Inc		
R19, R22	2	1.00k	RES, 1.00k ohm, 1%, 0.063W, 0402	0402	CRCW04021K00FKED	Vishay-Dale		
R23	1	8.06k	RES, 8.06k ohm, 1%, 0.063W, 0402	0402	CRCW04028K06FKED	Vishay-Dale		
R24	1	10.0k	RES, 10.0k ohm, 1%, 0.063W, 0402	0402	CRCW040210K0FKED	Vishay-Dale		
R25	1	200k	RES, 200k ohm, 1%, 0.063W, 0402	0402	CRCW0402200KFKED	Vishay-Dale		
R27	1	330	RES, 330 ohm, 5%, 0.063W, 0402	0402	CRCW0402330RJNED	Vishay-Dale		
R100	1	0.22	RES, 0.22 ohm, 1%, 0.125W, 0805	0805	ERJ-6RQFR22V	Panasonic	see note 2 below	
T1, T2	2	50A	Terminal 50A Lug	CB35-36-CY	CB35-36-CY	Panduit		
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8	8	Red	Test Point, Miniature, Red, TH	Red Miniature Testpoint	5000	Keystone		
TP9, TP10, TP11	3	Black	Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone		
TP12	1	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone		
U1	1		TPS544C20 18V, 30A PMBUS SYNCHRONOUS BUCK CONVERTERS, RVF0040A	RVF0040A	TPS544C20RVF	Texas Instruments	None	None
U2	1	UCC37324D	IC, Dual 4-A High Speed Low-Side Power MOSFET Drivers	SO-8	UCC37324D	TI	None	None
U3	1	TLC555CD	IC, Timer, Low-Power CMOS	SO8	TLC555CD	TI	None	None
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		

Notes:

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

2. C21 & R100 in series added by hand on either top or bottom of board

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