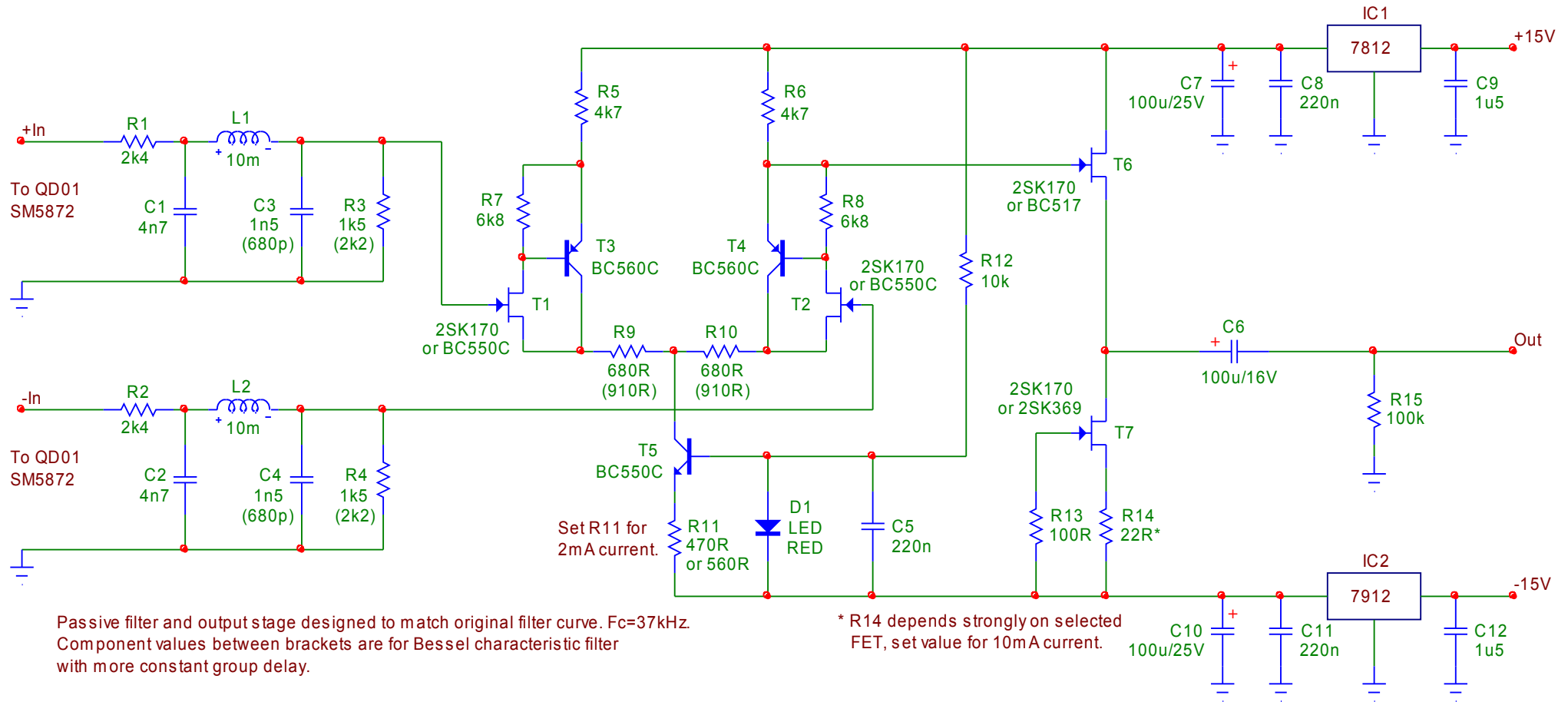


CD53/57/63/67 Discrete Output Stage with Complementary Feedback Pair (CFP) and Output Current Sink

(single channel, two sections needed for stereo)

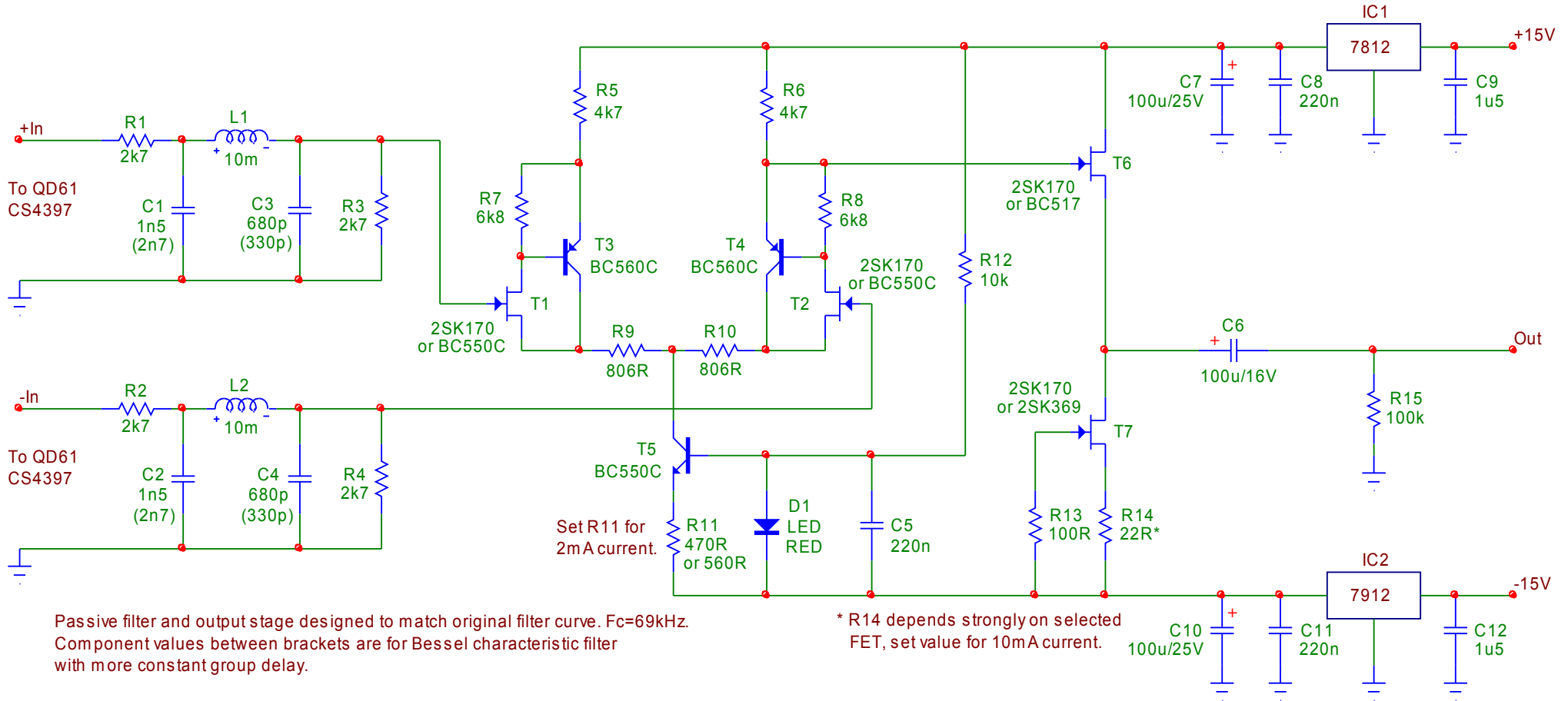


Passive filter and output stage designed to match original filter curve. $f_c=37\text{kHz}$.
Component values between brackets are for Bessel characteristic filter
with more constant group delay.

* R14 depends strongly on selected
FET, set value for 10mA current.

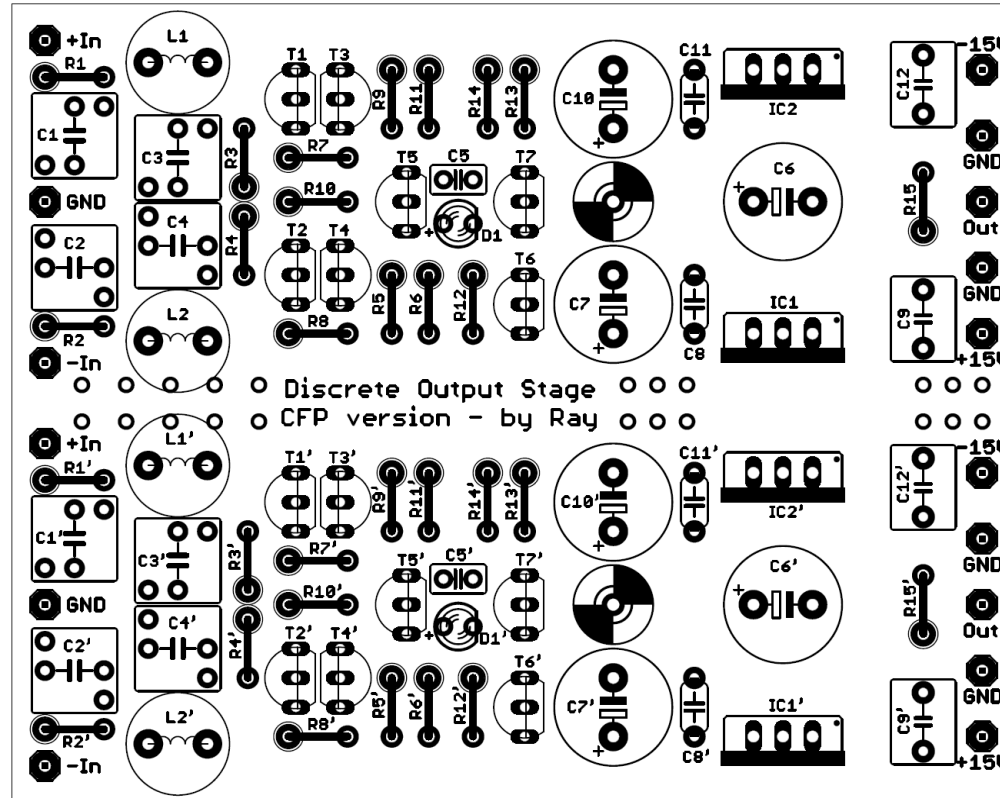
SA8400 Discrete Output Stage with Complementary Feedback Pair (CFP) and Output Current Sink

(single channel, two sections needed for stereo)



Component placement

(stereo version PCB)



Partslist for Discrete Output Stage CFP

Part nr.	Value:	Brand/Type:	Supplier:	Ordernr:
CD63/67				
R1, R2	2k4	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R3, R4	1k5 (2k2)	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R9, R10	680R (910R)	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
C1, C2	4n7	LCR FSCEX or EXFS, Rel-Cap RTE	Farnell, PCX	952-0562/952-0260, 020-51627
C3, C4	1n5 (680p)	LCR FSCEX or EXFS, Rel-Cap RTE	Farnell, PCX	952-0465 (952-0821), 010-51617 (003-68102)
SA8400				
R1, R2	2k7	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R3, R4	2k7	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R9, R10	806R	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
C1, C2	1n5 (2n7)	LCR FSCEX or EXFS, Rel-Cap RTE	Farnell, PCX	952-0465 (952-0511), 010-51617 (014-51621)
C3, C4	680p (330p)	LCR FSCEX or EXFS, Rel-Cap RTE	Farnell, PCX	952-0821 (952-0759/952-0210), 003-68101
(values between brackets are for Bessel filter characteristic)				
C5	220n/63V	MKT or ceramic, 2.5mm pitch		Farnell 189-0123/114-1778
C6	22...100u/16V	Black Gate or external MKP film cap >3.3uF	PCX, Percy Audio	
C7, C10	100u/25V	Black Gate FK or Std., Elna, Nichicon KZ	PCX, Percy Audio	
C8, C11	220n/63V	MKT, 5mm pitch	Farnell	168-5477/116-6039
C9, C12	1u5/63V	MKT, 5mm pitch	Farnell	116-6008/167-9410
D1	LED red	3mm or 5mm	Farnell	114-2517/161-2433/146-1624/161-2443
IC1	L7812CV	ST or insert your favorite voltage regulator!	Farnell	975-6124
IC2	L7912CV	ST or insert your favorite voltage regulator!	Farnell	975-6256
L1, L2	10mH	Panasonic	Farnell	809-4780
R5, R6	4k7	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R7, R8	6k8	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
R11	470R or 560R	metal film 1%, value depending on LED Vf, set CCS for 2mA current		
R12	10k	metal film 1%		
R13	100R	metal film 1%		
R14	TBD (22R)	metal film 1%, value depending on T7, set CCS for 10mA current		
R15	100k	Caddock, PRP, Takman REY, Vishay	PCX, Percy Audio	
T1, T2*	2SK170GR,BL/BC550C	Toshiba/generic	Farnell	101-7675
T3, T4	BC560C	generic	Farnell	146-7886
T5	BC550C	generic	Farnell	101-7675
T6#	2SK170xx/BC517	Toshiba/generic	Farnell	101-7671
T7	2SK170BL,V/2SK369BL	Toshiba		

* for transistor input section, BC550C can be used here

for transistor output stage, BC517 can be used here (both options can be mixed, e.g. FET input and transistor output)