

SMB20 Geigercounter

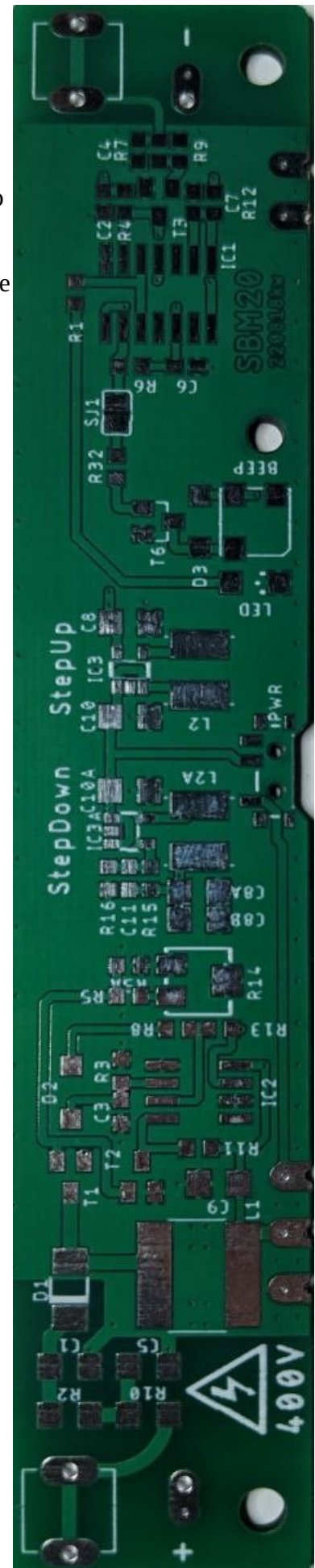
With this PCB and an SBM20 tube you can build a small, battery operated geiger counter. It can be supplied by two AA batteries, for example. Depending on the battery type you can populate the Step-Up (<5V) [A2] or the Step-Down (>5V) [A4].

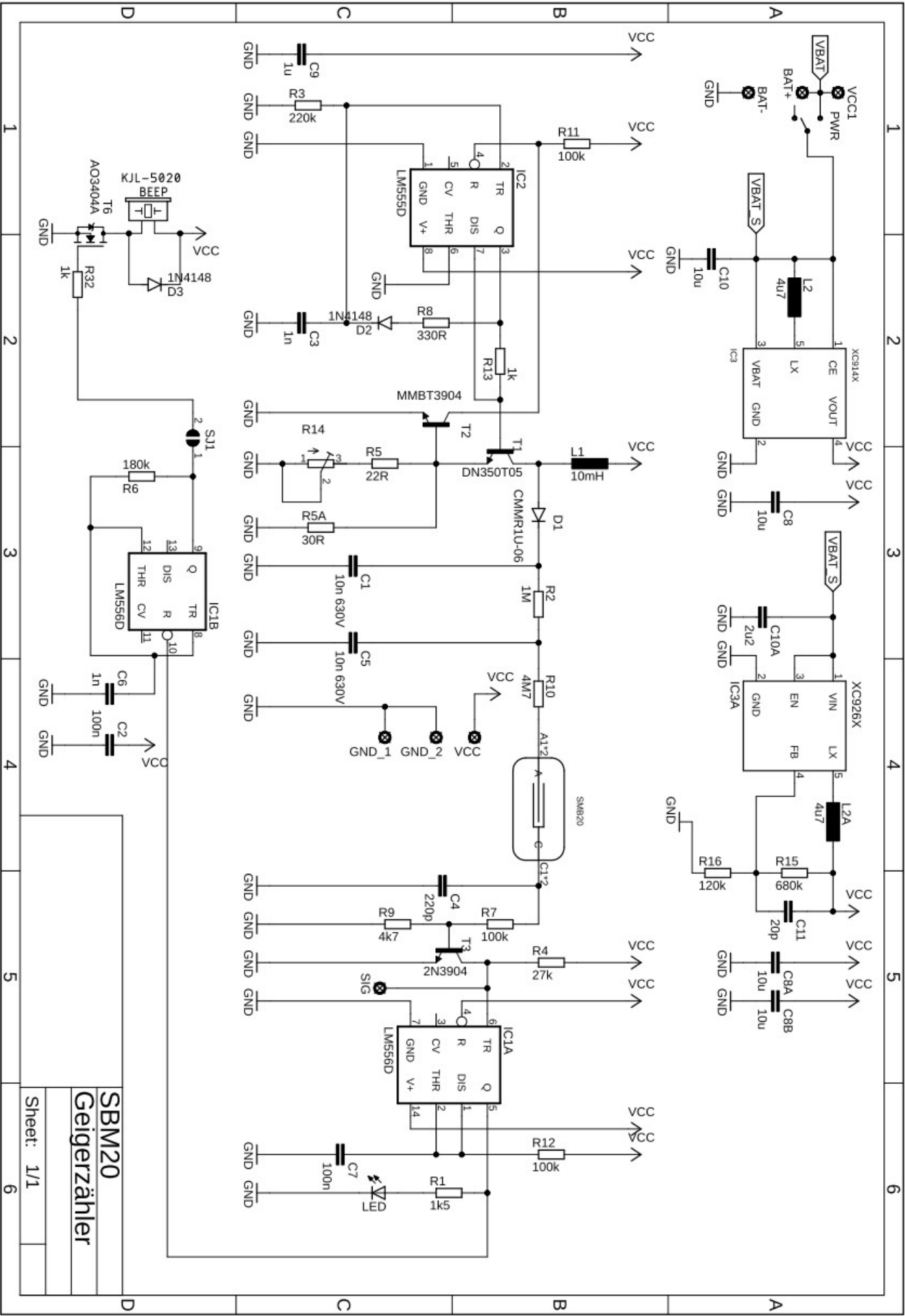
The lower part of the PCB generates the approx. 400V for the tube, the upper part amplifies and shapes the pulses for the LED and buzzer.

The buzzer [D1/D2] is optional if the LED is sufficient feedback.

Send Questions to @stdlogicvector@chaos.social

Qty	Value	Footprint	Parts	DIGIKEY	LCSC
1	Red	CHIPLED_1206	LED		
1	100R	R-TRIMM3224J	R14		
1	1M	R-EU_R1206	R2		
2	1N4148	SOD123	D2, D3		
2	1k	R-EU_R0603	R13, R32		
1	1k5	R-EU_R0603	R1		
2	1n	C-EUC0603	C3, C6		
1	1u	C-EUC1206	C9		
1	2u2	C-EUC1206	C10A		
1	4M7	R-EU_R1206	R10		
1	4k7	R-EU_R0603	R9		
1	10mH	L-EUL8065	L1		
2	10n 630V	C-EUC1206	C1, C5		
4	10u	C-EUC1206	C8, C8A, C8B, C10		
1	20p	C-EUC0603	C11		
1	22R	R-EU_R0603	R5		
1	27k	R-EU_R0603	R4		
1	30R	R-EU_R0603	R5A		
3	100k	R-EU_R0603	R7, R11, R12		
2	100n	C-EUC0603	C2, C7		
1	120k	R-EU_R0603	R16		
1	180k	R-EU_R0603	R6		
1	220k	R-EU_R0603	R3		
1	220p	C-EUC0603	C4		
1	330R	R-EU_R0603	R8		
1	680k	R-EU_R0603	R15		
1	CMMR1U-06	DO-214AC	D1	1514-CMMR1U-06TRPBFREECT-ND	
1	DN350T05	SOT23	T1	DN350T05DICT-ND	
1	LM555D	LM555D	IC2	LM555CMX/NOPBCT-ND	
1	LM556D	LM556D	IC1	2156-LM556CM-FS-ND	
2	MMBT3904	SOT23	T2, T3	4530-MMBT3904CT-ND	
2	SBM20	FUSECLIP	SBM20	F3781-ND	
1	XC914X	SOT23-5	IC3	893-1373-1-ND	
1	XC926X	SOT23-5	IC3A	893-1330-1-ND	
2	4u7	L5050	L2, L2A	490-7779-1-ND	
1	KJL-5020	BUZZER-5020	BEEP		C556937
1	AO3404A	SOT23	T6		C30010
1		SWITCH-SPDT-SMD-A	PWR		C319019





SBM20
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