

Bill of materials
Table 1. AEK-POW-BMSNOTX bill of materials

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	18	C1, C8, C15, C19, C21, C29, C31, C33, C40, C42, C45, C48, C50, C57, C59, C71, C75, C76	47nF	0603 - 50V - X7R Class II	WE	885012206093
2	1	C2	4.7uF	1206 - 50V - X7R Class II	WE	885012208094
3	1	C3	2.2uF	1210 - 100V - X7R Class II	WE	885012209071
4	3	C4, C6, C14	100nF	0603 - 100V - X7R Class II	WE	885012206120
5	1	C5	100pF	0603 - 100V - X7R Class II	WE	885012206102
6	2	C7, C12	N.M.	0603	N.A.	N.A.
7	15	C9, C17, C20, C23, C24, C30, C32, C35, C41, C43, C46, C49, C51, C58, C60	10nF	0603 - 50V - X7R Class II	WE	885012206089
8	1	C10	220nF	0603 - 50V - X7R Class II	WE	885012206125
9	3	C11, C13, C36	2.2uF	0805 - 25V - X7R Class II	WE	885012207079
10	9	C16, C27, C37, C47, C53, C54, C55, C56, C61	100nF	0603 - 50V - X7R Class II	WE	885012206095
11	2	C18, C25	1uF	0805 - 50V - X7R Class II	WE	885012207103
12	2	C22, C26	22pF	0603 - 50V - NP0 Class I	WE	885012006053
13	2	C28, C38	N.M.	1206	N.A.	N.A.
14	4	C34, C39, C52, C66	10uF	0805 - 16V - X5R Class II	WE	885012107014
15	5	C44, C62, C63, C64, C65	2.2nF	0603 - 50V - X7R Class II	WE	885012206085
16	4	C67, C68, C69, C70	6.8nF	0603 - 50V - X7R Class II	WE	885012206088
17	1	C72	10uF	1210 - 50V - X7R Class II	WE	885012209073
18	1	C73	68nF	0603 - 50V - X7R Class II	WE	885012206094
19	1	C74	33pF	0603 - 50V - NP0 Class I	WE	885012006054
20	1	CGS	4.7nF	0603 - 50V - X7R Class II	WE	885012206087
21	1	CN1		2.54mm - 1 row - KK254 - Male	WE	61900411121
22	1	CN2		2.54mm - 1 row - KK254 - Male	WE	61900311121
23	3	CN3, CN4, CN5		2.54mm - 1 row - KK254 - Male	WE	61900211121
24	1	CN6		2.54mm - 1 row - KK254 - Male	WE	61900511121
25	1	D1	SMA6T68AY, SMA	Automotive 600 W, 68V TVS in SMA	ST	SMA6T68AY
26	1	D2	Green	0805 - Led Green - 3.2V	WE	150080GS75000

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27	1	D3	SZMM3Z4V7T1G	4.7V Zener Voltage Regulators, 300mW	Onsemi	SZMM3Z4V7T1G
28	1	D4	Yellow	0805 - Led Yellow - 2V	WE	150080YS75000
29	1	D5	Red	0805 - Led Red - 2V	WE	150080RS75000
30	16	FB1, FB2, FB3, FB4, FB5, FB6, FB7, FB8, FB9, FB10, FB11, FB12, FB13, FB14, FB15, FB16	1K@100MHz	Ferrite Beads Multi-Layer Power 1KOhm 25% 100MHz 1.5A 0.15Ohm DCR 0805	TDK	MPZ2012S102ATD25
31	1	ISOH	61400416021	USB 2.0 Type A, Receptacle, Horizontal, THT	WE	61400416021
32	1	JP1		THT Vertical 3 pins Header, Pitch 2.54 mm, Single Row	WE	61300311121
33	1	P1		2.00mm - WR-WTB - Male Dual Row Horizontal Shrouded Header w. positive locking	WE	62403021722
34	2	P2, P3	61300211121	2.54mm - WR-PHD Pin Header, THT, pitch 2.54mm, Single Row, Vertical, 2p	WE	61300211121
35	1	Q1	STL8N10LF3, PowerFLAT 5x6 WF	Automotive-grade N-channel 100 V, 25 mΩ typ., 7.8 A STripFET™ F3 Power MOSFET in a PowerFLAT™ 5x6 package	ST	STL8N10LF3
36	1	Q2	STD105N10F7AG, DPAK	Automotive-grade N-channel 100 V, 6.8 mΩ typ., 80 A, STripFET™ F7 Power MOSFET in a DPAK package	ST	STD105N10F7AG
37	1	Q3	BSS138Q	N-Channel Enhancement Mosfet	NEXPERIA	BSS138Q-7-F
38	1	R1	10k	1206 - ±1% - 0.66W	Panasonic	ERJUP8F1002V
39	1	R2	N.M.	0805	N.A.	N.A.
40	2	R3, R7	10	0603 - ±1% - 0.25W	Panasonic	ERJPA3F10R0V
41	20	R4, R8, R11, R14, R17, R21, R23, R26, R29, R33, R40, R44, R51, R56, R60, R69, R70, R72, R73, R75	100	0603 - ±1% - 0.25W	Panasonic	ERJPA3F1000V
42	2	R5, R62	2.7k	0603 - ±1% - 0.125W	Vishay	MCT06030C2701FP500
43	14	R6, R9, R12, R16, R19, R22, R24, R28, R31, R38, R41, R50, R52, R59	39	2010 - ±1% - 1.25W	TE Connectivity	CRGP2010F39R
44	3	R10, R13, RMREG	N.M.	0603	N.A.	N.A.
45	2	R15, R18	60.4	0603 - ±1% - 0.1W	Panasonic	ERJ3EKF60R4V
46	7	R20, R25, R36, R39, R43, R45, R71	10K	0603 - ±1% - 0.2W	Panasonic	ERJP03F1002V
47	2	R27, RG	1K	0603 - ±1% - 0.25W	Panasonic	ERJPA3F1001V
48	1	R30	6.2K	0805 - ±1% - 0.5W	Panasonic	ERJP06F6201V
49	1	R32	18K	0603 - ±1% - 0.2W	Panasonic	ERJP03F1802V

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
50	4	R34, R37, R42, R53	470	0603 - $\pm 1\%$ - 0.125W	Panasonic	ERJH3EF4700V
51	1	R35	10k	0603 - $\pm 1\%$ - 0.1W	TDK	NTCG163JH103HTDS
52	4	R46, R47, R48, R49	10k	0805 - $\pm 1\%$ - 0.5W	Panasonic	ERJP6WF1002V
53	4	R54, R55, R57, R58	1.5K	2010 - $\pm 1\%$ - 2W	TE Connectivity	35021K5FT
54	1	R61	N.M.	2512	N.A.	N.A.
55	1	R74	1.1k	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1101V
56	1	R81	110K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1103V
57	1	RHOT	47	2512 - $\pm 5\%$ - 1W	TE Connectivity	352047RJT
58	1	RPD	100K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJP03F1003V
59	1	T1	120uH	Pulse Transformers 120uH	WE	74941000
60	1	U1	L9963E, TQFP 64 10x10x1.0	Automotive chip for battery management applications with daisy chain up to 31 devices	ST	L9963E
61	1	U2	USBLC6-2SC6Y, SOT23-6L	Automotive ESD protection for high speed interfaces.	ST	USBLC6-2SC6Y
62	1	U3	LM2902WYDT, SO-14	Low-power quad operational amplifier	ST	LM2902WYDT
63	1	for blister	60900213421	WR-PHD 2.54 mm Multi-Jumper Jumper with Test Point	WE	60900213421
64	4	for blister	970080365	WA-SPAII Plastic Spacer Stud, metric, internal/ internal	WE	970080365
65	4	for blister	97790603211	WA-SCRW Pan Head Screw w. cross slot M3	WE	97790603211
66	1	for blister	624030213322	WR-WTB 2.00 mm Female Dual Row Terminal Housing w. positive locking	WE	624030213322
67	30	for blister	62400113722	WR-WTB 2.00 mm Female Dual Row Crimp Contact	WE	62400113722
68	1	for blister	61900411621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900411621
69	1	for blister	61900311621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900311621
70	1	for blister	61900511621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900511621
71	3	for blister	61900211621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900211621
72	18	for blister	61910113722	WR-WTB 2.54 mm Female Crimp Contact	WE	61910113722

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