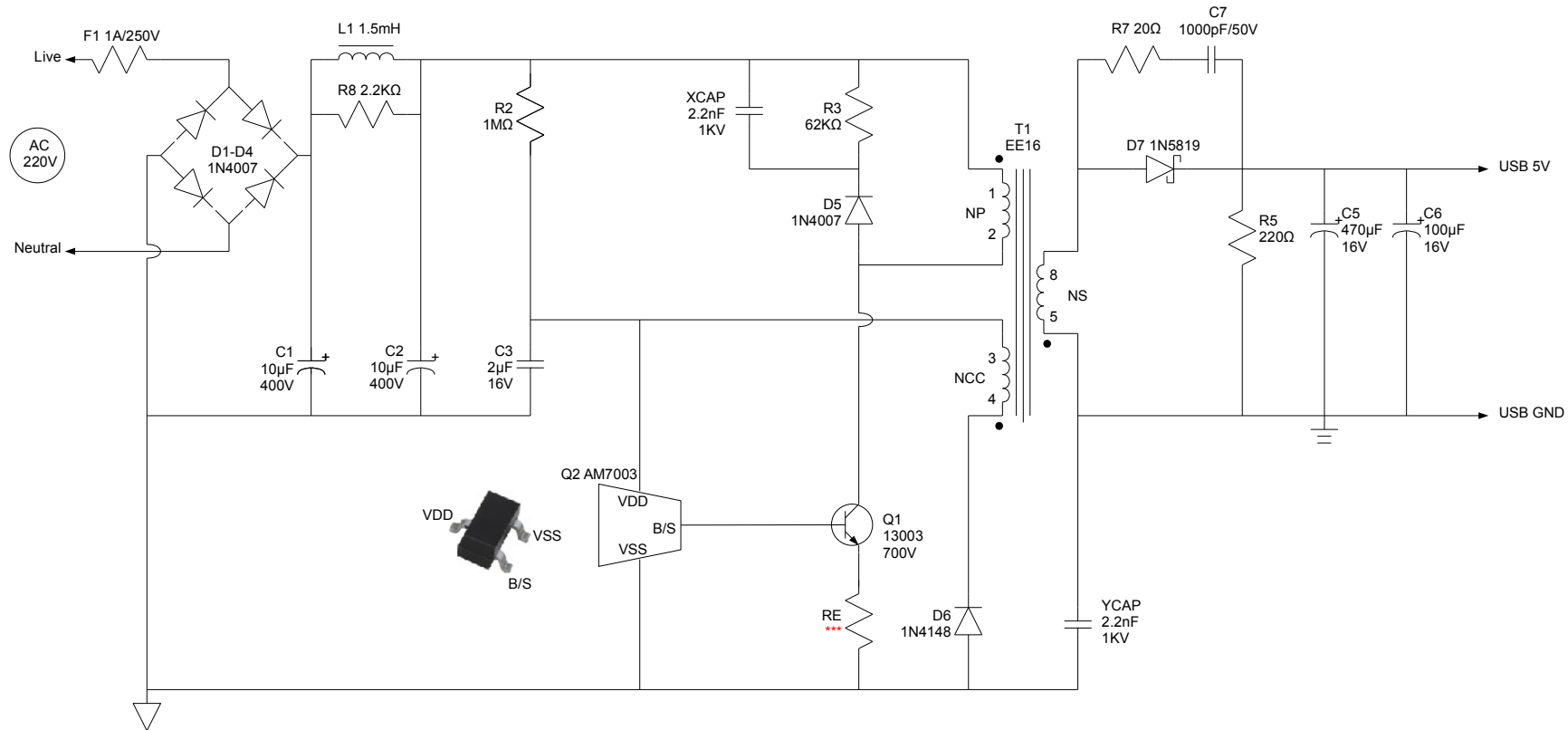


AM7003 Application Circuit

Care of EMC, ESD and Low Standby Power



It is the typical application circuit of a AC-DC USB power adaptor. The actual circuit and component values may vary in some different applications. A user shall design his circuit and determine the component values.

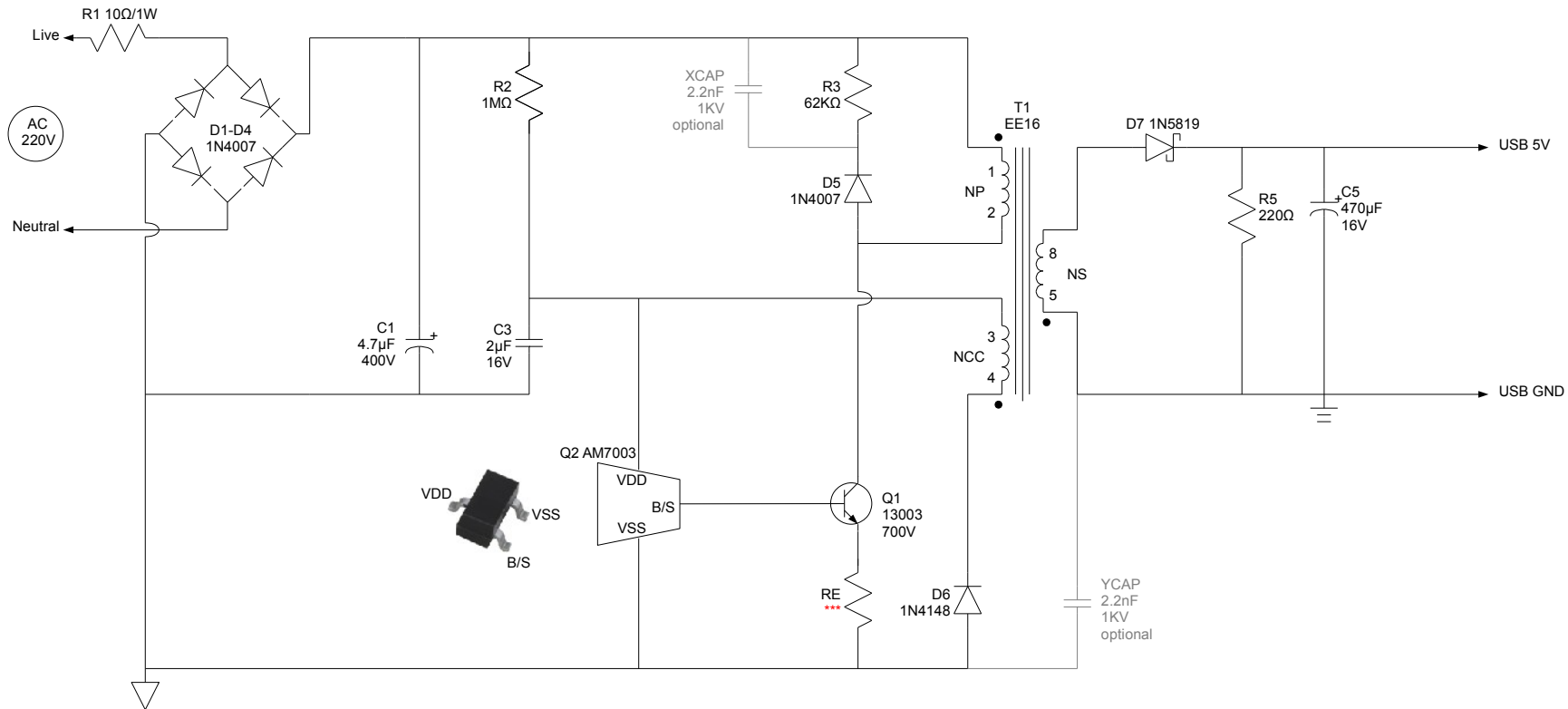
Secondary Output Voltage Low Bound (USB 5V) = Primary Sensing Threshold (6.25V) x the ratio of NS/NCC - Diode Drop D7
 Peak Emitter Current of 13003 $\sim 0.5 / RE$

Typical Values of RE : 3.9Ω for 500mA output

Patent Pending "B/S" Base-Sense Technology

AM7003 Application Circuit

Shoot at a lower BOM cost with the least component count



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<u>Ref</u>	<u>Value</u>	<u>Rating</u>	<u>Tolence</u>	<u>Description</u>
R1	10Ω	1W	±20%	high rating for over current fusing
R2	1MΩ	1/8W	±5%	
R3	63KΩ	1/8W	±5%	
R5	200Ω	1/8W	±5%	
RE	3.9Ω	1/2W	±2%	critital component to the output power rating
C1	4.7μF	400V	±20%	
C3	1μF	16V	±20%	
C5	470μF	16V	±20%	
XCAP	2.2nF	1KV	±10%	optional transformer leakage protection
YCAP	2.2nF	1KV	±10%	optional ESD protection
D1-D4	1N4007	1KV		full bridge rectifier
D5	1N4007	1KV		
D6	1N4148			
D7	1N5819	1A		high speed schottky barrier diode
T1	EE16/4+4	10W		NP=133T/3.0mH, NS=17T, NA=21T
Q1	13003	700V _{CES}		
Q2	AM7003			PWM controller, TO92 or SOT23-3

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