

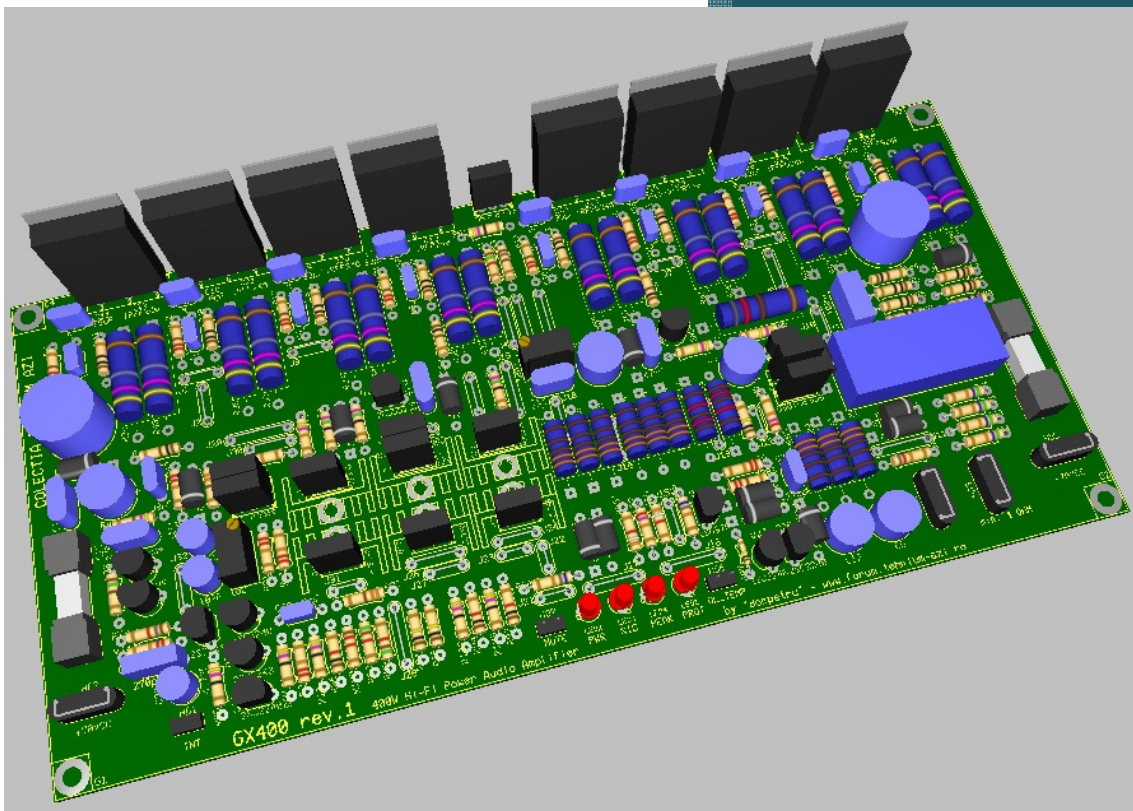
COLECTIA

TEHNIUM AZI

Do it yourself

GX400 rev.1

400W Hi-Fi Audio Amplifier



Hi-Fi Power Audio Amplifier

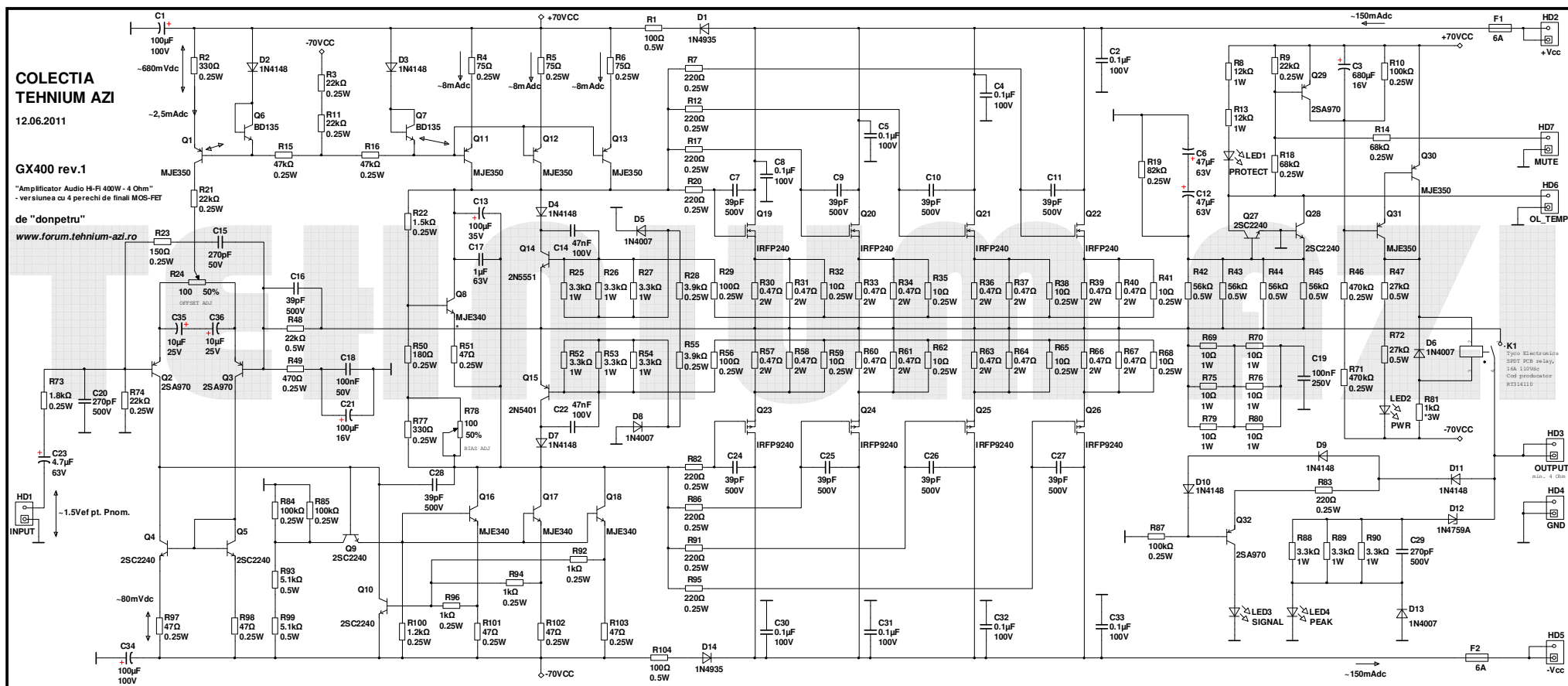
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2. SCHEMA ELECTRONICĂ

GX400 rev.1 – un amplificator audio Hi-Fi de 400W - compact si performant –

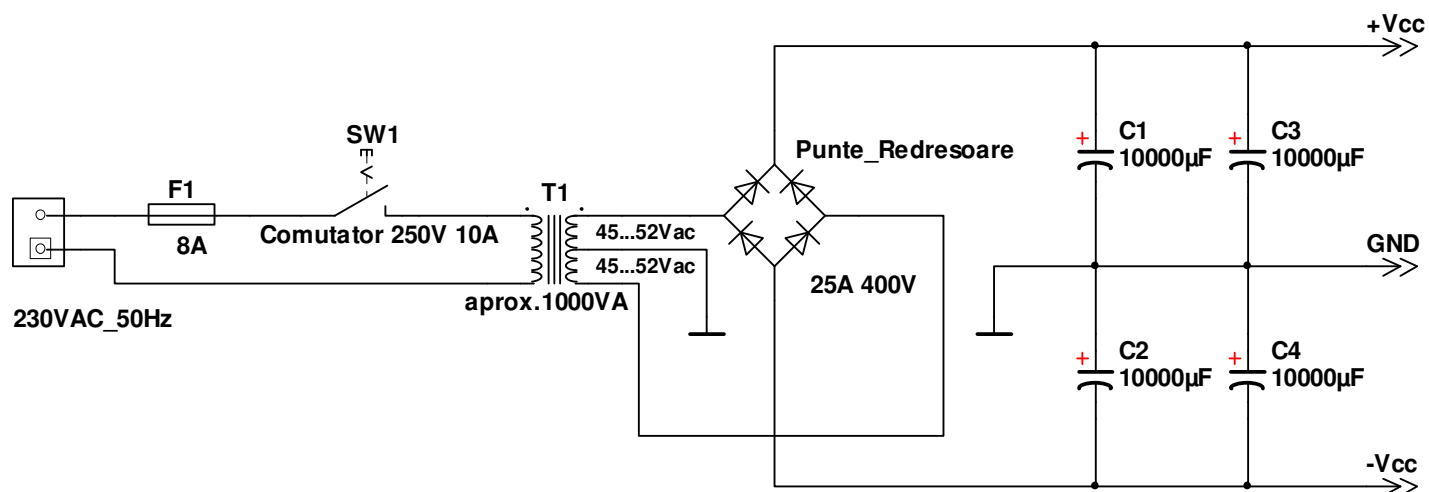
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Caracteristici tehnice

(ATENȚIE!!!) curenul de mers in gol pentru tot amplificatorul se va ajusta NUMAI dupa anclarea releului de pe iesire in domeniul 100...150mA)

	Zin	Uin	Fin_sin	Ubias	+/-Ualim	Impedanta incinta Zload = 8 Ohm		Impedanta incinta Zload= 4 Ohm		SR	Randament
	[kOhm]	[Vef]	[kHz]	[V]	[Vdc]	P [W]	THD[%]	P [W]	THD[%]	[V/us]	[%]
GX400 rev.1	~20	1,350	1	~6,850	70	208,65	0,001	415,02	0,002	~55,00	~53,50

Sursa de alimentare:**Obs!**

1. Valorile componentelor din schema sunt recomandate pentru alimentarea a doua montaje GX400.
2. Condensatoarele de filtraj vor avea tensiunea nominala de 80V sau 100V.
3. Optional se poate utiliza un circuit de softstart pe alimentarea transformatorului T1.

Tranzistoare

Nr. Crt.	Denumire	Bucati	Valori	Capsula	Alte observatii
1	Q19,Q20,Q21,Q22	4	IRFP240	TO247	
2	Q23,Q24,Q25,Q26	4	IRFP9240	TO247	
3	Q8,Q16,Q17,Q18	4	MJE340	TO126	
4	Q1,Q11,Q12,Q13,Q30,Q31	6	MJE350	TO126	
5	Q2,Q3,Q29,Q32	4	2SA970	TO92	
6	Q4,Q5,Q9,Q10,Q27,Q28	6	2SC2240	TO92	
7	Q15	1	2N5401	TO92	
8	Q14	1	2N5551	TO92	
9	Q6,Q7	2	BD135	TO126	

Nr. Crt.	Denumire	Bucati	Valori	Capsula / Tip	Alte observatii
1	D5,D6,D8,D13	4	1N4007	DO-35	
2	D2,D3,D4,D7,D9,D10,D11	7	1N4148	DO-35	
3	D12	1	1N4759A	DO-41	
4	D1,D14	2	1N4935	DO-35	
5	K1	1	Releu 110Vdc 2x16A	RM85-P-110VDC	vezi foto
6	HD2, HD3,HD4,HD5	4	Mufa plata PCB	PC187	
7	HD1,HD6,HD7	3	Header PCB	NS25	
8	F1,F2	4	6_AMP		
9	J1...J32	2	JUMPERI	L total	0.5m
10	LED1,LED2,LED3,LED4	21	LED ROSU	3mm	
11	RADIATOARE	6	TO126		vezi foto

Capacitoare

Nr. Crt.	Denumire	Bucati	Valori	Tip	Alte obs.
1	C2,C4,C5,C8,C30,C31,C32,C33	8	0.1uF	250V	MKS2
2	C17	1	1uF	63V	MKS2
3	C23	1	4.7uF	63V	ELEC
4	C35,C36	2	10uF	25V	TANTAL
5	C16,C24,C27,C28,C7,C9,C10,C11,C25,C26	10	39pF		LCC
6	C14,C22	2	47nF	100V	LCC
7	C6,C12	2	47uF	63V	LCC
8	C19	1	100nF	250V	LCC
9	C18	1	100nF	63V	LCC
10	C13	1	100uF	35V	ELEC
11	C21	1	100uF	16V	ELEC
12	C1,C34	1	100uF	100V	ELEC
13	C15,C29,C20	3	270pF	500V	LCC
14	C3	1	680uF	16V	ELEC



Radiator
15x10x29 mm



Releu 110VDC 2 x 16A

Nr. Crt.	Denumire	Bucati	Valori	Capsula / Tip	Rezistoare
					Alte obs.
1	R30,R31,R33,R34,R36,R37,R39,R40,R57,R58,R60,R61,R63,R64,R66,R67	16	0.47Ohm	3W	metal-oxid resistors
2	R100	1	1.2kOhm	0,25W	
3	R22	1	1.5kOhm	0,25W	
4	R73	1	1.8kOhm	0,25W	
5	R92,R94,R96	3	1kOhm	0,25W	
6	R81	1	1kOhm	3W	
7	R25,R26,R27,R52,R53,R54,R88,R89,R90	9	3.3kOhm	1W	
8	R28,R55	2	3.9kOhm	0,25W	
9	R93,R99	2	5.1kOhm	0,5W	
10	R32,R35,R38,R41,R59,R62,R65,R68,R69,R70,R75,R76,R79,R80	14	100Ohm	0,25W	
11	R8,R13	2	12kOhm	1W	
12	R3,R9,R11,R21,R48,R74	6	22kOhm	0,25W	
13	R47,R72	2	27kOhm	0,25W	
14	R15,R16	2	47kOhm	0,25W	
15	R51,R97,R98,R101,R102,R103	6	470Ohm	0,25W	
16	R42,R43,R44,R45	4	56kOhm	0,4W	
17	R14,R18	2	68kOhm	0,4W	
18	R4,R5,R6	3	750Ohm	0,25W	
19	R19	1	82kOhm	0,4W	
20	R10,R84,R85	3	100kOhm	0,4W	
21	R87	1	100kOhm	0,4W	

22	R24,R78	2	100Ohm	multitur
23	R29,R56	2	100Ohm	0,25W
24	R1,R104	2	100Ohm	1W
25	R23	1	150Ohm	0,25W
26	R50	1	180Ohm	0,25W
27	R7,R12,R17,R20,R82,R83,R86,R91,R95	9	220Ohm	0,25W
28	R2,R77	2	330Ohm	0,25W
29	R46,R71	2	470kOhm	0,25W
30	R49	1	470Ohm	0,25W

Rezistor 0.25W
sau 0.4W

Rezistor 1W



Rezistor 3W



Rezistor 5W

DIMENSIUNI PCB = 195 x 96 mm

