

EEZ DIB AFE3 BOM (r1B1, 2021-03-30)
Project source code at <https://github.com/eez-open/modular-psu>

#	Farnell / Element14								Digi-Key			Mouser		
	Qty	Part name	Package	Reference designator	Code	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ
1	2	1u	0603, 16V	C1, C9	3013421	CL10B105MO8NN WC	0,026	10	1276-1019-1-ND	0,039	10	80- C0603C105K4R	0,036	10
2	1	8n2	0603	C17	1759101	MC0603B822K500 CT	0,038	10	311-1811-1-ND	0,060	10	603- CC603KRX7R9B B822	0,032	10
3	2	1n	0603	C2, C10	2627426	MC0603B102K250 CT	0,009	10	1276-1018-1-ND	0,026	10	80- C0603C102J5RA C	0,021	10
4	3	10u	1206	C20, C34, C64	3013485	CL21B106KOQNN NE	0,262	10	1276-2872-1-ND	0,207	10	810- CGA4J1X7S1C1 06KA	0,144	1
5	8	1u	0805	C23, C25, C27, C48, C49, C54, C59, C60	2495193	885012207078	0,139	5	1276-1066-1-ND	0,070	10	963- TMK212B7105K G-T	0,050	10
6	19	100n	0603	C3, C4, C11, C12, C18, C19, C21, C22, C26, C28, C46, C47, C55, C56, C57, C58, C61, C62, C63	2522597	C0603C104K4RAC 7081	0,073	10	490-4774-1-ND	0,090	100	80- C0603C104M4R	0,085	100
7	1	22u	1206	C33	2320935	MC1210X226K250 CT	1,490	1	1276-3373-1-ND	0,369	10	603- CC121KKX7R8B B226	0,777	10
8	4	1n	1206, 50V	C5, C8, C13, C16	2773295	C1206C102M5RA CTU	0,059	10	732-8115-1-ND	0,071	10	710- 885012208075	0,073	10
9	2	1u	1206, 50V	C6, C14	3013524	CL31B105KBHNN NE	0,144	5	1276-3091-1-ND	0,092	10	CL31B105KBHN FNE	0,051	10
10	2	100n	1206, 50V	C7, C15	1414715	C1206C104K5RAC TU	0,053	10	399- C1206C104K5R AC7800CT-ND	0,066	10	80- C1206C104K5R ACLR	0,045	10
11	2	BAV199,235		D1, D10	2319137	BAV199,215	0,185	5	1727-6382-1-ND	0,145	10	771-BAV199235	0,146	10
12	8	SA2M-E3/61T	SMA	D2, D3, D4, D5, D6, D7, D8, D9	2335163	SA2M-E3/61T	0,261	10	CSA2M-E3/ IGICT-ND	0,223	10	78-CSA2M-E3/H	0,202	10
13	4	ZH32	THT; 20x5mm fuse holder	F1, F2, F4, F5	-				-			-		
14	1	SN005-60	1206	F3	3103210	1206L005/60WR	0,771	1	F8129CT-ND	0,460	1	576- 1206L005/60WR	0,440	1
15	1	AMC3330QDWERQ1	SOIC-16 Wide	IC1	-				296- AMC3330DWER CT-ND	8,980	1	595- AMC3330DWE	9,750	1
16	1	ADS131E04IPAGR	TQFP-64	IC11	3123346	ADS131E04IPAG	13,450	1	296-34885-1-ND	7,560	1	595- ADS131E04IPAG R	8,430	1
17	1	TPS71725DCKR	SC70-5	IC12	2348004	TPS71725DCKR .	0,982	1	296-21525-1-ND	0,890	1	595- TPS71725DCKR	0,889	1
18	1	TPS72325DBVR	SOT-23-5	IC13	3007843	TPS72325DBVR	2,690	1	296-39479-1-ND	2,300	1	595- TPS72325DBVR	2,310	1
19	1	ULN2803ADWR	SOIC-18	IC2	3125103	ULN2803ADWR	1,120	5	296-15777-1-ND	1,090	1	595- ULN2803ADWR	1,090	1
20	1	AMC3301DWER	SOIC-16 Wide	IC3	-				296- AMC3301QDWE RQ1CT-ND	9,340	1	595- AMC3301DWER	9,220	1
21	1	MCP6004T-I/ST	TSSOP-14	IC4	-				-			579-MCP6004T- I/ST	0,373	1

#	RS Components						TME					Price calculation for 1 set			
	Qty	Part name	Code	Part Number	Unit price €	MOQ	Code / Part Number	Unit price €	MOQ	THT	SMD	Best Supplier	Lowest unit price €	Order Qty	Line Cost €
1	2	1u	144-7375	CGA3E1X7R1C 105M080AC	0,029	100	CL10B105KO8NNNC	0,014	100		2	TME	0,014 €	2	0,027
2	1	8n2	-				C0603C822K5RACTU	0,026	100		1	TME	0,026 €	1	0,026
3	2	1n	135-6565	06031C102KAZ 2A	0,014	100	VJ0603Y102KXACW1 BC	0,010	100		2	Farnell	0,009 €	2	0,018
4	3	10u	184-3969	EMK212BB7106 MG-T	0,233	50	CL21A106KOQNNNG	0,034	100		3	TME	0,034 €	3	0,103
5	8	1u	378-665	08052R104K8B B	0,038	25	VJ0805Y105KXXTW1 BC	0,014	100		8	TME	0,014 €	8	0,116
6	19	100n	264-4630	C0603C104K4R ACTU	0,035	25	CL10B104KA8NNNC	0,098	100		19	RS	0,035 €	19	0,665
7	1	22u	766-1182	CL32A226KAJN NNE	0,343	10	CL32A226KAJNNNE	0,158	10		1	TME	0,158 €	1	0,158
8	4	1n	669-8420	CC1206KRX7R9 BB102	0,102	25	CL31B102KBCNNNC	0,027	100		4	TME	0,027 €	4	0,110
9	2	1u	766-1141	CL31B105KBHN NNF	0,052	100	CC1206KKX7R9105	0,047	100		2	TME	0,047 €	2	0,095
10	2	100n	391-214	12065C104KAT 2A	0,082	50	1206B104K500CT	0,019	100		2	TME	0,019 €	2	0,038
11	2	BAV199,235	751-3437	BAV199DW-7-F	0,232	25	BAV199.215	0,035	20		2	TME	0,035 €	2	0,070
12	8	SA2M-E3/61T	812-9275	SA2M-E3/5AT	0,116	100	SA2M-E3/61T	0,050	50		8	TME	0,050 €	8	0,397
13	4	ZH32	-				ZH32	0,228	5		4	TME	0,228 €	4	0,912
14	1	SN005-60	-				SN005-60	0,075	10		1	TME	0,075 €	1	0,075
15	1	AMC3330QDWERQ1	-				-				1	Digikey	8,980 €	1	8,980
16	1	ADS131E04IPAGR	817-5705	ADS131E04IPA G	6,050	1	-				1	RS	6,050 €	1	6,050
17	1	TPS71725DCKR	-				-				1	Mouser	0,889 €	1	0,889
18	1	TPS72325DBVR	-				-				1	Digikey	2,300 €	1	2,300
19	1	ULN2803ADWR	646-6311	ULN2803ADW	1,336	1	ULN2803ADWR	0,866	1		1	TME	0,866 €	1	0,866
20	1	AMC3301DWER	-				-				1	Mouser	9,220 €	1	9,220
21	1	MCP6004T-I/ST	-				-				1	Mouser	0,373 €	1	0,373

#	Qty	Part name	Package	Reference designator	Code	Farnell / Element14			Digi-Key			Mouser		
						Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ
22	2	DG212BDY-T1-E3	SOIC-16	IC5, IC7	1469429	DG212BDY-T1-E3	1,820	1	DG212BDY-T1-E3CT-ND	1,550	1	781-DG212BDY-T1-E3	1,470	1
23	1	MCP6001RT-I/OT	SOT-23-5	IC6	8540829	MCP6001RT-I/OT	0,219	1	MCP6001RT-I/OTCT-ND	0,200	1	579-MCP6001RT-I/OT	0,203	1
24	2	RT424F05	THT; DPDT Latching relay	ISEL10A_1, ISEL10A_2	3406968	RT424F05	6,450	1	PB2024-ND	6,370	1	655-5-1393243-2	6,380	1
25	1	EE2-5TNU-L	DPDT Latching relay, Gull Wing Lead	ISEL1A_1	2360813	EE2-5TNU-L	1,900	1	399-11021-1-ND	2,110	1	80-EE2-5TNU-L	2,120	1
26	2	MLZ1608N100LT000	0603	L1, L3	2564062	MLZ1608N100LT000	0,167	10	445-6755-1-ND	0,111	10	810-MLZ1608N100LT000	0,086	10
27	1	DLW21SN371SQ2L	0805	L2	-				490-5141-1-ND	0,410	10	81-DLW21SN371SQ2L	0,484	10
28	2	BLM18AG102SH1D	0603	L1, L2	3471092	BLM18AG102SH1D	0,032	10	490-7809-1-ND	0,070	10	81-BLM18AG102SH1D	0,051	10
29	3	VOR1142B4	SMD DIP-4	OK1, OK2, OK3	2889672	VOR1142B4	1,660	1	VOR1142B4-ND	1,420	1	78-VOR1142B4	1,420	1
30	2	CPC3902ZTR	SOT-223	Q1, Q2	-				CLA4156-1-ND	0,570	1	849-CPC3902ZTR	0,576	1
31	2	BSS214NH6327XTSA1	SOT-23	Q3, Q4	2480650	BSS214NH6327XTSA1	0,408	5	BSS214NH6327XTSA1CT-ND	0,255	10	726-BSS214NH6327	0,224	10
32	2	47R	0805	R1, R19	2861899	CRGCQ0805J47R	0,007	10	P47.0CCT-ND	0,069	10	279-CRGCQ0805F47R	0,028	10
33	3	1M5 0.1%	1206	R1, R3, R5	-				RG3216P-1504-B-T1	0,351	10	754-RG3216P-1504B-T1	0,263	10
34	2	10R	0805	R10, R12, R53, R54	2447556	MCWR08X10R0FTL	0,009	10	2019-RK73H2ATTD10R0FCT-ND	0,029	10	652-CR0805FX-10R0ELF	0,012	10
35	2	GMR100HTBFA10L0	2512, low TCR	R11, R35	2808330	GMR100HTBFA10L0	1,130	5	511-1686-1-ND	1,350	1	755-GMR100HTBFA10L0	1,080	1
36	1	15R	0805	R13	2447576	MCWR08X15R0FTL	0,009	10	311-15.0CRCT-ND	0,035	10	667-ERJ-6ENF15R0V	0,055	10
37	1	50R 0.1%	1206	R15	-				764-1183-1-ND	1,099	10	71-TNPW120650R0BEEN	0,697	10
38	2	49K9	1206	R17, R18	2908458	CR1206-FX-4992ELF	0,040	10	RNCP1206FTD49K9CT-ND	0,068	10	791-MR12X4992FTL	0,013	10
39	3	100K	1206	R19, R31, R36	2447551	MCWR08X1003FTL	0,010	10	RMCF0805FT100KCT-ND	0,024	10	71-CRCW0805100KFKEAC	0,040	10
40	3	470R	0805	R2, R14, R16	1099798	WCR0805-470RFI	0,019	10	311-470CRCT-ND	0,039	10	71-CRCW0805470RFKEB	0,041	10
41	2	4M7 0.1%	1206	R20, R21	-				408-2037-1-ND	0,413	10	754-RG3216P-4704B-T1	0,356	10
42	3	100K 0.1%	1206	R22, R25, R39	1717738	ERA8AEB101V	0,482	10	RG32P100KBCT-ND	0,346	10	754-RG3216P-1003-BT5	0,226	10

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22	2	DG212BDY-T1-E3	710-4780	DG212BDY-T1-E3	1,630	5	-				2	Mouser	1,470 €	2	2,940
23	1	MCP6001RT-I/OT	667-4335	MCP6001RT-I/OT	0,203	20	MCP6001RT-I/OT	0,172	10		1	TME	0,172 €	1	0,172
24	2	RT424F05	164-7553	RT424F05	6,485	1	5-1393243-2	2,500	2	2		TME	2,500 €	2	5,000
25	1	EE2-5TNU-L	870-5517	EE2-5TNU-L	1,987	1	-				1	Farnell	1,900 €	1	1,900
26	2	MLZ1608N100LT000	-				-				2	Mouser	0,086 €	2	0,172
27	1	DLW21SN371SQ2L	724-1674	DLW21SN371SQ2L	0,490	10	DLW21SN371SQ2L	0,234	10		1	TME	0,234 €	1	0,234
28	2	BLM18AG102SH1D	839-0803	BLM18AG102SH1D	0,025	100	BLM18AG102SH1D	0,016	50		2	TME	0,016 €	2	0,031
29	3	VOR1142B4	180-7266	VOR1142B4	1,416	5	-				3	RS	1,416 €	3	4,248
30	2	CPC3902ZTR	-				CPC3902ZTR	0,310	5		2	TME	0,310 €	2	0,620
31	2	BSS214NH6327XTSA1	827-0058	BSS214NH6327XTSA1	0,107	100	BSS214NH6327XTSA1	0,070	10		2	TME	0,070 €	2	0,140
32	2	47R	223-0253	CRG0805F47R	0,016	50	SMD0805-47R-1%	0,022	100		2	Farnell	0,007 €	2	0,013
33	3	1M5 0.1%	-				-				3	Mouser	0,263 €	3	0,789
34	2	10R	740-8987	CR0805-FX-10R0ELF	0,065	50	0805S8J0111T5E	0,013	100		2	Farnell	0,009 €	2	0,017
35	2	GMR100HTBFA10L0	-				-				2	Mouser	1,080 €	2	2,160
36	1	15R	223-0180	CRG0805F15R	0,045	50	0805S8F150JT5E	0,014	100		1	Farnell	0,009 €	1	0,009
37	1	50R 0.1%	-				AR06BTCV0500	0,127	10		1	TME	0,127 €	1	0,127
38	2	49K9	679-2174	CRCW120649K9FKEA	0,039	50	RC1206FR-0749K9	0,029	100		2	Mouser	0,013 €	2	0,026
39	3	100K	223-0691	CRG0805F100K	0,028	50	0805S8F1003T5E	0,015	100		3	Farnell	0,010 €	3	0,029
40	3	470R	223-0376	CRG0805F470R	0,021	50	RC0805FR-07470R	0,022	100		3	Farnell	0,019 €	3	0,057
41	2	4M7 0.1%	-				-				2	Mouser	0,356 €	2	0,712
42	3	100K 0.1%	669-6626	ERA8AEB104V	0,608	5	AR06BTCV1003	0,127	10		3	TME	0,127 €	3	0,380

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	Qty	Part name	Package	Reference designator	Code	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ
43	4	200K 0.1%	1206	R23, R24, R37, R38	1841801	ERA8AEB204V	0,468	10	RG32P200KBCT-ND	0,355	10	754-RG3216P-2003-BT5	0,226	10
44	2	330R	0805	R26, R29	2447638	MCWR08X3300FTL	0,007	10	A106061CT-ND	0,038	10	279-CRGCQ0805F330R	0,036	10
45	5	10K	0805	R27, R28, R33, R51, R52	9237755	RC0805FR-0710KL	0,022	10	311-10.0KCRCT-ND	0,039	10	603-RC0805FR-0710KL	0,014	10
46	1	33R	1206, low TCR	R30	-				13-RT1206BRD0733RLCT-ND	0,393	10	603-RT1206BRD0733RL	0,266	10
47	1	0R33	1210, low TCR	R32	-				A138567CT-ND	0,316	10	279-RL73H2ER33FTD	0,247	10
48	9	1K		R34, R43, R44, R45, R46, R47, R48, R49, R50	1099800	WCR0805-1K0FI	0,019	10	RC0805FR-071KL	0,039	10	603-RC0805FR-071KL	0,015	10
49	1	10K5 0.1%	1206	R6	2338266	MCWF12R1052BTL	0,249	10	A140954CT-ND	0,621	10	754-RG3216P-1052-BT5	0,226	10
50	1	82K5 0.1%	1206	R7	2338651	MCWF12R8252BTL	0,249	10	RQ73C2B82K5BTD	0,621	10	754-RG3216P-8252-BT5	0,226	10
51	1	0R220	1210	R8	1717924	ERJ14BQFR22U			RCWE.22FCT-ND	0,438	10	71-RCWE1210R220FKEA	0,318	10
52	1	PESD12VL1BA,115	SOD-323	TVS1	8737363	PESD12VL1BA,115	0,365	5	1727-3808-1-ND	0,320	10	771-PESD12VL1BA-T/R	0,296	10
53	1	691322310008	THT; 8-pin 3.81mm terminal block header, male pins	X1	-				732-2093-ND	1,390	1	710-691322310008	1,400	1
54	2	P125-2214A0BS230A1	THT; 28-pin 0.1" board-to-board (Producer: DONG GUAN YLIES PRECISE CONNECTOR CO.,LTD)	X2, X3	-				-			-		
55	1	MMSZ5230BT1G	SOD-123	ZD1	1431272	MMSZ5230BT1G	0,177	10	MMSZ5230BT1G OSCT-ND	0,148	10	863-MMSZ5230BT1G	0,170	10

Not installed														
8	470p	0603		C29, C30, C31, C32, C50, C51, C52, C53										
1	N.C.	0805		C24										
2	N.C.	0603		C35, C41										
4	N.C.	1206		C36, C37, C38, C39										
1	N.C.	1206		C40										
4	15n	603		C42, C43, C44, C45										
1	N.C.	SOIC-8		IC10										
1	N.C.			IC8										
1	N.C.	SOT-23-5		IC9										
5	N.C.	R-EU_R0805		R4, R9, R40, R41, R42										

Related parts and accessories

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43	4	200K 0.1%	828-0715	ERA8AEB204V	0,608	5	AR06BTCV2003	0,127	10		4	TME	0,127 €	4	0,506
44	2	330R	223-0354	CRG0805F330R	0,040	50	0805S8F3300T5E	0,014	100		2	Farnell	0,007 €	2	0,014
45	5	10K	125-1189	CRG0805F10K	0,002	100	RC0805FR-0710K	0,022	100		5	RS	0,002 €	5	0,010
46	1	33R	-				AR06BTCV0330	0,132	10		1	TME	0,132 €	1	0,132
47	1	0R33	-								1	Mouser	0,247 €	1	0,247
48	9	1K	223-0427	CRG0805F1K0	0,017	50	RC0805FR-071K	0,022	100		9	Mouser	0,015 €	9	0,135
49	1	10K5 0.1%	-				-				1	Mouser	0,226 €	1	0,226
50	1	82K5 0.1%	-				-				1	Mouser	0,226 €	1	0,226
51	1	0R220	721-3433	ERJ14BQFR22U	0,200	5	-				1	RS	0,200 €	1	0,200
52	1	PESD12VL1BA,115	508-024	PESD12VL1BA,115	0,294	20	PESD12VL1BA.115	0,126	5		1	TME	0,126 €	1	0,126
53	1	691322310008	824-6661	691322310008	1,470	1	15EDGRC3.81-08P	0,662	1	1		TME	0,662 €	1	0,662
54	2	P125-2214A0BS230A1	-				-			2					-
55	1	MMSZ5230BT1G	545-3033	MMSZ5230BT1G	0,173	20	MMSZ5230BT1G	0,033	25		1	TME	0,033 €	1	0,033
										9	85	53,78 €			

Not installed															
8	470p														
1	N.C.														
2	N.C.														
4	N.C.														
1	N.C.														
4	15n														
1	N.C.														
1	N.C.														
1	N.C.														
5	N.C.														

Related parts and acces:

#	Qty	Part name	Package	Reference designator	Code	Farnell / Element14			Digi-Key			Mouser		
						Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ	Part Number	Unit price €	MOQ
2		ZKSS-10A												
2		ZKSS-1.25A												
2		DS1025-01-1*2P8BV1-B	THT;	JP5, JP6	-				-			-		
2		JUMPER-2.0/R		JP5, JP6	-				-			-		
1		691304100008	8-pin 3.81mm push-in connector		-				277-12329-ND	7,410	1	651-1748037	7,440	1

Custom made components

1	PCB 4-layer 141.5 x 68.5 mm	JLCPCB.com	-
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All prices are net prices (without VAT)

Please note that BOM does not contain ordering number for parts on reels or that which includes re-reeling fee. Take also into account that total cost is higher because min. quantity (MOQ) for many parts is larger then what is needed for single unit.

All resistors are 1% 0805 and all capacitors are X7R 0805 if not otherwise specified.

For small quantities, consider ordering specialized chips at store.ti.com for better prices and availability.

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Project source code at <https://github.com/eez-open/modular-psu>

#	RS Components						TME			THT	SMD	Price calculation for 1 set			
	Qty	Part name	Code	Part Number	Unit price €	MOQ	Code / Part Number	Unit price €	MOQ			Best Supplier	Lowest unit price €	Order Qty	Line Cost €
2	ZKSS-10A						ZKSS-10A	0,459	10			TME	0,459 €	2	0,918
2	ZKSS-1.25A						ZKSS-1.25A	0,312	10			TME	0,312 €	2	0,624
2	DS1025-01-1*2P8BV1-B	-					ZL303-02P	0,013	50	2		TME	0,013 €	2	0,025
2	JUMPER-2.0/R	-					JUMPER-2.0/R	0,044	20			TME	0,044 €	2	0,087
1	691304100008		185-4361	691304100008	8,900	1						Digikey	7,410 €	1	7,410
															9,06 €
Custom made componer															
1	PCB 4-layer 141.5 x 68.5 mm											JLCPCB	8,796 €	1	8,796
															8,80 €
Total															71,64 €