Q17-Mini 3.0 Power Transistors Selection Table

Pair of transistors for the driver stage.

													Pair of transisto	rs for the	driver	stage.							
	Minimum Vds =	: 150V	, same Vgs(th) range ()				0		· en · A	1 -				1				Q7 v1.4.3	1
	DEFAULT		Status Parts	Og nC	Gfs Sie		R7	R8	Frea MHz	D.7	Cacui	ated (RCi	Frea MHz	D7	inai res	istor valu	es (scope) Frea MHz				ОК	Comment	
Config D1	OF	D	EOL FQP3P20	Qg IIC	1 22	2 100	n 1/	00	0 20	K/	104.7	NO	rieq ivinz	K/	100	no	rieq IVITZ					Comment	
cog 2 1	06	N	EOL FQP3N30	7	1 75	5 7	5	100	21.22	-	104,7	265,25	8		100	120	8				Yes	Original config	
L									,					· ·			_		•				
	TESTED OK		Status Parts	Qg nC	Gfs Sie	Ciss pF	R7	R8	Freq MHz	R7	,	R8	Freq MHz	R7		R8	Freq MHz				OK	Comment	
Config D2	Q5	Р	FQPF7P20	25	3.5	5 770	0 10	00	2,06		93,95		2,2		100		2,2				Yes		
	Q6	N	EOL 2SK3564	17	2.6	700	0	100	2,27			103,34	2,2			100	2,2				res		
_							,																1
	TESTED	_	Status Parts	Qg nC	Gfs Sie	Ciss pF	R7	R8	Freq MHz	R7		R8	Freq MHz	R7		R8	Freq MHz				OK	Comment	
Config D3	Q5	P	FQPF7P20	25	3.5	770	0 10	100	2,06		93,95	400.55	2,2	_	100	400	2,2				Yes	0	
	Q6	N	FQPF3N80C	16.5	1 3	705	5	100	2,25	l l		108,55	2,2			100	2,2			l		Overshoot with config S2.	I
	CANDIDATE	1	Status Parts	Og nC	Gfs Sie	Ciss pF	R7	R8	Freg MHz	R7	, 1	R8	Freq MHz	R7		R8	Freq MHz	1	1	l	ОК	Comment	1
	Q5	Р	IRF9610	11				00	9,36		98,54		9,5		100		9	1				Consume 120mA per rail.	İ
	Q6	N		8.2				100				119,66				100	9	i e			No	Q14=3.4V, Q16=-3.8V	
									, , , ,				-,-,-									, , , , , , , , , , , , , , , , , , , ,	•
	CANDIDATE		Status Parts	Qg nC	Gfs Sie	Ciss pF	R7	R8	Freq MHz	R7	,	R8	Freq MHz	R7		R8	Freq MHz				ОК	Comment	
	Q5	Р	IRFI9620G	15				00	4,68		99,59		4,7										
	Q6	N	IRFI620G	14	1.5	5 260	0	100	6,12			130,24	4,7										
Pair of transistors for the output stage.																							
	Minimum Valo	150	/// ///-/	41/) -		106.	٠					,	air of transistor	s for the	output	stage.							
	DEFAULT	- 1300	, same Vgs(th) range (Ciss pF	R14	R15	Freg KHz	R1	4	R15	Freg KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	Subjective sound review
Config S1	Q15	N	FQA46N15	110	36	2500	0 3	30	192.92		335.06	KIJ	190	N24	330	ICLU	190	` '	0.011	90.9			Good sound.
	Q16	Р	n.a FQA36P15	105	19.5	2550	0	330	189,13			328,49	190			330	190	9.1	-,		Yes	Original config	Well balanced sound.
		-			•				•														
	TESTED		Status Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz	R1	.4	R15	Freq KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	Subjective sound review
Config S2	Q15	N	FQA46N15	110		2500			192,92		335,06		190		330		190		0,017	88,2	No	Q14=3.6V, Q16=-3.8V - Bad spectrum.	Good sound.
	Q16	Р	IXTH48P20P	103	32	5400	0	330	89,31			155,12	190			150	190	3.1			110	With R10/R13=8R2 consume 400mA.	Low frequency drier than S5.
_						T							I= I										
6663	TO TEST	N	Status Parts	Qg nC	Gfs Sie		R14	R15	Freq KHz	R1	307.96	R15	Freq KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	Subjective sound review
Config S3	Q15 Q16	N	IXTQ50N20P IXTQ52P10P	60	23	2720	0	30	177,31 0 169,52	-	307,96	294,43	190	-				9.1				48v max.	
	QIO	Р	IXIQSZPIOP	00	/ 20	2043)	330	109,52			234,43	190				l .	I.	<u> </u>	l .			
	TESTED	1	Status Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freg KHz	R1	.4	R15	Freq KHz	R14	- 1	R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	ОК	Comment	Subjective sound review
Config S4	Q15	N	IXTQ36N30P	70	22	2 2250	0 3:		214,35		372,29		190		374		190	1	0,022	87.2 dB		Q14=3.6V, Q16=-3.8V	Good sound.
	Q16	Р	IXTQ36P15P	55	19	3100	0	330	155,57			270,21	190			270	190	8.2			No	With R10/R13=9R1 ou 8R2 - Bad spectrum.	Low frequency less controlled than S5.
	TESTED OK		Status Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz			R15	Freq KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	Subjective sound review
Config S5	Q15	N	FQA46N15	110	36	2500	0 3	30	192,92		335,06		190		330		190	8.2	0,011	91,1	Yes	Q15/Q16 well balanced (3.6V).	Good sound.
<u> </u>	Q16	Р	IXTQ36P15P	55	19	3100	U	330	155,57			270,21	190			330	285					With R10/R13=8R2. Good spectrum.	Well balanced sound.
	CANDIDATE		Status Parts	Og nC	Gfc Sio	Ciss pF	D1/I	R15	Freq KHz	R1	4	R15	Freq KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	CND -dBuA	OK	Comment	1
	Q15	N	IXTQ50N20P	70				30	177,31		307,96	KIJ	190	K14		KIJ	rieq Kiiz	· · · ·	1110 /6	SINK -UDUA	OK	Comment	
	Q16	P	IXTQ36P15P	55				330			,	270,21	190					9.1					
									'														•
	CANDIDATE		Status Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz	R1	.4	R15	Freq KHz	R14	.	R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	ОК	Comment	
	Q15	N	IXFH50N85X	152				30	107,65		186,97		190					9.1					
	Q16	Р	IXTH48P20P	103	32	5400	0	330	89,31			155,12	190										
			a Ia .		1-1-1	1	1	1	I				I= I					I				-	1
	CANDIDATE	N	Status Parts IRFP240			Ciss pF 1300		R15	Freq KHz 370,99	R1	644,35	R15	Freq KHz	R14		R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	
	Q15 Q16	P	IRFP9240	70 44				330			644,35	698,04	190 190					9.1					
	QIU	l r	IKI F 3240	44	9.4	+ 1200	J	330	401,30	-		030,04	130				l .	I.	l .	l			J
	SIM NOT WORK	KING	Status Parts	Qg nC	Gfs Sie	Ciss pF	R14	R15	Freq KHz	R1	.4	R15	Freq KHz	R14	- 1	R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	ОК	Comment]
	Q15	N	ECX10N20		1	1 500		30	964,57	1	1675,31		190					9.1					1
	Q16	Р	ECX10P20		1.5	500	0	330	964,57			1675,31	190					9.1]
								_														-	1
	SIM NOT WORK			Qg nC	Gfs Sie	Ciss pF		R15	Freq KHz	R1		R15	Freq KHz	R14	<u> </u>	R15	Freq KHz	R10-R13 (R)	THD %	SNR -dBuA	OK	Comment	1
	Q15	N	ECW20N20		8	900			535,87		930,73	452.70	190					9.1	<u> </u>				
	Q16	Р	ECW20P20] 3	1850	υĮ	330	267,93			452,78	190				l		l	l .			I
												Pai	r of transistors f	for on-am	nn now	or sunnly							
	Minimum Vds =	: 60V	same Vgs(th) range (4	V)								rai		ог ор-ап	h how	cı suppiy							
	DEFAULT		Status Parts		Gfs Sie	Ciss pF	R40	R41	Freq MHz	R4	10	R41	Freq MHz	R40		R41	Freq MHz				OK	Comment	1
1																							

Original config