

Parts list

Table 9. EVL250W-ATX80PL bill of materials

Ref	Value	Description	Manufacturer
C1	220 μ F	Electrolytic capacitor VXG – 450 V	Rubycon
C2	100 nF	Polypropylene capacitor 450 V	
C3	1.0 μ F	Polypropylene capacitor 450 V – ECWF2W105JA	Panasonic
C4	1 μ F	SMD ceramic capacitor X7R – 16 V	AVX
C5	22 μ F	Electrolytic capacitor 25 V – 105 °C	
C6	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C7	3.3 nF	SMD ceramic capacitor X7R – 50 V	AVX
C8	2.2 nF	SMD ceramic capacitor X7R – 50 V	AVX
C9	560 pF	SMD ceramic capacitor NP0 – 50 V	AVX
C10	330 pF	SMD ceramic capacitor NP0 – 50 V	AVX
C11	470 pF	SMD ceramic capacitor X7R – 50 V	AVX
C12	220 nF	SMD ceramic capacitor X7R – 25 V	AVX
C13	1 nF	SMD ceramic capacitor X7R – 50 V	AVX
C14	33 nF	SMD ceramic capacitor X7R – 25 V	AVX
C15	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C101	1.0 μ F	Polypropylene capacitor 450 V – ECWF2W105JA	Panasonic
C102	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C103	22 μ F	Electrolytic capacitor 25 V – 105 °C	
C104	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C105	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C106	220 pF	SMD ceramic capacitor NP0 – 50 V 1 %	AVX
C107	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C108	470 nF	SMD ceramic capacitor X7R – 16 V	AVX
C109	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C110	100 pF	SMD ceramic capacitor NP0 – 50 V	AVX
C112	10 nF	SMD ceramic capacitor X7R – 50 V	AVX
C201	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C202	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C203	4.7 nF	SMD ceramic capacitor X7R – 50 V	AVX
C204	3.3 nF	SMD ceramic capacitor X7R – 100 V	AVX
C205	220 nF	SMD ceramic capacitor X7R – 25 V	AVX
C206	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
C207	470 μ F	Electrolytic capacitor ZLH – 16 V	Rubycon
C208	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C209	2.2 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C210	2.2 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C301	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C302	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C303	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C304	1.2 nF	SMD ceramic capacitor X7R – 50 V	AVX
C305	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C306	4.7 μ F	SMD ceramic capacitor X7R – 16 V	AVX
C307	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C308	1 nF	SMD ceramic capacitor X7R – 50 V	AVX
C309	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C310	2.2 nF	SMD ceramic capacitor X7R – 50 V	AVX
C311	100 μ F	SMD ceramic cap 6.3 V – GRM32EF50J107ZE20K	Murata
C312	100 μ F	SMD ceramic cap 6.3 V – GRM32EF50J107ZE20K	Murata
C313	10 μ F	SMD ceramic capacitor X7R – 6.3 V	AVX
C501	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C502	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C503	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C504	1.2 nF	SMD ceramic capacitor X7R – 50 V	AVX
C505	4.7 μ F	SMD ceramic capacitor X7R – 16 V	AVX
C506	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C507	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C508	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C509	1 nF	SMD ceramic capacitor X7R – 50 V	AVX
C510	2.2 nF	SMD ceramic capacitor X7R – 50 V	AVX
C511	100 μ F	SMD ceramic cap 6.3 V – GRM32EF50J107ZE20K	Murata
C512	100 μ F	SMD ceramic cap 6.3 V – GRM32EF50J107ZE20K	Murata
C513	10 μ F	SMD ceramic capacitor X7R – 10 V	AVX
C602	470 pF	Ceramic capacitor – 1 kV	
C603	1500 μ F	Electrolytic capacitor HM – 16 V	Nichicon
C604	470 μ F	Electrolytic capacitor ZLH – 16 V	Rubycon
C605	10 μ F	Electrolytic capacitor 50V – 105 °C	
C606	47 μ F	Electrolytic capacitor 3V – 105 °C	

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
C607	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C608	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C609	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C611	220 nF	SMD ceramic capacitor X7R – 25 V	AVX
C612	47 nF	SMD ceramic capacitor X7R – 25 V	AVX
C613	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
C614	0.1 μ F	SMD ceramic capacitor X7R – 25 V	AVX
C615	10 nF	SMD ceramic capacitor X7R – 25 V	AVX
CN1	AC INLET	3.96 mm pitch KK series	Molex
CX1	470 nF	Polypropylene X2 capacitor R46 – 275 Vac	Arcotronics
CX3	680 nF	Polypropylene X2 capacitor R46 – 275 Vac	Arcotronics
CY1	2N2	Ceramic Y1 capacitor – DE1E3KX222M	Murata
CY2	2N2	Ceramic Y1 capacitor – DE1E3KX222M	Murata
CY3	4N7	Ceramic Y1 capacitor – DE1E3KX472M	Murata
D1	D15XB60	15A/600V bridge rectifier	Shindengen
D2	1N5406	3A/600V rectifier	
D3	STPSC1006D	10A/600V silicon carbide Schottky rectifier	STMicroelectronics
D4	1N4148WS	Fast switching diode	
D5	1N4148WS	Fast switching diode	
D6	1N4148	Fast switching diode	
D101	LL4148	Fast switching diode	
D102	LL4148	Fast switching diode	
D103	STTH1L06	1A/600V ultrafast high voltage rectifier	STMicroelectronics
D203	LL4148	Fast switching diode	
D204	LL4148	Fast switching diode	
D301	TMMBAT43	Small signal Schottky diode	STMicroelectronics
D501	TMMBAT43	Small signal Schottky diode	STMicroelectronics
D601	STTH102A	1A/200V high efficiency ultrafast diode	STMicroelectronics
D602	BAV103	Switching diode	
D603	BAV103	Switching diode	
D604	STTH108A	1A/800V high voltage ultrafast rectifier	STMicroelectronics
D605	STPS5L60	5A/60V power Schottky diode	STMicroelectronics
D606	BAT48	Small signal Schottky diode	STMicroelectronics
D607	LL4148	Fast switching diode	
D608	LL4148	Fast switching diode	

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
D609	LL4148	Fast switching diode	
F1	FUSE - 10A	Fuse T10A – time delay	
IC1	L6563S	Enhanced transition-mode PFC controller	STMicroelectronics
IC2	L6591	PWM controller for ZVS half bridge	STMicroelectronics
IC3	VIPER27HN	Offline high voltage converters	STMicroelectronics
IC200	TL431AIZ	Programmable voltage reference	STMicroelectronics
IC300	L6727	Single phase PWM controller	STMicroelectronics
IC500	L6727	Single phase PWM controller	STMicroelectronics
IC600	TS431AIZ	Low voltage adjustable shunt reference	STMicroelectronics
L1	2x4 mH	Common mode choke 1606.0010	Magnetics
L2	2xJUMPER		
L3	60 μ H	Differential mode choke 1119.0013	Magnetics
L4	870 μ H	PFC choke	
L5	0.75 μ H	AHB post filter inductor 1019.0016	Magnetics
L201	3.7 μ H	AHB output choke 2029.0002	Magnetics
L301	3.7 μ H	DC-DC choke 2029.0001	Magnetics
L501	3.7 μ H	DC-DC choke 2029.0001	Magnetics
L601	2.7 μ H	AUX stage post filter inductor 1048.0010	Magnetics
NTR1	2R5	NTC inrush current limiter B57237S0259M000	EPCOS
OPTO1	PC817A	Optocoupler	SHARP
OPTO2	PC817A	Optocoupler	SHARP
OPTO3	PC817A	Optocoupler	SHARP
Q1	STF12NM50N	500 V MDmesh II Power MOSFET	STMicroelectronics
Q2	STF12NM50N	500 V MDmesh II Power MOSFET	STMicroelectronics
Q3	BC857C	PNP small signal BJT	
Q101	STF21NM50N	500 V MDmesh™ II Power MOSFET	STMicroelectronics
Q102	STF21NM50N	500 V MDmesh™ II Power MOSFET	STMicroelectronics
Q201	STP120NF04	40 V STripFET™ II Power MOSFET	STMicroelectronics
Q202	STP75NF75FP	75 V STripFET™ II Power MOSFET	STMicroelectronics
Q301	STD95N2LH5	25 V STripFET™ V Power MOSFET	STMicroelectronics
Q302	STD95N2LH5	25 V STripFET™ V Power MOSFET	STMicroelectronics
Q303	STD95N2LH5	25 V STripFET™ V Power MOSFET	STMicroelectronics
Q501	STD95N2LH5	25 V STripFET™ V Power MOSFET	STMicroelectronics
Q502	STD95N2LH5	25V STripFET™ V Power MOSFET	STMicroelectronics
Q503	STD95N2LH5	25 V STripFET™ V Power MOSFET	STMicroelectronics

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
Q601	MMBT3904	NPN small signal BJT	
Q603	MMBT3904	NPN small signal BJT	
Q604	MMBT3904	NPN small signal BJT	
Q605	MMBT3906	PNP small signal BJT	
R1	0R33	Metal film resistor – 5 % – 250 ppm/°C – 2 W	
R2	0R33	Metal film resistor – 5 % – 250 ppm/°C – 2 W	
R3	6.8 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R4	6.8 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R5	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R6	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R7	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R8	2.2 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R9	2.2 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R10	2.2 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R11	51 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R12	1 Meg	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R13	2.4 K	Metal film resistor – 1% – 100 ppm/°C – 0.16 W	
R14	6.8 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R15	2.4 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R16	220 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R17	1.5 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R18	1.5 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R19	1.5 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R20	1.6 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R21	1.6 Meg	SMD film resistor – 1% – 100 ppm/°C – 1206	
R22	1.6 Meg	SMD film resistor – 1 % – 100 ppm/°C – 1206	
R23	470 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R24	56 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R25	56 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R26	24 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R28	56 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R29	3.3 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R30	2.7 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R31	3.3 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R32	3.3 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
R101	0.18 R	Metal film resistor – 5 % – 250 ppm/°C – 2 W	
R103	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R104	4.7 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R105	100 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R107	20 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R108	36 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R109	20 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R110	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R111	20 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R112	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R113	1 K	Metal film resistor – 1 % – 100 ppm/°C – 0.16 W	
R114	2.2 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R115	2.2 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R116	100 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R201	2.2 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R202	15 K	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R203	13 R	Metal film resistor – 5 % – 250 ppm/°C – 2 W	
R204	5.6 R	Metal film resistor – 5 % – 250 ppm/°C – 2 W	
R206	2.2 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R208	15 K	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R209	1 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R210	2.2 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R211	20 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R212	10 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R213	5.6 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R214	75 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R215	6.8 K	SMD film resistor – 5 % – 250 ppm/°C – SOD-80	
R216	10 K	SMD film resistor – 5 % – 250 ppm/°C – SOD-80	
R301	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R302	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R303	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R304	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R305	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R306	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R307	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
R308	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R309	7.5 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R310	6.34 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R311	10 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R312	2 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R313	0 R	SMD film resistor – 0603	
R314	0 R	SMD film resistor – 0805	
R501	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R502	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R503	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R504	22 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R505	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R506	47 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R507	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R508	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R509	7.5 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R510	10 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R511	12.7 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R512	2.4 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R513	0 R	SMD film resistor – 0603	
R514	0 R	SMD film resistor – 0805	
R601	470 K	SMD film resistor – 5 % – 250 ppm/°C – 1206	
R602	4.7 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R603	15 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R604	56 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R605	13 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R606	10 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R607	150 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R610	1 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R611	15 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R612	10 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R613	4.7 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R614	47 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R615	1.6 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R616	1 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	

Table 9. EVL250W-ATX80PL bill of materials (continued)

Ref	Value	Description	Manufacturer
R617	1 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R618	1.5 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R619	10 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R620	470 R	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R621	1 K	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R622	470 R	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R623	100 R	SMD film resistor – 1 % – 100 ppm/°C – 0603	
R624	0 R	SMD film resistor – 0603	
R626	1 K	SMD film resistor – 5 % – 250 ppm/°C – 0603	
R627	1.5 K	SMD film resistor – 5 % – 250 ppm/°C – 0805	
R628	200 R	SMD film resistor – 5 % – 250 ppm/°C – 0805	
RX1	680 K	SMD film resistor – 5 % – 250 ppm/°C – 1206	
RX2	680 K	SMD film resistor – 5 % – 250 ppm/°C – 1206	
T1	Transformer	AHB transformer 1965.0003	Magnetica
T2	Transformer	AUX transformer 1031.0010	Magnetica
VDR1	Varistor	300 Vac – S14K300 – B72214S0301K101	EPCOS
ZD601	BZV55-B18	SMD Zener diode 18 V – 2 %	
ZD603	BZX55B5V1	Zener diode 5V1 – 2 %	
ZD604	BZX55-B13	Zener diode 13 V – 2 %	
ZD605	BZX55B2V7	Zener diode 2V7 – 2 %	
ZD606	BZV55-B36	SMD Zener diode 36 V – 2 %	