## **Q17 Power Transistors Selection Table**

Pair of transistors for the driver stage.

	Minimum Vds	- 1EOV	cama \	(ac(th) range (A	IV/\ cless	a transdoo	tanco //	efc)					Р	air of tran	sistors for the	e driv	er stage.						Q7 v1.3.8	,
	Minimum Vds	- 15UV,	same V					115]				1 1	Cacu	lated (RCis	ss filter)		Final re	esistor vali	ues (scope)	l			Q/ V1.3.8	1
	Minimum default config									R7	Cucu	R8			R7 R8		Freq MHz			OK	Comment			
Config D1	Q5	Р	EOL	FQP3P20	(0)	5 1.23	3	190	100		8.38	1	104.7			3	100		8			Yes		1
	Q6	N	EOL	FQP3N30		7 1.75	5	75		100	21,22		.,.	265,25	8	3		120	8			Yes	Original config	
				•		•	•	•							*	•	· ·		•	,	*		•	<u>,</u>
	LIVE		Status		Qg nC	Gfs Sie	Ciss pl	R7		R8	Freq MHz	R7		R8	Freq MHz		R7	R8	Freq MHz			ОК	Comment	
Config D2	Q5	P		FQPF7P20	25	J.,		770	100		2,06	9	93,95		2,2	2	100		2,2			Yes	Small oscillation at clip (Q6).	
	Q6	N	EOL	2SK3564	17	7 2.6	5	700		100	2,27			103,34	2,2	2		100	2,2			Yes		1
				1																	1		1.	٦
C	TESTED		Status	Parts	Qg nC	Gfs Sie				R8	Freq MHz	R7		R8	Freq MHz		R7	R8	Freq MHz			OK	Comment	_
Config D3	Q5	P		FQPF7P20	25	3.5		770	100	400	2,06	9	93,95	400 55	2,2	2	100	400	2,2			Yes	0 1 1 11 5 50	4
	Q6	N		FQPF3N80C	16.5	) :	3	705		100	2,25			108,55	2,2	<u>'</u>	<u> </u>	100	2,2	ļ	ļ	Yes	Overshoot with config S2.	1
	CANDIDATE	1 1	Status	Darte	00.00	Gfs Sie	Cicc pl	R7		R8	Freq MHz	R7		R8	Freq MHz	1	R7	R8	Freq MHz			OK	Comment	٦
	Q5	Р	Status	IRF9610	Ug nc			170	100	No	9,36		98,54	кo	9,5	-	к/	Ro	Freq IVITZ			UK	Comment	-
	Q6	N		IRF610	8.2			140	100	100			70,34	119,66					1					-
	QU	IN		IIII 010	0.2	2 0.0	<u>'l</u>	140		100	11,30			113,00	J,-	<u>'</u>			1	l				1
	CANDIDATE		Status	Parts	Qg nC	Gfs Sie	Ciss n	R7		R8	Freq MHz	R7		R8	Freq MHz		R7	R8	Freq MHz			ОК	Comment	1
	Q5	Р		IRFI9620G	15			340	100		4,68		99,59		4,7	7	1							†
	Q6	N		IRFI620G	14			260		100	6,12		,	130,24		_								†
																								-
													P	air of trans	sistors for the	outp	out stage.							
	Minimum Vds = 150V, same Vgs(th) range (4V), close transductance (Gfs) and Qg.																							
	DEFAULT		Status	Parts	Qg nC	Gfs Sie	Ciss pl	R14	ļ	R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %	SNR -dBu	OK	Comment	Subjective sound review
Config S1	Q15	N		FQA46N15	110	36	5 2	500	330		192,92	33	35,06		190	)	330		190	0,012	86,8	Yes	Original config	Nice medium and high.
	Q16	Р	n.a	FQA36P15	105	19.5	5 2	550		330	189,13			328,49	190	)		330	190			Yes	Original comig	Low frequencies set back.
	LIVE		Status		_~	Gfs Sie	Ciss pl	_		R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %		OK	Comment	Subjective sound review
Config S2	Q15	N		FQA46N15	110		5 2	_	330		192,92	33	35,06		190	)	330		190	0,013	87,1	Yes	Overshoot with config D3.	Nice medium and dynamic sound.
	Q16	Р		IXTH48P20P	103	32	2 5	400		330	89,31			155,12	190	)		150	190			Yes	Need R15=150R to remove overshoot.	Volcals with grain.
				In .	-	01.01		. Inc.			l=	244			I	_	Inca				care to	011	In .	
Config S5	TESTED	N	Status			Gfs Sie				R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %		OK	Comment Tasks divide age for D2	Subjective sound review
Colling 33	Q15 Q16	P		FQA46N15 IXTQ36P15P	110		_	500 100	330	330	192,92 155,57	33	35,06	270,21	190 . 190	)	330	180	190	0,019	-84,7	Yes Yes	Tested with config D2.  Need R15=180R to remove overshoot.	Low frequencies set back.  Nice medium. High a little aggressive.
	QIO	r		IXTQS0F13F	3.	) 13	3	100		330	133,37			270,21	. 150	,	-	100	203	l		163	Need RIS-180K to remove overshoot.	Nice medium. High a little aggressive
	TESTED	1 1	Status	Parts	Og nC	Gfs Sie	Ciss pl	R14	1	R15	Freg KHz	R14		R15	Freq KHz	T	R14	R15	Freg KHz	THD+N %	SNR dBu	OK	Comment	Subjective sound review
Config S4	Q15	N	Jeurus	IXTQ36N30P	70	22		250	330	1123	214,35		72,29	IX IS	190	)	374	1123	190	0,022	87.2 dB	Yes	Tested with config D2.	High frequencies set back.
	Q16	P		IXTQ36P15P	55		_	100	550	330	155,57		, ,,,,,	270,21	. 190	)	571	160		0,022	0712 00	Yes	Need R15=160R to remove overshoot.	Volcals with grain. Round bass
				1																	1			
	TESTED		Status	Parts	Qg nC	Gfs Sie	Ciss pl	R14	ļ	R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %	SNR dBu	ОК	Comment	1
Config S3	Q15	N		IXTQ50N20P	70	) 23	3 2	720	330		177,31	30	07,96		190	)	300		190	0,017	87.3	Yes	48v max. Tested with config D2.	1
	Q16	Р		IXTQ52P10P	60	) 20	) 2	845		330	169,52			294,43	190	)		170	330			Yes	Need R15=170R to remove overshoot.	1
																								_
	CANDIDATE		Status	Parts		Gfs Sie				R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %	SNR dBu	ОК	Comment	_
	Q15	N		IXTQ50N20P	70			720	330		177,31	30	07,96		190									_
	Q16	Р		IXTQ36P15P	55	5 19	3	100		330	155,57			270,21	. 190	)								_
				1	-		1							1000	1		1	10.00	1	I			12 .	٦
	CANDIDATE		Status			Gfs Sie				R15	Freq KHz	R14		R15	Freq KHz	_	R14	R15	Freq KHz	THD+N %	SNR dBu	OK	Comment	_
	Q15 Q16	N P		IXFH50N85X IXTH48P20P	152			480 400	330	330	107,65 89,31	15	36,97	155,12	190						ļ			4
	QIO	Р		IXI H46PZUP	103	5 32	2 3	400		330	69,31			155,12	190	'								J
	CANDIDATE	1 1	Status	Parts	Og rC	Gfs Sie	Ciss n	: R1/		R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N ≪	SNR dBu	OK	Comment	٦
	Q15	N	Jiaius	IRFP240	70			300	330	KIJ	370,99		14.35	KIJ	190	)	11.17	KIJ	TTEG KITZ	TITE TIV 70	JIVIN UDU	OK	Comment	-
	Q16	P		IRFP9240	44			200	330	330	401,90	-	11,55	698,04					+					1
						, ,		1		. 550	,50					1	-1		1		1	1	ı	4
	SIM NOT WOR	KING	Status	Parts	Qg nC	Gfs Sie	Ciss pl	R14		R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %	SNR dBu	ОК	Comment	1
	Q15	N		ECX10N20	T -	1		500	330		964,57		75,31		190	)	Ì	1		,			İ	1
	Q16	Р		ECX10P20		1.5		500		330	964,57			1675,31										1
				•	•	•				•												•		•
	SIM NOT WOR	KING	Status		Qg nC	Gfs Sie				R15	Freq KHz	R14		R15	Freq KHz		R14	R15	Freq KHz	THD+N %	SNR dBu	OK	Comment	]
	Q15	N		ECW20N20		8		900	330		535,87		30,73		190									]
	Q16	P		ECW20P20		3	3 1	350		330	267,93			452,78	190	)								]
													Pair	r of transis	tors for op-ai	np po	wer supply							

## Pair of transistors for op-amp power supply

	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	N		IRF610		8.0	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	