

MARANTZ TRANSISTOR/DIODE/TRIMMER SUBSTITUTION GUIDE -- updated 05/18/2022

Transistor	Vce	Ic	Package	Sub 1	Vce	Ic	Package	Sub 2	Vce	Ic	Package
2N4123	30V	0.2A	TO-92	2N3904	40V	0.2A	TO-92				
2N4125	30V	0.2A	TO-92	2N3906	40V	0.2A	TO-92				
2SA1039	120V	50mA	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA484	110V	1.5A	TO-39	2N5415	200V	1A	TO-39	2N5416	300V	1A	TO-39
2SA493	40V	50mA	TO-98	KSA992FBU	120V	50mA	TO-92				
2SA494	30V	30mA	TO-98	2SA1015	50V	0.15A	TO-92	KSA992FTA	120V	50mA	TO-92
2SA495	20V	0.1A	TO-98								
2SA497	80V	0.8A	TO-92	KSA1220AY	160V	1.2A	TO-92				
2SA562 (ECB)	30V	0.4A	TO-98	2N3906 (EBC)	40V	0.2A	TO-92	KSA1013YTA	160V	1A	TO-92
2SA564	25V	0.1A	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA566	100V	0.7A	TO-66	MJE15033G	250V	8A	TO-220				
2SA606	80V	0.7A	TO-37	2N5415	200V	1A	TO-39	2N5416	300V	1A	TO-39
2SA607	80V	0.7A	TO-37	2N5415	200V	1A	TO-39	2N5416	300V	1A	TO-39
2SA627	60V	7A	TO-3	MJ21193G	250V	16A	TO-3				
2SA640	45V	30mA	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA684	60V	1.2A	TO-92	KSA1220AY	160V	1.2A	TO-126				
2SA706	60V	1A	TO-202	KSA1220AY	160V	1.2A	TO-126				
2SA720	40V	0.5A	TO-92	KSA1013YTA	160V	1A	TO-92	KSA1220AY	160V	1.2A	TO-126
2SA721	35V	0.1 A	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA722	55V	0.1A	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA725	35V	0.1 A	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA726	50V	0.1A	TO-92	KSA992FBU	120V	50mA	TO-92	BC327	45V	0.5A	TO-92
2SA733	40V	0.3A	TO-92	KSA733 Digikey	50V	0.15A	TO-92	2N3906	40V	0.2A	TO-92
2SA747A	140V	10A	TO-3	MJ21193G	250V	16A	TO-3				
2SA750	80V	50mA	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA753	110V	10A	TO-3	MJ21193G	250V	16A	TO-3				
2SA757	90V	7A	TO-3	MJ21193G	250V	16A	TO-3				
2SA763	30V	50mA	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA771	80V	6A	TO-66	TIP42B or C	80V	6A	TO-220				
2SA777	80V	0.5A	TO-92	KSA1220AY	160V	1.2A	TO-126	KSA1013YTA	160V	1A	TO-92
2SA794	80V	0.5A	TO-126	KSA1220AY	160V	1.2A	TO-126				
2SA798	50V	0.1A	SP9	KSA992FBU	120V	50mA	TO-92				

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2SA809	120V	50mA	TO-5	KSA1381ESTU	300V	0.1A	TO-126				
2SA815	100V	1A	TO-220	TIP30C	100V	1A	TO-220				
2SA818	150V	50mA	SOT-33	KSA1381ESTU	300V	0.1A	TO-126				
2SA839	150V	1.5A	TO-220	MJE15033G	250V	8A	TO-220				
2SA841	60V	50mA	TO-98	KSA992FBU	120V	50mA	TO-92				
2SA842	40V	50mA	TO-98	BC557 (CBE leads)	45V	0.1A	TO-92				
2SA872	90V	50mA	TO-92	KSA992FBU	120V	50mA	TO-92				
2SA912	150V	0.1A	TO-92	KSA1013YTA	160V	1A	TO-92				
2SA913	150V	0.1A	TO-220	KSA940TU	150V	1.5A	TO-220				
2SA914	150V	50mA	TO-126	KSA1381ESTU	300V	0.1A	TO-126				
2SA915-A	120V	50mA	SOT-33	KSA1220A	160V	1.2A	TO-126				
2SA959	100V	10A	TO-3	MJ21193G	250V	16A	TO-3				
2SB507	60V	3A	TO-220	MJE15031	150V	8A	TO-220	MJE15033	250V	8A	TO-220
2SB537	110V	2A	TO-220	KSA940TU	150V	1.5A	TO-220	MJE15031	150V	8A	TO-220
2SB541	100V	12A	TO-3	MJ21193G	250V	16A	TO-3				
2SB549	100V	0.8A	TO-126	MJE253G	100V	4A	TO-225	KSA1220AY	160V	1.2A	TO-126
2SB557	120V	8A	TO-3	MJ21193G	250V	16A	TO-3				
2SB600	200V	15A	TO-3	MJ21193G	250V	16A	TO-3				
2SB617	100V	6A	XM20	2STA1694	120V	8A	TO3				
2SB618	120V	7A	XM20	BD912	100V	15A	TO-220				
2SB645-R	200V	15A	TO-3	MJ21193G	250V	16A	TO-3				
2SB686	100V	6A	TO-218	2STA1694	120V	8A	TO-3				
2SC1000	50V	0.1A	TO-98	KSC1815	50V	0.15A	TO-92	KSC1845F	120V	50mA	TO-92
2SC1047	20V	20mA	TO-92	KSP10 (leads BEC)	25V	100nA	TO-92				
2SC1116A	120V	10A	TO-3	MJ21194G	250V	16A	TO-3				
2SC1124	140V	1A	TO-202	KSC2690AY	160V	1.2A	TO-126				
2SC1175	45V	0.2A	TO-92	KSC2383YTA	160V	1A	TO-92				
2SC1213A	35V	0.5A	SOT-33	KSC2383YTA	160V	1A	TO-92				
2SC1222	30V	30mA	TO-92	KSC1845FTA	120V	50mA	TO-92				
2SC1312	35V	0.1A	TO-92	KSC1845FTA	120V	50mA	TO-92	BC337	45V	0.8A	TO-92
2SC1313	50V	0.1A	TO-92	KSC1845FTA	120V	50mA	TO-92	BC337	45V	0.8A	TO-92
2SC1318	50V	0.5A	TO-92	KSC2383YTA	160V	1A	TO-92	KSC2690	160V	1.2A	TO-126
2SC1327	35V	0.1A	TO-92	KSC1815YTA	50V	0.15A	TO-92	KSC1845FTA	120V	50mA	TO-92

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Transistor	Vce	Ic	Package	Sub 1	Vce	Ic	Package	Sub 2	Vce	Ic	Package
2SC1328	55V	0.1A	TO-92	KSC1845FTA	120V	50mA	TO-92				
2SC1342	20V	30mA	SOT-33								
2SC1343	110V	10A	TO-3	MJ21194G	250V	16A	TO-3				
2SC1344E	30V	0.1A	SOT-33	KSC1815YTA	50V	0.15A	TO-92	KSC1845FTA	120V	50mA	TO-92
2SC1345	50V	0.1A	SOT-33	KSC1815YTA	50V	0.15A	TO-92				
2SC1384	50V	1.5A	TO-92	KSC2690AY	160V	1.2A	TO-126				
2SC1400	80V	50mA	TO-92	KSC1845FTA	120V	50mA	TO-92				
2SC1403	100V	8A	TO-3	MJ15015G	120V	15A	TO-3	MJ21194G	250V	16A	TO-3
2SC1407	50V	1.5A	TO-92								
2SC1451	120V	50mA	R119	KSC1845FTA	120V	50mA	TO-92	KSC3503DSTU	300V	0.1A	TO-126
2SC1509	80V	1A	TO-92	KSC2383	160V	1A	TO-92				
2SC1567	100V	0.5A	TO-126	KSC2690AY	160V	1.2A	TO-126				
2SC1568	15V	0.8A	TO-126	BD13516S	45V	1.5A	TO-126	MJE243G	100V	4A	TO-225
2SC1625	100V	1A	TO-220	TIP29C	100V	1A	TO-220				
2SC1627A	80V	0.3A	TO-92	2SC3708 Sanyo	80V	0.5A	TO-92				
2SC1628	150V	50mA	TO-131	KSC3503DSTU	300V	0.1A	TO-126				
2SC1669	150V	1.5A	TO-220	MJE15032G	250V	8A	TO-220				
2SC1681	60V	50mA	TO-98	KSC1845FTA	120V	50mA	TO-92				
2SC1740	50V	0.1A	TO-92	KSC1845FTA (?)	120V	50mA	TO-92				
2SC1775	90V	50mA	TO-92	KSC1845FTA	120V	50mA	TO-92				
2SC1885	150V	0.1A	TO-92	KSC2690AY	160V	1.2A	TO-126	KSC2383YTA	160V	1A	TO-92
2SC1913	150V	1.5A	TO-220	KSC2073TU	150V	1.5A	TO-220				
2SC1940	120V	50mA	SOT-33	KSC2690AY	160V	1.2A	TO-126				
2SC1953	150V	50mA	TO-126	KSC3503DSTU	300V	0.1A	TO-126				
2SC1986	80V	6A	TO-220	TIP41B or C	80V	6A	TO-220				
2SC2235	120V	0.8A	TO-92	KSC2383YTA	160V	1A	TO-92				
2SC2390	80V	50mA	TO-92	KSC1845FTA	120V	50mV	TO-92				
2SC371	30V	0.1A	TO-98	KSC1815	50V	0.15A	TO-92	KSC945C	50V	0.15A	TO-92
2SC372	30V	0.1A	TO-98	KSC1815	50V	0.15A	TO-92	KSC945C	50V	0.15A	TO-92
2SC373	30V	0.1A	TO-98	KSC2383YTA	160V	1A	TO-92	KSC945C	50V	0.15A	TO-92
2SC458BLG	30V	0.1A	SOT-33	KSC1815	50V	0.15A	TO-92				TO-92
2SC461	30V	0.1A	SOT-33	KSC945	50V	0.15A	TO-92				TO-92
2SC484	110V	1.5A	TO-39	2N3440	250V	1A	TO-39				TO-39

Transistor	Vce	Ic	Package	Sub 1	Vce	Ic	Package	Transistor	Vce	Ic	Package
2SC497	80V	0.8A	TO-92	KSC2690AY	160V	1.2A	TO-92				TO-92
2SC535B	20V	20mA	SOT-33								
2SC536G,E	30V	0.1A	TO-92	KSC945CYTA	50V	0.15A	TO-92				TO-92
2SC631	25V	0.1A	U29	KSC1845	120V	50mA	TO-92	hFE>350			TO-92
2SC632	40V	0.1A	U29	KSC1845	120V	50mA	TO-92	hFE>350			TO-92
2SC644	25V	50mA	TO-92	KSC1845	120V	50mA	TO-92	KSC945CYTA	50V	0.15A	TO-92
2SC668C	15V	30mA	R145	NTE107 (?)							
2SC680	120V	2A	TO-66	MJE15032G	250V	8A	TO-220				TO-220
2SC696	60V	3A	TO-39	MJE182G	80V	3A	TO-225	KSC2690AY	160V	1.2A	TO-126
2SC710	25V	30mA	TO-92	KSC1845FTA	120V	50mA	TO-92				TO-92
2SC732	30V	0.1A	TO-98	KSC1845	120V	50mA	TO-92				TO-92
2SC733	30V	0.1A	TO-98	KSC945CYTA	50V	0.15A	TO-92				TO-92
2SC734	50V	0.15A	TO-98	KSC2383YTA	160V	1A	TO-92	KSC945CYTA	50V	0.15A	TO-92
2SC735 (ECB)	30V	0.4A	TO-98	BC337 (CBE)	45V	0.8A	TO-92	2N3904 (EBC)	40V	0.2A	TO-92
2SC789	60V	4A	TO-220	TIP41C	100V	6A	TO-220	MJE15030	150V	8A	TO-220
2SC828	30V	50mA	TO-92	KSC1845FTA	120V	50mA	TO-92				TO-92
2SC829	20V	30mA	TO-92	KSC1845FTA	120V	50mA	TO-92				TO-92
2SC829C	20V	30mA	TO-92	KSC1845FTA	120V	50mA	TO-92				TO-92
2SC853	60V	0.2A	TO-236	BD139	80V	1.5A	SOT-32-3				SOT-32-3
2SC871	25V	30mA	TO-92	KSC1845	120V	50mA	TO-92	BC550B	45V	0.2A	TO-92
2SC875	75V	0.5A	TO-5	2N3440	250V	1A	TO-39				TO-39
2SC897B	100V	7A	TO-3	MJ21194G	250V	16A	TO-3				TO-3
2SC929C	10V	30mA	R145								
2SC930C	10V	30mA	R145								
2SC941(O)	35V	20mA	TO-98	KSC1845	120V	50mA	TO-92				TO-92
2SC945	40V	0.1A	TO-92	KSC945C	50V	0.15A	TO-92				TO-92
2SC959	80V	0.7A	TO-39	2N3440	250V	1A	TO-39				TO-39
2SC960	80V	0.7A	MD34	2N3440	250V	1A	TO-39				TO-39
2SC984	30V	0.5A	TO-1	ZTX694B	120V	0.5A	TO-92	KSC1815	50V	0.15A	TO-92
2SD188M	70V	5A	TO-3	MJ21194G	250V	16A	TO-3				TO-3
2SD217	80V	7A	TO-3	MJ21194G	250V	16A	TO-3				TO-3
2SD313	60V	3A	TO-220	MJE15030	150V	8A	TO-220	MJE15032	250V	8A	TO-220
2SD315	40V	4A	TO-66	2N4231	40V	5A	TO-66	NTE175	300V	2A	TO-66

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Thermistors		Source	Part #					
SDT-100		Digikey	495-2156-ND					
Diode	Specs		Sub 1	Specs		Sub 2	Specs	
10D-1			1N5392					
10D-2			1N5393					
1N34A								
1N60								
1S1008								
1S1212			1N4148					
1S1555			1N4148					
1S188FM2								
1S2471			1N4148					
1S2472			1N4148					
1S2473C			1N4148					
20A90M			1N60					
5B2	250V 5A							
6B20	240V 6A							
BZ-140	14V 1W		1N4744A	15V 1W				
BZ-150	15V 1W		BZX85B15-TR	15V 1.3W				
CZ-205	20.5V 1W		1N4747A	20V 1W				
DS-131B			MUR1620CTG			NXP BYQ28E200,127		
DS-132B			MUR1620CTRG					
DS-133A			1N4007 X 2 series					
DS-133B			1N4007 X 2 series					
MV-1								
MV-13			1N4148 X 2 series					
S1B-01-02			UF4005					
S3016R			1N4148			1N4448		

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Diode	Specs		Sub 1	Specs		Sub 2	Specs	
S5188								
SM-150-01			1N4001			1N4007		
STV-3H								
U05B			UF5405					
U05C			UF5404					
VD1122			1N4148					
VD1212			1N4148 X 2 series					
W06B			1N4004					
WZ-071	7.1V 500mW		NZX6V8D	7.05V 500mW				
WZ-081	8.1V 500mW		BZX79B8V2	8.2V 500mW				
WZ-120	12V 500mW		1N5242	12V 500mW				
WZ-140	14V 500mW		1N5244B	14V 500mW				
WZ-150	15V 500mW		BZX79B15	15V 500mW				
WZ-177	17.7V 500mW		1N5247B	17V 500mW				
WZ-192	19V 500mW		1N5249B-TR	19V 500mW				
WZ-240	24V 500mW		1N5252B	24V 500mW				
WZ-310	31V 500mW		BZX79-C30, 133	30V 500mW				
Trimmer Subs								
Model	Single/Multi	Resistance	Bourns Part Number	Top/Side Adjust				
2215	Single	100K	3386F-1-104	Top				
	Single	470	3386F-1-471	Top				
2226b	Multi	5k	3296Y-1-502LF	Top				
	Multi	100	3296Y-1-101LF	Top				
2230	Single	100K	3386F-1-104	Top				
	Single	470	3386F-1-471	Top				

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Model	Single/Multi	Resistance	Bourns Part Number	Top/Side Adjust				
2235B	Single	5K	3386F-1-502TLF	Side				
	Single	200	3386H-1-201LF	Side				
2245	Single	1K	3386H-1-102	Side				
	Single	2.2K	3386H-1-222	Side				
2270	Single	1K	3386H-1-102	Side				
	Single	2.2K	3386H-1-222	Side				
2275	Single	1K	3386H-1-102	Side				
	Single	2K	3386H-1-202	Side				