Q17 Power Transistors Selection Table

Pair of transistors for the driver stage.

											Pair	of transist	ors for the	driver stage.							_
Minimum Vds = 150V, same Vgs(th) range (4V), close transductance (Gfs) Q7 v1.3.7 Minimum default config Caculated (RCiss filter) Final resistor values (scope)														7							
	DEFAULT		Status		Og nC			R7	R8	Freq MHz		R7	RR	Freq MHz		R7	RS	Freq MHz	ОК	Comment	
Config D1	OF	D	EOL	FQP3P20	Qg IIC	1 22	CISS PF	0 100	no n	0 20	,	104.7	No	rieq ivinz	,	100	NO	rieq ivinz	Yes	Comment	
coming D1	Q5 OF	N	EOL	FQP3N30	7	1.75	7	0 100	1	100 21,22	,	104,7	265,25	: 0	,	100	120	0	Yes	Original config	
	QU	14	LOL	1 QF3N30	,	1.75	,	5		21,22			203,23	, .	,		120	8	163		_
	LIVE		Status	Parts	Qg nC	Gfs Sig	Ciss pF	R7	R8	Freq MHz		R7	R8	Freq MHz		R7	R8	Freq MHz	OK	Comment	7
Config D2	05	Р	Jeacus	FQPF7P20	25	3.5	5 77	0 100		2.06		93,95		2.2	,	100		2,2		Small oscillation at clip (Q6).	
	06	N	EOL	2SK3564	17			_	-	100 2,27		30,33	103,34	2.2	1	100	100	2,2		Small oscillation at one (Qo).	
	40			251.5501		2.0	, ,,	<u> </u>		2,2,			100,0	-,-			100	2,2	103		→
	TESTED		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R7	R8	Freq MHz		R7	R8	Freq MHz	1	R7	R8	Freg MHz	ОК	Comment	7
Config D3	05	Р		FQPF7P20	25	3.5		0 100		2,06		93,95		2.2		100		2,2			7
	Q6	N		FQPF3N80C	16.5	3	3 70	_		100 2.25		30,55	108.55	2.2		100	100	2.2		Overshoot with config S2.	7
!	-									-,			/		-						→
	CANDIDATE		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R7	R8	Freg MHz		R7	R8	Freq MHz		R7	R8	Freg MHz	ОК	Comment	7
	Q5	Р		IRF9610	11			_		9,36		98,54		9,5							7
	Q6	N		IRF610	8.2					100 11,36			119,66								7
									-	,								ı			_
	CANDIDATE														Comment	7					
	Q5	Р		IRFI9620G	15			_		4,68		99,59		4,7							7
	Q6	N	1	IRFI620G	14					100 6,12		,,,,	130,24	4,7							7
							-	-												•	_
Pair of transistors for the output stage. Minimum Vds = 150V, same Vgs(th) range (4V), close transductance (Gfs)																					
	DEFAULT		Status	Parts	Qg nC			R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	Sound review
Config S1	Q15	N		FQA46N15	110	36	5 250	0 330)	192,92		335,06		190)	330		190	Yes	Original config	Nice medium.
	Q16	Р	n.a	FQA36P15	105	19.5	255	0	3	330 189,13			328,49	190)		330	190	Yes	Original config	Low frequencies set back.
				•			•	•						•			•				•
	LIVE		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	Sound review
Config S2	Q15	N		FQA46N15	110	36	5 250	0 330	כ	192,92		335,06		190)	330		190	Yes	Overshoot with config D3. Ok with D1, D2	2 Dry and dynamic sound.
	Q16	Р		IXTH48P20P	103	32	2 540	0	3	89,31			155,12	190)		150	190	Yes	Need R15=150R to remove overshoot.	
-										•											
	TESTED		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	Sound review
Config S5	Q15	N		FQA46N15	110	36	5 250	0 330)	192,92		335,06		190)	330		190	Yes	Tested with config D2.	
	Q16	Р		IXTQ36P15P	55	19	310	0	3	330 155,57			270,21	190)		180	285	Yes	Need R15=180R to remove overshoot.	
	CANDIDATE		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	
Config S6	Q15	N		IXTQ50N20P	70	23)	177,31		307,96		190)	300		190			
	Q16	Р		IXTQ36P15P	55	19	310	0	3	330 155,57			270,21	190)		270	190			<u>_l</u>
	TESTED		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	Sound review
Config S4	Q15	N		IXTQ36N30P	70	22)	214,35		372,29		190)	374		190	Yes	Tested with config D2.	High frequencies set back.
	Q16	Р		IXTQ36P15P	55	19	310	0	3	330 155,57	'		270,21	190)		160	320	Yes	Need R15=160R to remove overshoot.	Volcals with grain. Round bass
						,		,						,				,		1	-
	TESTED		Status		Qg nC	Gfs Sie	_	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	
Config S3	Q15	N		IXTQ50N20P	70	23				177,31		307,96	ļ	190)	300		190	Yes	48v max. Tested with config D2.	-
	Q16	Р		IXTQ52P10P	60	20	284	5	3	169,52			294,43	190)		170	330	Yes	Need R15=170R to remove overshoot.	
					1.		1			-							1			T-	_
	CANDIDATE		Status				Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	ОК	Comment	4
	Q15	N	ļ	IXFH50N85X	152			_		107,65		186,97		190					ļ		4
	Q16	Р	1	IXTH48P20P	103	32	540	U] 3	830 89,31		ļ	155,12	190)				l		_
			·	1	-		-	1						T=				I= '		T	¬
	CANDIDATE	1	Status				Ciss pF		R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	-
	Q15	N		IRFP240	70					370,99	-	644,35		190					 		┥
	Q16	Р	1	IRFP9240	44	9.4	120	υĮ	1 3	330 401,90	-	 	698,04	190	יו		l	<u> </u>	l	l	_
			1	In .	1	01.0	le: -	1	1	I			In	I=			In	I=		Ia .	¬
	SIM NOT WORK	_	Status		Qg nC	Gts Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	-
	Q15	N		ECX10N20	-	1	1 50			964,57		1675,31	4675.51	190					<u> </u>		-
	Q16	Р	<u> </u>	ECX10P20	1	1.5	5 50	υĮ] 3	964,57		l	1675,31	190	יוי			<u> </u>	l		_
	CINA NICE	/IB1 C	Ch.:	In	0	Cf- C'	C:	D4.6	Ina-	Ir		D44	Dar.	I	_	D4.4	ln4F	F 1611	6	I c	¬
	SIM NOT WORK	_	Status		Qg nC	Gts Sie	Ciss pF	R14	R15	Freq KHz		R14	R15	Freq KHz		R14	R15	Freq KHz	OK	Comment	-
	Q15	N	<u> </u>	ECW20N20	1	8	90	_		535,87	1	930,73		190			ļ		<u> </u>		-
	Q16	Р	l	ECW20P20		3	185	U] 3	330 267,93		l	452,78	190	יוי		l		l .		_
										ı	Pair of	transistors	for op-am	ıp power supp	oly						

Pair of transistors for op-amp power supply

Minimum Vds = 60V, same Vgs(th) range (4V)

	DEFAULT		Status	Parts	Qg nC	Gfs Sie	Ciss pF	R40	R41	Freq MHz	R40	R41	Freq MHz	R40	R41	Freq MHz	OK	Comment	
Config A1	Q1	Ν		IRF610		0.8	140	100		11,36	126,31		9	120		9		Original config	
	Q4	Р		IRF9610		0.9	170		100	9,36		104,02	9		100	9		Original config	