

ETD29 core 20 layers with no additional isolation as secondary, gaps 100um and 8-turn primary  
 Double cascade is used with 16 BY6 diodes and 16 1nF capacitors (8 per side)  
 18650: the usage of battery with measured battery voltage during the measurements (3.5V-4.1V)  
 LTspice: simulation results  
 PS: power supply is used with given current limit  
 Bat +DC/DC: battery supplied DC/DC converter is used to produce output voltage

freq [kHz]	Vout [kV] 3.95V 18650	Vout [kV] 4.15V 18650	Vout [kV] 3.7V DC- PS 2A	Vout [kV] 7.4V DC PS 2A	Vout[kV] LTspice 3.96V/2A	Vout [kV] LTspice 7.4V/2A	Vout [kV] 5V PS	Vout [kV] 5V Bat +DC/DC
1	4.3	4.3	5.4	8.9	6.5	6.7	7.8	2.6
2	5.7	5.8	7.0	14.6	7.6	8.2	10.3	3.5
3	6.2	6.0	7.9	18.8	10.6	10.1	11.5	4.5
4	7.0	7.2	8.9	20.1	9.1	9.7	12.4	8.8
5	6.8	6.6	8.6	18.5	14.5	15.1	12.1	6.0
6	7.1	7.0	9.1	20.8	11.8	19.1	12.8	5.8
7	7.7	7.4	9.2	21.6	11.0	13.6	13.4	5.8
8	8.2	7.9	9.5	22.0	11.0	10.6	13.8	6.7
9	9.0	8.6	9.7	22.6	12.7	11.4	14.2	8.9
10	9.7	9.6	10.3	24.0	15.5	12.8	15.0	12.3
11	10.3	10.1	10.7	24.3	18.5	15.0	15.2	15.7
12	10.1	10.5	10.3	22.9	19.6	18.6	14.4	16.5
13	9.6	10.0	9.6	21.6	18.6	23.4	13.9	10.7
14	8.9	9.2	9.1	20.2	17.6	29.2	13.2	8.3
15	8.0	8.2	8.5	18.4	17.0	32.5	12.2	6.8
16	7.0	7.1	7.9	16.5	16.6	32.8	11.1	5.9
17	6.0	6.1	7.2	12.7	15.9	31.9	10.1	5.4
18	5.7	5.6	6.6	9.8	15.4	30.7	9.1	4.9
19	4.8	4.9	5.6	7.7	14.8	29.7	8.2	4.5
20	4.2	4.3	5.5	6.1	14.4	28.8	7.3	4.1

Vout[kV]  
LTspice  
3.9V/20A

11.4  
15.7  
19.0  
20.6  
22.2  
22.8  
23.8  
24.5  
24.4  
23.7  
22.6  
21.7  
20.2  
19.1  
18.4  
18.3  
17.7  
17.3  
17.0  
16.7