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TPS61088 reference design

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
C1, C19	2	1uF	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
C2, C3, C4, C5	4	22uF	CAP, CERM, 22 uF, 16 V, +/- 10%, X5R, 1206	1206	GRM31CR61C226KE15L	MuRata		
C6	1	220uF	CAP, AL, 220 uF, 25 V, +/- 20%, 0.1 ohm, TH	Cap, 10x12.5mm	UBT1E221MPD1TD	Nichicon		
C7	1	100pF	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402	GRM1555C1H101JA01D	MuRata		
C8	1	6800pF	CAP, CERM, 6800 pF, 25 V, +/- 10%, X7R, 0402	0402	GRM155R71E682KA01D	MuRata		
C9	1	22uF	CAP, CERM, 22 uF, 6.3 V, +/- 20%, X5R, 0805	0805	C2012X5R0J226M	TDK		
C10	1	150uF	CAP, TA, 150 uF, 16 V, +/- 10%, 0.15 ohm, SMD	7343-31	B45197A3157K409	Kemet		
C12	1	4.7uF	CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0603	0603	06032D475KAT2A	AVX		
C13	1	0.047uF	CAP, CERM, 0.047 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C473KA01D	MuRata		
C14, C16	2	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0402	0402	GRM155R61C104KA88D	MuRata		
C17, C18	2	10uF	CAP, CERM, 10 uF, 6.3 V, +/- 20%, X5R, 0603	0603	C1608X5R0J106M	TDK		
C21	1	10uF	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	0603	C1608X5R1E106M080A C	TDK		
D1, D2, D3	3	75V	Diode, Switching, 75 V, 0.3 A, SMD, 2-Leads, Body 1.2x0.8mm	SMD, 2-Leads, Body 1.2x0.8mm	1N4148WT	Fairchild Semiconductor		
J1, J2, J3	3		Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology		
J4	1		Header, 100mil, 4x1, Gold, TH	4x1 Header	TSW-104-07-G-S	Samtec		
J5, J6	2		Header, 100mil, 2x1, Gold, TH	2x1 Header	TSW-102-07-G-S	Samtec		
L1	1	1.2uH	Inductor, Shielded Drum Core, Metal Composite, 1.2 uH, 12.9 A, 0.007 ohm, SMD	9.5x8.7mm	CDMC8D28NP-1R2MC	Sumida		
Q1	1	50V	MOSFET, N-CH, 50 V, 0.22 A, SOT-23	SOT-23	BSS138	Fairchild Semiconductor		None
R0	1	499	RES, 499, 1%, 0.063 W, 0402	0402	CRCW0402499RFKED	Vishay-Dale		
R1	1	205k	RES, 205 k, 1%, 0.063 W, 0402	0402	CRCW0402205KFKED	Vishay-Dale		
R2	1	57.6k	RES, 57.6 k, 1%, 0.063 W, 0402	0402	CRCW040257K6FKED	Vishay-Dale		
R3	1	255k	RES, 255 k, 1%, 0.063 W, 0402	0402	CRCW0402255KFKED	Vishay-Dale		
R4	1	90.9k	RES, 90.9 k, 1%, 0.063 W, 0402	0402	CRCW040290K9FKED	Vishay-Dale		
R5	1	121k	RES, 121 k, 1%, 0.063 W, 0402	0402	CRCW0402121KFKED	Vishay-Dale		
R7, R11, R21	3	0	RES, 0, 5%, 0.063 W, 0402	0402	CRCW0402000Z0ED	Vishay-Dale		
R8, R12, R15	3	100k	RES, 100 k, 0.5%, 0.063 W, 0402	0402	CRCW0402100KDHEDP	Vishay-Dale		
R9, R10, R13, R14, R19	4	10.2k	RES, 10.2 k, 1%, 0.063 W, 0402	0402	CRCW040210K2FKED	Vishay-Dale		
R16, R22	2	12.1	RES, 12.1, 1%, 0.063 W, 0402	0402	CRCW040212R1FKED	Vishay-Dale		
R17	1	1.00Meg	RES, 1.00 M, 1%, 0.1 W, 0402	0402	ERJ-2RK1004X	Panasonic		
R18	2	19.6k	RES, 19.6 k, 1%, 0.063 W, 0402	0402	CRCW040219K6FKED	Vishay-Dale		
TP1, TP2, TP5, TP6	4	Red	Test Point, TH, Multipurpose, Red	Keystone5010	5010	Keystone		
U1	1		13.2-V Output, Synchronous Boost Converter with 10-A Switch, RHL0020A	RHL0020A	TPS61088RHLR	Texas Instruments	TPS61088RHLT	Texas Instruments
U3	1		Low-Cost, Low Noise, 5.5 MHz CMOS Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 14-pin SOP (PW0014A), Green (RoHS & no Sb/Br)	PW0014A	OPA4377AIPW	Texas Instruments	Equivalent	None
C11	0	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0402	0402	GRM155R61C104KA88D	MuRata		
C15	0	1000pF	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0603	0603	GRM188R72A102KA01D	MuRata		
C20	0	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 20%, X7R, 0402	0402	C1005X7R1H102M	TDK		
R6, R20	0	2.05	RES, 2.05, 1%, 0.1 W, 0603	0603	CRCW06032R05FKEA	Vishay-Dale		

Notes:

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