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TPS61085 reference design

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPCB1	1		Printed Circuit Board		PMP9770	Any	-	-
C1	1	10uF	CAP, CERM, 10 µF, 10 V, +/- 10%, X5R, 0805	0805	GRM219R61A106KE44D	MuRata		
C2, C7, C12, C13	4	1uF	CAP, CERM, 1 µF, 16 V, +/- 10%, X5R, 0603	0603	GRM185R61C105KE44D	MuRata		
C3, C14	2	0.1uF	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C104KA88D	MuRata		
C4	1	3300pF	CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0402	0402	GRM155R71H332KA01D	MuRata		
C5, C6	2	10uF	CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805	0805	C2012X5R1E106K125A B	TDK		
C8, C9	2	0.1uF	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603	06035C104KAT2A	AVX		
C10, C11	2	1uF	CAP, CERM, 1 µF, 50 V, +/- 10%, X5R, 0603	0603	GRM188R61H105KAALD	MuRata		
D1	1	20V	Diode, Schottky, 20 V, 1 A, SOD-123FL	SOD-123FL	MBR120LSFT1G	ON Semiconductor		
D2	1	18V	Diode, Zener, 18 V, 200 mW, SOD-323F	SOD-323F	MM3Z18VB	Fairchild Semiconductor		
D3	1	7.5V	Diode, Zener, 7.5 V, 200 mW, SOD-323F	SOD-323F	MM3Z7V5B	Fairchild Semiconductor		
D4, D5	2	30V	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23	BAT54SLT1G	ON Semiconductor		
H9, H10, H11, H12	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply	-	-
J1, J2, J3, J4, J5	5		Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology		
JP1	1		Header, 100mil, 2x1, Tin plated, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions		
L1	1	4.7uH	Inductor, Shielded Drum Core, Ferrite, 4.7uH, 1.7A, 0.08 ohm, SMD	Inductor, 4.2x1.65x4.2mm	LQH44PN4R7MP0L	MuRata		
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	45 V	Transistor, NPN, 45 V, 0.1 A, SOT-23	SOT-23	BC850CLT1G	ON Semiconductor		
Q2	1	45 V	Transistor, PNP, 45 V, 0.1 A, SOT-23	SOT-23	BC857C-7-F	Diodes Inc.		
R1	1	16.2k	RES, 16.2 k, 1%, 0.063 W, 0402	0402	CRCW040216K2FKED	Vishay-Dale		
R2	1	39k	RES, 39 k, 5%, 0.063 W, 0402	0402	CRCW040239K0JNED	Vishay-Dale		
R3	1	115k	RES, 115 k, 1%, 0.063 W, 0402	0402	CRCW0402115KFKED	Vishay-Dale		
R4	1	1.00k	RES, 1.00 k, 1%, 0.1 W, 0603	0603	RC0603FR-071KL	Yageo America		
R5	1	820	RES, 820, 1%, 0.1 W, 0603	0603	RC0603FR-07820RL	Yageo America		
R6	1	50K	TRIMMER, 50K Ohm, 0.1 W, SMD	2.5x2.8mm	3312J-1-503E	Bourns		
R7, R9	2	49.9k	RES, 49.9 k, 1%, 0.063 W, 0402	0402	CRCW040249K9FKED	Vishay-Dale		
R8	1	10.0	RES, 10.0, 1%, 0.1 W, 0603	0603	CRCW060310R0FKEA	Vishay-Dale		
SH-JP1	1	1x2	Shunt, 100mil, Gold plated, Black	Shunt	969102-0000-DA	3M	SNT-100-BK-G	Samtec
U1	1		18.5 V, 2 A, 650 KHz / 1.2 MHz Step-Up DC-DC Converter with Forced PWM Mode, 2.3 to 6 V, -40 to 85 degC, 8-pin SOP (DGK8), Green (RoHS & no Sb/Br)	DGK0008A	TPS61085DGKR	Texas Instruments	Equivalent	None
U2	1	LM7321MF	Single 30V High Output Current and Unlimited Capacitive Load Op Amp	MF05A_L	LM7321MF	National Semiconductor		

Notes:

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

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