

Bill of Materials

TI DESIGNS
TIDM-PSFB
Literature #

Item	Count	RefDes	Value	Description	Size	Part Number	MFR	Digikey Part #	Alternates for Obsolete Components	
									Part No.	MFR
1	1	C1	220nF	220nF, Capacitor, Ceramic, 100V X7R, +/- 10%	2220	Std	Std	720-1153-1-ND		
2	1	C13	1000pF	1000pF, Capacitor, Ceramic Disk, 500VAC	0.72	440LD10	Vishay-Sprague		P11118-ND	ECQ-U3A224MG
3	5	C14, C15, C16, C17, C18	1uF	1uF, Capacitor, Ceramic, 50V, X7R, +/- 10%	0805	Std	Std	490-4736-1-ND		
4	1	C19	100uF (Alt1)	100uF, Capacitor, Aluminum, 35V, ±20%	0.200 * 0.435 inch	P5551-ND				
5	1	C2	0.47uF	0.47uF, Capacitor, Film, 275VAC, 20±%	0.236 X 0.591	ECQ-U3A474MG	Panasonic			
6	1	C3	330 uF	330 uF, Capacitor, 450V, Temp.-255 to +105°C, ±20%	35mm	EETHC2W331 EA	Panasonic			
7	5	C4, C5, C6, C7, C8	1500 uF	1500 uF, Capacitor, Low Impedance, 16V, ±20%	400 mil	EKY-160ELL152MJ 30S	Nippon			
8	4	C9, C10, C11, C12	1uF	1uF, Capacitor, Ceramic, 25V, X7R, +/- 10%	1206	Std	Std	490-1789-1-ND		
9	5	D1, D2, D3, D9, D10	1N4148W	1N4148W, Diode, Signal, 200-mA, 100-V, 350-mW	SOD-123	1N4148W-7-F	Diodes			
10	6	D14, D15, D16, D17, D18, D19	BAT54	BAT54, Diode, Schottky, 200-mA, 30-V	SOT23	BAT54	Vishay-Liteon	BAT54FSC-ND		
11	2	D4, D6	ES3BB	ES3BB, Diode, 3000mA, 100V	SMB	ES3BB-13-F	Diodes Inc			
12	2	D5, D11	MURS360T3G	MURS360T3G, Diode, 3000mA, 600V	SMC	MURS360T3G				
13	4	D7, D8, D12, D13	MMSZ5242BT1G	MMSZ5242BT1G, Diode, Zener, 12V, 500-mW	SOD-123	MMSZ5242BT1G				
14	2	F1		Fuse Clip, 5x20 mm	0.205 x 0.220 inch x2	0100056H	Wickmann	486-1173-ND		
15	3	HS1, HS2, HS3	782653B02000	Heatsink, Vertical-mount, Clip Extrusion	0.866 x 2.000 inch	782653B02000	Aavid			
16	2	J1, J2	ED120/2DS	Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35 inch	ED120/2DS	OST			
17	2	J3, J4	CX70-14-CY	Copper, single barrel, one-hole, straight tongue (fixed) lug, #14 - #4 AWG wire, 1/4 stud hole."	1.55 x 0.50 inch	CX70-14-CY	Panduit			
18	1	J5	DF11-14DS-2DSA(05)	CONN RECEPT 14POS 2MM PCB TIN FEMALE	0.394 x 0.630 inch	DF11-14DS-2DSA(05)	HRS			
19	1	L1**	2.0 uH, 75PR8108	Inductor, 2.0 uH	0.913 X 1.165 inch	75PR8108	Vitec Electronics Corp			

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20	1	L2**	26 uH, 60PR964	Inductor, 26uH, Quad, ±18%	0.791 x 0.858 inch	60PR964	Vitec Electronics Corp			
21	4	Q1, Q2, Q3, Q4	SPP20N60CFD	MOSFET, N-ch, 650-V, 20-A, 220-milliohms	TO-220V	SPP20N60CFD			SPP20N60S5/FDP18N50-ND	
22	2	Q5, Q6	FDP032N08/IRFB3077PbF	MOSFET, N-ch, 75-V, 120-A, 3.2-milliohms/3.3milliohm	TO-220V	FDP032N08/IRFB3077PbF				
23	1	R1	48.7	48.7, Resistor, Chip, 1/10W, 1%	0805	Std	Std	RHM48.7CCT-ND		
24	1	R11	49.9	49.9, Resistor, Chip, 1/10W, 1%	0805	Std	Std	RHM49.9CRCT-ND		
25	1	R2	4.87k	4.87k, Resistor, Chip, 1/10W, 1%	0805	Std	Std	RHM4.87KCRCT-ND		
26	1	R22	0	0, Resistor, Chip, 1/10W, 1%	0805	Std	Std	RHM0.0ARCT-ND		
27	8	R3, R5, R12, R13, R18, R19, R20, R21	3.01	3.01, Resistor, Chip, 1/10W, 1%	0805	Std	Std	541-3.01CCCT-ND		
28	3	R4, R14, R17	1.00M	1.00M, Resistor, Chip, 1/10W, 5%	0805	Std	Std	RHM1.0MARCT-ND		
29	1	R6	100k	100k, Resistor, Chip, 1W, 1%	2512	Std	Std	541-100KAFCT-ND		
30	6	R7, R10, R15, R16, R23, R24	10.0k	10.0k, Resistor, Chip, 1/10W, 1%	0805	Std	Std	RHM10.0KCRCT-ND		
31	2	R8, R9	1.00k	Res, Power Metal Strip, 2W, ±5%	4527	Std	Std	W5CC-1.0KCT-ND		
32	1	T1**	PE63587	XFMR, Current Sense	0.700 x 0.900 inch	PE63587	Pulse			
33	1	T2**	75PR8107	Transformer,	1.520 x 1.970 inch	75PR8107	Vitec Electronics			
34	2	T3, T4**	56PR3362	Transformer, Gate Drive	0.453 x 0.492 inch	56PR3362	Vitec Electronics			
35	9	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9	K24A/M	Pin, Thru Hole, Tin Plate, for 0.062 PCB's	0.039 inch	K24A/M	Vector			
36	3	U1, U2, U3**	UCC27324D	IC, High Speed Low Side Power MOSFET driver	SO8	UCC27324D	TI			
37	1	--		PCB, 7.1 In x 3.8 In x 0.062 In		HPA442	Any			
38	2	C20, C21	1uF	CAPACITOR MLCC 1uF X7R 100V 10%	1210	GRM32ER72A105KA01L	Murata			
39	2	R25, R26	499	RESISTOR 499 0.25W 1% 1206	1206	RK73H2BTTD4990F	KOA	RHM499FCT-ND		
40	4	R28,29,30,31,32,33	10K	Res. - 10K, 1%, 1/8W, 0805 SMD	805	RHM10.0KCC T-ND	Rohm			
41	1	R27	0.0005	RESISTOR CS 0.0005 3W 2% 4020	4020	BVS-M-R0005	ISOTEK			
42	1	J8		Standard 0.1" DIL header, cut to fit						
43	1	J7		7 Pin 5W Aux Power Supply		PR798	Texas Instruments			
44	3	TP10, TP11, TP12	K24A/M	Pin, Thru Hole, Tin Plate, for 0.062 PCB's	0.039 inch	K24A/M	Vector			
45	1	U5	OPA365	IC SGL-SUPPLY OPAMP SOT-23-5	SOT235	OPA365AIDBVR	Texas Instruments	OPA345NA/250		
46	2	R37, R38	1K	RESISTOR 1.00K 0.062W 1% 0603	603	RK73H1JT1D1001F	KOA			
47	1	R39	47K	RESISTOR 47K 0.062W 1% 0603	603	P47.0KHCT-ND	KOA			
48	1	R40	4.7	Res. - 4.7ohm, 5%, 1/8W, 0805 SMD	805	MCR10EZJ4R7	Rohm			
49	1	C24	220pF	CAP MLCC 220pF 50V 5% COG 0603	603	GRM1885C1H221JA01D	Murata			

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50	1	C25	100nF	CAP MLCC 100nF 16V 10% X7R 0603	603	GRM188R71C104KA01D	Murata			
51	1	U4	TPS715A01	IC 1.2-15V HI-IN LDO REG SON8	SON8	TPS715A01DRB	Texas Instruments			
52	1	R34	1	RESISTOR 1/10watts 1ohms 1%	603	RK73H1JTTDD1R00F	KOA			
53	1	R35	174k	RESISTOR 174K 0.062W 1% 0603	603	P174KHCT-ND	KOA			
54	1	R36	100k	RESISTOR 100K 0.062W 1% 0603	603	RK73H1JTDD1003F	KOA			
55	1	C22	1uF	CAP MLCC 1uF 25V 10% X7R 0805	805	C2012X7R1E105K	TDK			
56	1	C23	10nF	CAP MLCC 10nF 50V 10% X7R 0603	603	GRM188R71H103KA01D	Murata			
57	1	C26	10uF	10uF, Capacitor, Ceramic, 25V, 0805	805					
Additional Hardware										
58	1	X1 @ F1	BK/S501-2-R	2A, Fast Acting Fuse	5mmX20mm	BK/S501-2-R	Cooper/Bussman			
59	6	X1 @ HS1,HS2, HS3		SCREW STEEL M3 THR 6MM		29311	Keystone Electronics			
60	6	X1 @ HS1,HS2, HS3		WASHER LOCK METRIC M 3 ZINC		MLWZ 003	B&F Fastener Supply			
61	6	X1 @ HS1,HS2, HS3, Q1, Q2 Q3, Q4, Q5, Q6		Thermal Pad Tube, Needs to be cut to 22mm		BER156-ND	Bergquist			
62	6	X1 @ HS1,HS2, HS3, Q1, Q2, Q3, Q4, Q5, Q6		MAX Clip		MAX01G	Aavid			
63	1	X2@J5		UCC28950 Daughter Card Assembly		HPA471	Any			
64	4	1903C		STANDOFF HEX .500/6-32THR NYLON,Mount on Bottom of PCB		1903C	Keystone Electronics			
65	4	4824		Nut, Mount to Top of PCB		4824	Keystone Electronics			

- Notes:
1. These assemblies are ESD sensitive, ESD precautions shall be observed.
 2. Magnetics L1, L2, T1, T2, T3, T4 are not to be dipped or cleaned with any cleaning solution.
 3. These assemblies must be clean and free from flux and all contaminants.
Use of no clean flux is not acceptable.
 4. These assemblies must comply with workmanship standards IPC-A-610 Class 2.
 5. Ref designators marked with an asterisk (****) cannot be substituted.
All other components can be substituted with equivalent MFG's components.
 6. Long lead time components are in red cells