

SEMI-CONDUCTOR REPLACEMENT GUIDE TRANSISTORS

PART #	E.C.G.	G.E.	MOTOROLA	RADIO SHACK	R.C.A.	T.C.G.	WORKMAN	ZENITH
2SA 564	ECG 290A	GE-269	2N4403	276-2023	SK3247/234	TCG290A	911/290	121-879
2SA 659	ECG 290A	GE-269	2N4403	276-2023	SK3466/159	TCG290A	911/290	121-Z9003
2SA 673	ECG 290A	GE-269	2N4403	276-2023	SK3114/290	TCG290A	911/290	121-Z9003
2SA 733	ECG 290A	GE-269	2N4403	276-2023	SK3114/290	TCG290A	62/159	121-Z9067
2SA 817	ECG 298	GE-272	2N4405	---	SK3450/298	TCG298	915/298	121-Z9103
2SA 940	ECG 398	GE-303	MJE15031	---	SK3441/292	TCG398	781/292	121-Z9048
2SA 1015	ECG 290A	GE-269	2N4403	276-2023	SK3114/290	TCG290A	---	---
2SC 536	ECG 85	GE-212	MPSA18	276-2009	SK9929/85	TCG85	536	121-972
2SC 711	ECG 85	GE-62	MPSA18	276-2009	SK9929/85	TCG85	372	121-972
2SC 828	ECG 85	GE-61	MPSA18	276-2009	SK9929/85	TCG85	828	121-972
2SC 945	ECG 85	GE-212	MPSA18	276-2009	SK9929/85	TCG85	1945	121-Z9065
2SC 1051	ECG 280	GE-35	MJ423	---	SK9141/94	TCG94	707/162	121-Z9018
2SC 1215	ECG 107	GE-86	MPS6543	276-2010	SK3293/107	TCG107	535/107	121-522
2SC 1384	ECG 293	GE-47	---	---	SK3849/293	TCG293	914/297	121-Z9066
2SC 1507	ECG 198	GE-251	TIP50	---	SK3220/198	TCG198	779/198	121-Z9028
2SC 1740	ECG 85	GE-62	2N4401	276-2009	SK9929/85	TCG85	736/123A	121-Z9065
2SC 1756	ECG 376	GE-251	TIP50	---	SK3219	TCG376	779/198	121-Z9107
2SC 1815	ECG 85	GE-62	MPSA05	276-2009	SK9929/85	TCG85	66/199	121-Z9065
2SC 2073	ECG 375	---	---	---	SK9118/375	TCG375	780/291	121-Z9106
2SC 2228	ECG 399	GE-222	MPSA42	---	SK3866	TCG399	68/287	121-Z9045

Information based on Howard W. Sam's Semi-conductor General Purpose Replacement Guide - Fourth Edition

NOTE: Be sure to check all pinouts before installing. Nintendo cannot guarantee all parts as direct replacements.

SEMI-CONDUCTOR REPLACEMENT GUIDE TRANSISTORS

PART #	E.C.G.	G.E.	MOTOROLA	RADIO SHACK	R.C.A.	T.C.G.	WORKMAN	ZENITH
2SC 2271	ECG 399	GE-224	MPSA42	---	SK3433/287	TCG399	68/287	121-Z9045
2SC 2320	ECG 85	---	---	276-2009	SK9929/85	TCG85	---	---
2SC 2335	ECG 379	GE-66A	TIP41A	---	SK9085/379	TCG379	745/152	121-987-03
2SC 2482	ECG 399	GE-222	MPSA42	---	SK3244	TCG399	68/287	121-Z9045
2SC 2501	ECG 379	---	---	---	---	---	---	---
2SC 2518	ECG 379	---	---	---	---	---	---	---
2SC 2535	ECG 379	---	---	---	SK9085/379	---	---	---
2SC 2551	---	---	---	---	---	---	---	---
2SC 2555	---	---	---	---	---	---	---	---
2SC 2612	ECG 379	---	---	---	---	---	---	---
2SC 2749	---	---	---	---	---	---	---	---
2SC 2857	---	---	---	---	---	---	---	---
2SC 3236	ECG 379	---	---	---	---	---	---	---
2SD 386	ECG 375	---	---	---	SK9118/375	TCG375	763/375	121-Z9028
2SD 401	ECG 375	---	MJEL5030	---	SK9118/375	TCG375	763/375	121-Z9016
2SD 592	ECG 85	GE-47	MPSA05	276-2009	SK9929/85	TCG85	912/293	121-29066
2SD 869	ECG 89	---	---	---	SK9119/89	TCG89	---	---
2SD 870	ECG 89	---	---	---	SK9119/89	TCG89	---	---
2SD 901	---	---	---	---	---	---	---	---
2SD 921	---	---	---	---	---	---	---	---

2SD 1090

Information based on Howard W. Sam's Semi-conductor General Purpose Replacement Guide - Fourth Edition

NOTE: Be sure to check all pinouts before installing. Nintendo cannot guarantee all parts as direct replacements.

SEMI-CONDUCTOR REPLACEMENT GUIDE

DIODES

PART #	E.C.G.	G.E.	MOTOROLA	RADIO SHACK	R.C.A.	T.C.G.	WORKMAN	ZENITH
1SS53	ECG 177	GE-300	1N4935	276-1102	SK9091/177	TCG177	925/519	103-131
1S953	ECG 519	GE-514	1N4735	276-1103	SK3100/519	TCG519	925/519	103-131
1S954	ECG 519	GE-514	1N4735	276-1103	SK3100/519	TCG519	925/519	103-131
1S1553	ECG 519	GE-300	1N4735	276-1103	SK3100/519	TCG519	---	103-131
1S1555	ECG 177	GE-300	1N4935	276-1102	SK9091/177	TCG177	1062/177	103-131
1S1588	ECG 519	GE-514	1N4735	276-1103	SK3100/519	TCG519	925/519	103-131
1S1595	ECG 506	GE-511	MR1-1400	---	SK3998/506	TCG506	172/506	103-287
1S1835	ECG 552	GE-511	MR1-1400	276-1104	SK9000/552	TCG552	172/506	103-287
1S1885	ECG 116	GE-504A	1N4005	276-1104	SK3313/116	TCG116	155	212-76-02
1S1953	ECG 5065A	---	---	---	SK3838/5065A	TCG5065A	1149/5065	---
1S2075	ECG 177	GE-300	1N4935	276-1102	SK9091/177	TCG177	1062/177	103-131
1S2076	ECG 519	GE-514	1N4735	276-1103	SK3100/519	TCG519	925/519	103-131
1S188TV	ECG 109	1N34AS	1N34A(2)	276-1123	SK3090/109	TCG109	134/109	103-Z9001
1S5277B	---	---	---	---	---	---	---	---
W03B	---	---	---	---	---	---	---	---
1ODF-4	---	---	---	---	---	---	---	---
EUI	ECG 552	GE-511	MR1-1400	---	SK9000/552	TCG552	152/552	103-287
RU2	ECG 552	GE-511	MR1-1400	276-1104	SK9000/552	TCG552	152/552	103-287
S1B01-02	ECG 116	GE-504A	1N4005	276-1104	SK3313/116	TCG116	158/116	212-76-02
ERC04-06	ECG 156	GE-512	1N4725	276-1104	SK3051/156	TCG156	4008/156	212-Z9000

Information based on Howard W. Sam's Semi-conductor General Purpose Replacement Guide - Fourth Edition

NOTE: Be sure to check all pinouts before installing. Nintendo cannot guarantee all parts as direct replacements.

SEMI-CONDUCTOR REPLACEMENT GUIDE DIODES

PART #	E.C.G.	G.E.	MOTOROLA	RADIO SHACK	R.C.A.	T.C.G.	WORKMAN	ZENITH
EQA01-35	ECG 5085A	GEZD-36	1N4753A	---	SK3337/5085A	TCG5085A	1168/5085	103-270
EQA01-07	ECG 5071A	GEZD-6.8	1N4736A	---	SK3334/5071A	TCG5071A	1106/5071	103-Z9020
EQA01-12	ECG 142A	GEZD-13	1N4742A	276-563	SK3062/142A	TCG142A	1158/143	103-96
05Z5.6	ECG 5011A	---	1N5232B	---	SK3777/5011A	TCG5011A	1412/5011	103-Z9007
05Z5.1L	ECG 5010A	GEZD-5.1	1N5231B	276-565	SK3776/5010A	TCG5010A	1103/135	103-Z9006
05Z13	ECG 143A	GEZD-13	1N4743A	---	SK3750/143A	TCG143A	1158/143	103-96
05Z27	---	---	---	---	---	---	---	---
1Z27	ECG 146A	GEZD-27	1N4750A	---	SK3064/146A	TCG146A	1120/146	103-Z9014
CTU-2S	---	---	---	---	---	---	---	---
CTB-33S	---	---	---	---	---	---	---	---
S4VB40	ECG 168	GEBR-1000	3N256	276-1173	SK3648/168	TCG168	1053/168	212-Z9001
1B4B41	---	---	---	---	---	---	---	---
5GG2C41	---	---	---	---	---	---	---	---
15FWJ2C1	---	---	---	---	---	---	---	---

Information based on Howard W. Sam's Semi-conductor General Purpose Replacement Guide - Fourth Edition

NOTE: Be sure to check all pinouts before installing. Nintendo cannot guarantee all parts as direct replacements.

SEMI-CONDUCTOR REPLACEMENT GUIDE INTEGRATED CIRCUITS

	NATIONAL	SIGNETICS	FAIRCHILD	MOTOROLA	R.C.A.	INTEL	SYLVANIA	A.M.D.	T.I.
LA 1464	--	--	--	--	--	--	--	--	--
LA 5112	--	--	--	--	SK 9188	--	ECG 1479	--	--
MB 3614	LM 324	LM 324	MA 324	LM 324	CA 324	--	--	LM 324	LM 324
MB 7063	--	82S09	93419	--	--	--	--	--	--
MB 7074	--	--	--	10422	--	--	--	--	--
MB 8884	--	--	--	--	--	8035 (6MHz)	--	--	--
M 58715	--	--	--	--	--	8039 (11MHz)	--	--	--
101xx (ECL)	--	101xx	101xx	101xx	--	--	--	--	--
5501 300ns CMOS RAM	MM2101A-2	--	--	--	--	--	--	9101 300ns CMOS RAM	--

NOTE: Be sure to check all pinouts before installing.
Nintendo cannot guarantee all parts as direct replacements.

Absolute Maximums

Vcbo = Collector-to-Base voltage with Emitter open
Vebo = Emitter-to-Base reverse voltage with Collector open
Ic = Maximum continuous Collector current
Pw = Maximum power that can be dissipated at 25 C
TEMP = Maximum operating temperature (C)

Cutoff

Current between Collector and Base with Emitter open

Gain

Typical value of current gain for common Emitter configuration at current shown

TYPE #	MANUFACTURER	ABSOLUTE MAXIMUMS						CUTOFF			GAIN		REPLACEMENT
		Vcbo (V)	Vebo (V)	Ic (mA)	Pw (mW)	TEMP (°C)	Icbo (A)	Vcb (V)	Hfe	Ic (mA)			
2SA564	MATSUSHITA	-25	-5	-100	250	125	-1	-10	250	-2	2SA1015		
2SA564A	"	-45	"	"	"	"	"	"	"	"	2SA1015		
2SA733	NEC	-60	-5	-100	250	125	-0.1	-60	200	-1	2SA564A		
2SA1015	TOSHIBA	-50	-5	-150	400	125	-0.1	-50	>70	-2	2SA733		
2SC711	mitsubishi	30	4	100	200	125	0.1	25	250	1	2SC1815		
2SC828	MATSUSHITA	30	5	50	250	125	1	10	>65	2	2SC2320		
2SC828A	"	45	"	"	"	"	"	"	"	"	2SC2320		
2SC1215	"	30	3	50	200	125	100	30	100	2	2SC1395		
2SC1384	"	60	5	1A	750	135	0.1	20	160	500	2SC2024		
2SC1740	TOYO	50	5	100	300	125	0.5	30	120	1	2SC536		
2SC1815	TOSHIBA	60	5	150	400	125	0.1	60	>70	2	2SC536		
2SC2320	mitsubishi	50	6	200	300	125	0.1	50	>90	1	2SC1815		

 TRANSISTOR SPECIFICATIONS

TYPE #	MANUFACTURER	ABSOLUTE MAXIMUMS						CUTOFF		GAIN		REPLACEMENT
		Vcbo (V)	Vebo (V)	Ic (mA)	Pw (mW)	TEMP (°C)	Icbo (A)	Vcb (V)	Hfe	Ic (mA)		
2SC2535	TOSHIBA	500	6	2A	20W	150	100	400	>10	3A	2SC2335	
2SA817	"	-80	-5	-300	600	150	-0.1	-50	>70	-30	2SA697	
2SA1015	"	-50	-5	-150	400	125	-0.1	-50	>70	-2	2SA733	
2SC2555	"	500	7	10A	100W	150	100	400	35	1A	2SC2749	

POWER SUPPLY TRANSISTOR SPECIFICATIONS

TYPE #	MANUFACTURER	ABSOLUTE MAXIMUMS					CUTOFF		GAIN		REPLACEMENT
		Vcbo(V)	Vebo(V)	Ic(mA)	Pw(mW)	TEMP (C)	Icbo(A)	Vcb(V)	Hfe	Ic(mA)	
2SA659	SANYO	-50	-5	-200	400	125	-10	-40	100	-50	2SA1015
2SA673	HITACHI	-35	-4	-500	400	125	-0.5	-20	60	-10	2SA695
2SA940	TOSHIBA	-150	-5	-1.5A	25W	150	-10	-120	75	-500	2SA546A
2SC536	SANYO	40	5	100	200	125	1	35	320	1	2SC2320
2SC1015	mitsubishi	40	4.5	3A	33W	175	500	15	50	100	2SC1076
2SC1051	SANYO	150	6	7A	60W	150	1mA	30	90	1A	2SD425
2SC1507	NEC	300	7	200	15W	150	0.1	200	80	10	2SC1756
2SC2073	TOSHIBA	150	5	1.5A	25W	150	10	120	75	500	2SC867
2SC2228	SANYO	160	5	50	750	125	1	160	40	10	2SC1573
2SC2271	SANYO	300	6	100	900	150	1	200	40	10	2SC1573
2SC2551	TOSHIBA	300	6	100	400	150	0.1	300	90	20	2SC1473

 MONITOR TRANSISTOR SPECIFICATIONS

TYPE #	MANUFACTURER	ABSOLUTE MAXIMUMS						CUTOFF		GAIN		REPLACEMENT
		Vcbo (V)	Vebo (V)	Ic (mA)	Pw (mW)	TEMP (°C)	Icbo (A)	Vcb (V)	Hfe	Ic (mA)		
2SD386A	SANYO	200	6	2A	25W	150	1mA	180	40	500	2SC2073	
2SD869	TOSHIBA	1500	5	3.5A	50W	150	10	500	12	500	-----	
2SD870	"	"	"	5A	"	"	"	"	"	1A	-----	
2SD901	NEC	200	5	2A	25W	150	50	150	100	400	-----	
2SD1090	-----	200	5	5A	80W	150	100 A	200	500	1500 1A	-----	

 MONITOR TRANSISTOR SPECIFICATIONS

NOTES