

# Bill of Materials

TI DESIGNS  
TIDM-BLPFC  
Revision 4

Item	Macro Name	Ref. Des	Type	Description	# needed per macro	# needed per board	Digikey Part #	Mouser Part #	Newark	Comments
1	PFC-Bridgeless Main Board[R3]	H1	J	100 pin DIMM socket - Molex 0876301001	1	1		538-87630-1001		
2	PFC-Bridgeless Main Board[R3]	M2	M	AuxSupply-400Vin-to-12V-5V	1	1				Custom Made
3	PFC-Bridgeless Main Board[R3]	C1, C4	C	Ceramic, 1000pF, 0805	2	2	PCC102BNTR-ND			
4	PFC-Bridgeless Main Board[R3]	BS5,BS6	BC	Banana Connector and Screws	2	2	501-1115-ND			Each Bag contains 10
5	PFC-Bridgeless Main Board[R3]	J1		Standard 0.1" SIL headers, cut to fit, total needed 1x4	1	1				
6	PFC-Bridgeless Main Board[R3]	J7	JP	Standard 0.1" SIL headers, cut to fit, total needed 1x3	1	1				
7	PFC-Bridgeless Main Board[R3]	J3,J4,J5,J6, J8	JP	Standard 0.1" SIL headers, cut to fit, total needed 1x2	5	5				
8	PFC-Bridgeless Main Board[R3]	P1	TB	CONN AC RECEPT 7MM R/A RND PCB	1	1	Q218-ND			
9	PFC-Bridgeless Main Board[R3]	C2, C3		Do not populate	0	0				
10	PFC-Bridgeless Main Board[R3]	Cd1		CAP CER .22UF 16V X7R 10% 0805	1	1	445-1355-1-ND			
11	PFC-Bridgeless Main Board[R3]	Cd2, Cd3		CAP CER .1UF 50V 10% X7R 0805	2	2	490-1666-1-ND			
12	PFC-Bridgeless Main Board[R3]	D1, D2		1N4148WX-TP DIODE SWITCH 75V 300MA SOD323	2	2	1N4148WXTPMSCCT-ND			
13	PFC-Bridgeless Main Board[R3]	R7, R11, R12		RES 10.0K OHM 1/8W 1% 0805 SMD	3	3				
14	PFC-Bridgeless Main Board[R3]	R1		168 ohm, 1%	1	1				
15	PFC-Bridgeless Main Board[R3]	R2, R4		RES 4.99K OHM 1/8W 1% 0805 SMD	2	2	RHM4.99KCRCT-ND			
16	PFC-Bridgeless Main Board[R3]	R3		RES 18 OHM 1/8W 5% 0805 SMD	1	1	RHM18ACT-ND			
17	PFC-Bridgeless Main Board[R3]	R5		RES 1.00K OHM 1/8W 1% 0805 SMD	1	1	RHM1.00KCCT-ND			
18	PFC-Bridgeless Main Board[R3]	R6		Do not populate	0	0				
19	PFC-Bridgeless Main Board[R3]	R8		Do not populate	0	0				
20	PFC-Bridgeless Main Board[R3]	R9		RES 10.0 OHM 1/8W 1% 0805 SMD	1	1	RHM10.0CCT-ND			
21	PFC-Bridgeless Main Board[R3]	R10		Do not populate	0	0				
22	PFC-Bridgeless Main Board[R3]	T1		PA3270NL, Current Sense Transformer, Pulse Engineering	1	1	Changed to PA3294NL			
23	PFC-Bridgeless Main Board[R3]	U1		OPA2350	1	1	OPA2350UA-ND			
24	PFC-Bridgeless Main Board[R3]	U2		TS5A3159, Digi 296-17319-1-ND	1	1	296-17319-1-ND			
25	PFC-Bridgeless Main Board[R3]	ZD1		SMAZ14, SMAZ16-TPMSCCT-ND, Changed to DIODE ZENER 6.2V 1W POWERDI123	1	1	SMAZ16-TPMSCCT-ND			
26	PFC-Bridgeless Main Board[R3]	ZD2		SMAZ14, SMAZ16-TPMSCCT-ND, Changed to DIODE ZENER 6.2V 1W POWERDI123	1	1	SMAZ16-TPMSCCT-ND			
27	PFC-Bridgeless Main Board[R3]	U3		74LVC2G17	1	1	296-13013-2-ND			
28	USB-JTAG-ISO[R1]	C1, C4, C5	C	Cer. Cap - 1u, 6.3V, X5R, 0603	3	3	PCC2174CT-ND, PTI x-referenced to C1608X7R1A105K/DK			
29	USB-JTAG-ISO[R1]	C2	C	Cer. Cap - 2u2, 6.3V, X5R, 0603	1	1	490-1551-1-ND			
30	USB-JTAG-ISO[R1]	C3, C6-C16	C	Cer. Cap - 100n, 16V, X7R, 0603	12	12	GRM188R71C104KA01D			

31	USB-JTAG-Iso[R1]	C17	C	Cer. Cap - 0.1uf, 100V, 20% , Axial	1	1	478-3154-1-ND		
32	USB-JTAG-Iso[R1]	DA1	DA	Diode Array, Quad, SOT363	1	1	BAW567DW-FDICT-ND		
33	USB-JTAG-Iso[R1]	J1, J3, J4, J5	J	Standard 0.1" SIL headers, cut to fit, total needed 1x8	4	4			
34	USB-JTAG-Iso[R1]	J2	J	Standard 0.1" DIL header, cut to fit, remove pin 6, total needed 2x7	1	1			
35	USB-JTAG-Iso[R1]	JP1	JP	Connector - USB Type B	1	1	ED90064-ND		
36	USB-JTAG-Iso[R1]	L1, L2	L	Inductor, 22uH, 0805	2	2	490-4030-1		
37	USB-JTAG-Iso[R1]	LD1	LD	LED, green, 0805	1	1	404-1021-1		
38	USB-JTAG-Iso[R1]	R1	R	Res. - 470R, 5%, 0.1W, 0603	1	1	RHM470GCT-ND		
39	USB-JTAG-Iso[R1]	R2, R3	R	Res. - 27R, 5%, 0.1W, 0603	2	2	RHM27GCT-ND		
40	USB-JTAG-Iso[R1]	R4, R6, R9, R10, R14	R	Res. - 2K2, 5%, 0.1W, 0603	5	5	RHM2.2KGCT-ND		
41	USB-JTAG-Iso[R1]	R5	R	Res. - 1M, 1%, 0.1W, 0603	1	1	RHM1.00MHCT-ND		
42	USB-JTAG-Iso[R1]	R7	R	Res. - 10K, 5%, 0.1W, 0603	1	1	RHM10KGCT-ND		
43	USB-JTAG-Iso[R1]	R8	R	Res. - 1K, 5%, 0.1W, 0603	1	1	RHM1.0KGCT-ND		
44	USB-JTAG-Iso[R1]	R11	R	Res. - 680R, 5%, 0.1W, 0603	1	1	RHM680GCT-ND		
45	USB-JTAG-Iso[R1]	R13	R	Res. - 47K, 5%, 0.1W, 0603	1	1	RHM47KGCT-ND		
46	USB-JTAG-Iso[R1]	U1	U	FTDI UART/FIFO Dual, 48-LQFP	1	1	768-1010-1-ND		
47	USB-JTAG-Iso[R1]	U2	U	EEPROM, SOT23-6	1	1	93LC46BT-I/OTCT-ND		
48	USB-JTAG-Iso[R1]	U3	U	DFP - LVC2G74	1	1	296-13273-1-ND		
49	USB-JTAG-Iso[R1]	U4	U	LDO - 3.3V - TPS73033	1	1	296-17580-1-ND		
50	USB-JTAG-Iso[R1]	U5	U	Digital Isolator, Quad 4/0, 25Mbps	1	1		595-IS07240CDW	
51	USB-JTAG-Iso[R1]	U6	U	Digital Isolator, Quad 2/2, 25Mbps	1	1		595-IS07242CDW	
52	USB-JTAG-Iso[R1]	X1	X	Resonator - 6MHz	1	1	490-1218-1-ND		
53	PFC-Bridgeless-CT[R2]	C2,C3	C	Do not populate	0	0	PCC1820CT-ND		
54	PFC-Bridgeless-CT[R2]	C4	C	Film Cap - 47n, 630VDC METAL POLY CAP	1	1	E6473-ND		
55	PFC-Bridgeless-CT[R2]	C5,C6,C16	C	Elec. Cap - 100uf, 450V, Alum, radial	3	3	565-1481-ND		
56	PFC-Bridgeless-CT[R2]	C1,C7	C	4.7pF, 50V, NPO, 0805	2	2	478-1300-1-ND		
57	PFC-Bridgeless-CT[R2]	C9	C	CAP CER 0.01uF 50V 5% 0805	1	1	490-1664-1-ND		
58	PFC-Bridgeless-CT[R2]	Cd1	C	Cer. Cap - 2u2, 25V, X7R, 0805	1	1	PCC2231CT-ND		
59	PFC-Bridgeless-CT[R2]	Cd2, Cd3	C	CAP CER 20000PF 50V X7R 0805 (Changed to 10000pF because of stock issue)	2	2	0805C203KAT2A-ND, [Changed to 478-5031-1-ND, 10000pF, 50V, 0805, 0805C103MAT2A]		
60	PFC-Bridgeless-CT[R2]	Cd5	C	CAP, CER 22U 1206 25V	1	1	490-5527-1-ND		
61	PFC-Bridgeless-CT[R2]	R1,R2,R7,R11	R	RES 10.0K OHM 1/8W 1% 0805 SMD	4	4	RHM10.0KCCT-ND		
62	PFC-Bridgeless-CT[R2]	R3,R4,R5,R9	R	RES 10.0 OHM 1/8W 1% 0805 SMD	4	4	RHM10.0CCT-ND		
63	PFC-Bridgeless-CT[R2]	R6,R10	R	Do not populate	0	0	RHM2.49KCCT-ND		
64	PFC-Bridgeless-CT[R2]	R8, R17	R	RES 1k 1/8W 1% 0805 SMD					
65	PFC-Bridgeless-CT[R2]	R13,R14	R	Res. - 1.0M, 0.1%, 0.1W, 0805	2	2	P1MDACT-ND		
66	PFC-Bridgeless-CT[R2]	R15	R	RES 13.0K OHM 1/8W 1% 0805 SMD,	1	1	RHM13.0KCCT-ND		
67	PFC-Bridgeless-CT[R2]	R12, R19	R	RES 10 OHM 1/8W 1% 0805 SMD	2	2			
68	PFC-Bridgeless-CT[R2]	R16, R18	R	Do not populate	0	0			
69	PFC-Bridgeless-CT[R2]	D1, D6	ZD	DIODE Schottky, 30V, 500mA, SOD-123	2	2	MBR0530TR-ND		
70	PFC-Bridgeless-CT[R2]	ZD1	ZD	DIODE ZENER 1W 16V SMA, DO-214AC	1	1	SMAZ5V1-TPMSCT-ND		
71	PFC-Bridgeless-CT[R2]	ZD2	ZD	DIODE ZENER 5.1V 1W SMA	Not on board	Not on board	SMAZ5V1-FDICT-ND		
72	PFC-Bridgeless-CT[R2]	U1	U	Dual Power Mosfet Driver HS, 4A, 8-SOIC, UCC27324QDRQ1	1	1	296-23486-1-ND		
73	PFC-Bridgeless-CT[R2]	T1,T2	T	CS Transformer,	2	2	CTX16-18294-R-ND		
74	PFC-Bridgeless-CT[R2]	Q1,Q2	Q	IPP60R250CP, MOSFET N-CH 650V 12A TO-220	2	2	IPP60R250CPIN-ND		
75	PFC-Bridgeless-CT[R2]	D2,D3	DA	Do not populate	0	0	1N4148WTPMSCT-ND		
76	PFC-Bridgeless-CT[R2]	D4,D5	DA	CSD10060G, DIODE SCHOTTKY 600V 10A TO263-2	2	2	CSD10060G-ND		
77	PFC-Bridgeless-CT[R2]	HS1,HS2	HS	Heat Sink, 2.0", Wakefield, Outline 34.92mm x 12.70mm, Height 2"	2	2	345-1030-ND		
78	PFC-Bridgeless-CT[R2]	Ref HS1, HS2		Nylon Washers for Heatsink Stad offs , 0.120x0.375 Nylon	4	4	3118K		
79	PFC-Bridgeless-CT[R2]	Ref Q1, Q2		Shoulder washer for Imperial 440 Screws	2	2		749-SW-032-135	
80	PFC-Bridgeless-CT[R2]	Ref Q1, Q2		Imperial 440 Screws	2	2			
81	PFC-Bridgeless-CT[R2]	Ref Q1, Q2		Heat Pads Insulators	2	2	BER205-ND		
82	PFC-Bridgeless-CT[R2]	PR1	PR	Do not populate	0	0			
83	PFC-Bridgeless-CT[R2]	L1,L2	L	Cooper Inductors , CTX16-18702-R, 200Khz, 150uH, @ 7.8 Amps Peak ,500W PFC Inductor	2	2	CTX16-18702R		
84	DC-PwrEntry1Sw[R1]	C1	C	Cer. Cap - 22u, 25V, X5R, 1206	1	1	587-1433-1-ND		
85	DC-PwrEntry1Sw[R1]	C2	C	Cer. Cap - 10u, 25V, X5R, 1206	1	1	PCC2326CT-ND, PTI X-referenced to C3216Y5V1E106Z		
86	DC-PwrEntry1Sw[R1]	C3	C	Cer. Cap - 4u7, 25V, X5R, 0805	2	2	490-3335-1-ND		

87	DC-PwrEntry1Sw[R1]	C4	C	Cer. Cap - 0.1uf, 25V, X5R, 0805	1	1	PCC1828CT-ND, PTI X-referenced to 250R15W104KV4T		
88	DC-PwrEntry1Sw[R1]	C5,C6,C7	C	Elec. Cap - 330uf, 25V, Alum, radial	3	3	P5154-ND		
89	DC-PwrEntry1Sw[R1]	R1	R	Res. - 330R, 1%, 0.1W, 0805	1	1	RHM330CTR-ND		
90	DC-PwrEntry1Sw[R1]	R2	R	Res. - 470R, 5%, 0.1W, 0805	1	1	RHM470ARCT-ND		
91	DC-PwrEntry1Sw[R1]	LD1	LD	LED, green, 0805	1	1	404-1021-1		
92	DC-PwrEntry1Sw[R1]	SW1	SW	Toggle Switch - Miniature, SPDT	1	1		108-2AS1T1203-EVX	
93	DC-PwrEntry1Sw[R1]	M1	P	Power Module - PTH08080	1	1	296-20432-ND		
94	DC-PwrEntry1Sw[R1]	U1	U	LDO - 3.3V - TPS79533	1	1	296-13810-1-ND		
95	DC-PwrEntry1Sw[R1]		J	Standard 0.1" SIL headers, cut to fit, total needed 1x2	1	1			
96	DC-PwrEntry1Sw[R1]	JP1	JP	Power jack 2.1 x 5.5 mm	1	1	CP-002AH-ND		
97	AC-PwrEntry-Bridgeless[R2]	C1,C2	C	CAP FILM .0047UF 330VAC SUPPRESS	2	2	P4625-ND		
98	AC-PwrEntry-Bridgeless[R2]	C3,C4	C	CAP FILM .047UF 330VAC SUPPRESS	2	2	495-3241-ND, Changed to 495-3972-ND		
99	AC-PwrEntry-Bridgeless[R2]	C6	C	Do not populate	0	0			
100	AC-PwrEntry-Bridgeless[R2]	C5	C	CAP FILM .47UF 330VAC SUPPRESS	1	1	495-3253-ND, Crossed to B32914A3474M by PTI, PTI changed again to 495-3252-ND		
101	AC-PwrEntry-Bridgeless[R2]	C7,C8	C	CAP .0039UF 16V PPS FILM 0805 5%	2	2	PCF1191CT-ND		
102	AC-PwrEntry-Bridgeless[R2]	R1,R2,R4,R5	R	RES 432K OHM 1/8W 1% 0805 SMD	4	4	RHM432KCCT-ND		
103	AC-PwrEntry-Bridgeless[R2]	R3,R6	R	RES 7.15K OHM 1/8W 1% 0805 SMD	2	2	RHM7.15KRCRT-ND		
104	AC-PwrEntry-Bridgeless[R2]	R7	R	RES 1.00K OHM 1/8W 1% 0805 SMD	1	1	RHM1.00KCCT-ND		
105	AC-PwrEntry-Bridgeless[R2]	R8	R	RES 10.0K OHM 1/8W 1% 0805 SMD	1	1	RHM10.0KCCT-ND		
106	AC-PwrEntry-Bridgeless[R2]	RT1	RT	CURRENT LIMITR INRSH 16.0 OHM 20%	1	1	KC007L-ND		
107	AC-PwrEntry-Bridgeless[R2]	RLY1	RLY	RELAY PWR SPST 10A 5VDC SEAL PCB	1	1	Z2155-ND		
108	AC-PwrEntry-Bridgeless[R2]	L1,L2	L	Differential Mode Filter Inductor, Pulse Engg PA0431L	2	2	553-1115-ND		
109	AC-PwrEntry-Bridgeless[R2]	D1,D2	D	DIODE SCHOTTKY DUAL SOT23-3	2	2	BAT54SCT-ND		
110	AC-PwrEntry-Bridgeless[R2]	D3	D	DIODE SWITCH 100V 400MW SOD123	1	1	1N4148W-FDICT-ND		
111	AC-PwrEntry-Bridgeless[R2]	Q1	Q	MOSFET N-CH 25V 220MA SOT-23	1	1	FDV301NCT-ND		
112	AC-PwrEntry-Bridgeless[R2]	Lcm	L	CHOKE COMM MODE W/HDR 2mH 7.5A	1	1	M8903-ND		
113	AC-PwrEntry-Bridgeless[R2]	VAR1	VAR	VARISTOR 275V RMS 10MM RADIAL	1	1	495-1433-ND		
114	AC-PwrEntry-Bridgeless[R2]	F1	F	FUSEHOLDER SLOT FPG4 IP40 PCB	1	1	486-1159-ND		
115	AC-PwrEntry-Bridgeless[R2]	Fuse-Cap	F	CAP FOR 5X20MM FUSES FLUSH MOUNT	1	1	WK6234-ND		
116	AC-PwrEntry-Bridgeless[R2]	Fuse-F1	F	FUSE 250V IEC SLO 5X20MM 6.5A	1	1	F2425-ND		

### Instruction for Jumper Installation

J3, J4, J5, J6, J7

Install 4 jumpers at J3, J4, J5 & J6.  
Install 1 jumper at J7, pin 2-3

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