

## BILL OF MATERIALS

Item	Q.ty	Reference	Part / Value	Tolerance %	Voltage/ Current	WATT	TECNOLOGY information	PACKAGE	Manufacturer	Manufacturer Code	RS/Distelec/Other Code	More Info
1	2	C1,C4	2.2nF Y1	+/-20%	400V		Y1 Ceramic capacitor	Through Hole	Any		RS code: 214-5903	
2	1	C2	0.22uF	+/-20%	300V		X2 Capacitor	Through Hole	Any		RS code: 208-6882	
3	1	C3	0.47uF	+/-10%	300V		X2 Capacitor	Through Hole	Any		RS code: 441-9694	
4	1	C5	0.68uF	+/-10%	630V		Radial polyprop cap	Through Hole	Any		RS code: 190-8438	
5	2	C6,C7	330uF	+/-20%	450V		Electrolytic Capacitor	Through Hole	Phycomp	LH450M0330BPF-3050	RS code: 440-6711	
6	1	C8	0.22uF	+/-10%	630V		Polyester Capacitor	Through Hole	Any		Distrelec code: 823778	
7	1	C9	2.2uF	+/-20%	450V		Electrolytic Capacitor	Through Hole	Any		RS code: 193-7256	
8	1	C10	2.2uF	+/-20%	50V		Electrolytic Capacitor	Through Hole	Any		RS code: 117-007A	
9	1	C11	10uF	+/-20%	50V		Electrolytic Capacitor	Through Hole	Any		RS code: 365-4240	
10	1	C12	39pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
11	1	C13	1uF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
12	2	C14,C25	100pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
13	1	C15	22nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
14	4	C16,C19,C21,C22	100nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
15	1	C17	220pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
16	1	C18	100uF	+/-20%	25V		Electrolytic Capacitor	Through Hole	Any		RS code: 365-4127	
17	1	C20	1uF	+/-20%	50V		Electrolytic Capacitor	Through Hole	Any		RS code: 365-4199	
18	1	C23	3.3nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
19	1	C24	470pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
20	1	C26	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	Do not fit
21	1	D1	8A/400V Ac diode bridge		400V/8A		Single-Phase Bridge Rectifier	Through Hole	Vishay	KBU8G-E4	RS code: 634-9288	
21A	1	Heatsink for D1	Heatsink for D1				Heatsink for D1		Aavid Thermalloy	S055/B/100	RS code: 4907208	
22	2	D2,D10	GF1M		1000V/1A		Rectifier diode	DO214BA	Vishay	GF1M	RS code: 269-451	
23	1	D3	1N5406		600V/3A		Rectifier diode	DO201AD	Any		RS code: 262-343	
24	1	D4	STTH12S06				Turbo 2 ultrafast high voltage rectifier	TO-220	STMicroelectronics	STTH12S06FP		
25	3	D5,D6,D14	LL4148				Switching diode	SOD-80	Any		Distrelec code: 601496	
26	2	D7,D11	STTH1R06				Turbo 2 ultrafast high voltage rectifier	SMB	STMicroelectronics	STTH1R06U		
27	1	D8	BZX84C15		15V		Zener diode	SOT-23	NXP	BZX84-C15	RS code: 436-8186	
28	2	D9,D15	1N4001		50V/1A		Rectifier diode	DO204AL	Vishay	1N4001	RS code: 261-148	
29	1	D12	15V		15V	0.5W	Zener diode	DO-34	Any		Distrelec code: 601542	
30	1	D13	LED-red				Red CHIPLED	SMD 1206	Any		RS code: 654-5694	
31	1	F1	Fuse		250V/10A		Time lag fuse	-	RS		RS code: 488-8567	
31A	1	SOCKET for F1	SOCKET for F1				SOCKET for F1	Through Hole	Schurter	31.8231	RS code: 336-7851	
32	1	IC1	VIPER12A-E				Low Power OFF-Line SMPS Primary Switcher	SO-8	STMicroelectronics	VIPER12AS-E		
33	1	J7	220AC/16A				3 way PCB mount screw terminal, 7.62mm	Through Hole	Phoenix Contact	1731734	RS code: 189-5972	
34	1	J8	OUT/400V-3.5A				3 way PCB mount screw terminal, 7.62mm	Through Hole	Phoenix Contact	1731734	RS code: 189-5972	
35	1	J9	VIPER12 ON/OFF				2 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
36	1	J10	Ext-15v				2 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
37	1	J11	TSV992				Rail-to-rail input/output 20 MHz GBP operational amplifiers	SO-8	STMicroelectronics	TSV992ID		
38	1	J12	TD352				Advanced IGBT/MOSFET Driver	SO-8	STMicroelectronics	TD352ID		
39	1	J13	L7805C				Positive voltage regulators	DPAK	STMicroelectronics	L7805CDT-TR		
40	1	J14	74VHCU04				HEX INVERTER	SO-14	STMicroelectronics	74VHCU04MTR		
41	1	J15	MC connector PFC 1				34 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461792	
42	1	J16	MC connector PFC 2				34 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461792	
43	1	J18	CON3				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
44	1	L1	B82725A2802N1				Power Line Choke	Vertical Through Hole	Epcos	B82725A2802N1	Distrelec code: 351190	
45	1	L2	900uH-10Apk									
46	1	L3	1 mH	+/-10%	290mA		Radial Inductor	Through Hole	Würth Elektronik	744741102	RS code: 488-9964	
47	1	Q1	STW23NM60N				N-channel 600 V - 0.150 Ω - 19 A, second generation MDMesh™ Power	TO-247	STMicroelectronics	STW23NM60N		
47A	1	Heatsink for Q1 and D4	Heatsink for Q1 and D4				Heatsink for STW23NM60N and STTH12S06 (100,00mm)		Aavid Thermalloy	78075		
48	2	Q2,Q3	BC847				NPN transistor	SOT23	NXP	BC847	RS code: 436-7953	
49	1	RL1	relesmal		12V/10A		Mini Power Pcb Relay	Through Hole	Tyco Electronics	T7SS5E6-12	RS code: 616-8714	
50	1	R1	330k	+/-1%		0.6W	Resistor	Through Hole			RS code: 149-105	
51	3	R2,R6,R7	220k	+/-1%		0.6W	Resistor	Through Hole			RS code: 149-060	
52	1	R3	82k	+/-1%		0.6W	Resistor	Through Hole			RS code: 148-950	
53	2	R4,R10	4.7k	+/-1%		0.6W	Resistor	Through Hole			RS code: 148-663	
54	2	R5,R35	470k	+/-5%		1/4W	Resistor	Through Hole				
55	1	R8	100k	+/-1%		1/4W	Resistor	Through Hole			RS code: 148-972	
56	1	R9	47	+/-5%		1/4W	Resistor	SMD 1206				
57	1	R11	6.8	+/-5%		1/4W	Resistor	SMD 1206				
58	1	R12	0.07	+/-3%		3W	non inductive resistor LOB3 type	Through Hole	IRC		Distrelec: 710516	
59	2	R13,R31	3.3k	+/-5%		1/4W	Resistor	SMD 1206				
60	3	R14,R30,R33	10k	+/-5%		1/4W	Resistor	SMD 1206				
61	2	R15,R22	1.5k	+/-5%		1/4W	Resistor	SMD 1206				
62	1	R16	220k	+/-5%		1/4W	Resistor	SMD 1206				
63	1	R17	6.8k	+/-5%		1/4W	Resistor	SMD 1206				
64	2	R18,R24	33k	+/-5%		1/4W	Resistor	SMD 1206				
65	2	R19,R20	22k	+/-5%		1/4W	Resistor	SMD 1206				
66	1	R21	12k	+/-5%		1/4W	Resistor	SMD 1206				
67	1	R23	4.7k	+/-5%		1/4W	Resistor	SMD 1206				
68	2	R25,R29	2.2k	+/-5%		1/4W	Resistor	SMD 1206				
69	1	R26	1k	+/-5%		1/4W	Resistor	SMD 1206				
70	2	R27,R28	120k	+/-5%		1/4W	Resistor	SMD 1206				
71	1	R32	1.5k	+/-5%		1/4W	Resistor	SMD 1206				
72	1	R34	100	+/-5%		5V	Resistor	Through Hole	Any		RS code: 199-7769	
73	1	R36	1.2k	+/-5%		1/4W	Resistor	SMD 1206				

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74	1	TP1	15V TP				1 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
75	1	TP2	5V TP				1 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
76	1	TP3	Vdc Power Stage TP				1 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code: 495-8470	
77	9	Metal Spacer	Metal Spacer				Metal spacer M3x10mm		Any		RS code: 222-395	
78	11	Metal Screw	Metal Screw				Metal Screw M3X6		Any		RS code: 560-580	
79	4	Metal Screw	Metal Screw				Metal Screw M3X10		Any		RS code: 560-596	
80	11	Metal washer	Metal washer				Metal washer M3		Any		RS code: 560-338	
81	2	Metal shakeproof washer	Metal shakeproof washer				Metal washer M3		Any		RS code: 526-574	