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seeburg music products semiconductor replacement guide

EMERGENCY
ONLY

- * JUKE BOX SEMICONDUCTOR REPLACEMENT INFORMATION
- * CROSS REFERENCE OF MARKINGS ON SEMICONDUCTORS TO ACTUAL PART NUMBERS
- * CANADIAN TO JEDEC CROSS REFERENCE
- * SEEBURG SELECTION LIST
- * LEAD IDENTIFICATION ILLUSTRATIONS

ALSO INCLUDED:

SEEBURG STEREO TUNER (HOME UNIT) SEMICONDUCTOR INFORMATION

SEEBURG ELECTRONIC ORGAN SEMICONDUCTOR REPLACEMENT INFORMATION

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SERVICE & SUPPLY COMPANY PHONO DIVISION ROCK CREEK, OHIO 44084

SEEBURG MUSIC PRODUCTS

SEMICONDUCTOR REPLACEMENT GUIDE

The purpose of this guide is to offer emergency field replacement information of all semiconductors used in Seeburg Music Products. Use of the information will eliminate down time if the exact replacement by Seeburg part number is not readily available. Type numbers listed are usually available at local parts houses throughout the country.

The replacements are not suggested as every day replacements of Seeburg components. In most cases the emergency replacement listed will cost more than the original component from the Seeburg Corp.

All replacements listed have been checked to operation parameters and usually exceed the ratings specified by the Manufacturer. In no known instance is an inferior part listed.

Information contained in the guide is NOT with the approval of any manufacturer and is offered for emergency assistance only.

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Every precaution has been taken in the preparation of this manual to insure accurate information. However, the publisher assumes no responsibility for errors, omissions or damages resulting from the use of the information supplied herein.

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TABLE OF CONTENTS

Use Of This Guide 2

Section I Seeburg Part Number Listings..... 3

Section II Cross Reference of Stereo Tuner Part Numbers 30

Section III Semiconductor Symbols Used In This Manual 32

Section IV Markings on Semiconductors
(Other then complete part numbers)..... 34

Section V Canadian To JEDEC Cross Reference 36

Section VI Seeburg Selection List..... 39

 " VII BLACK BOX GREY BOX AND 100WATT AMP SEMI COND - PARTS LIST - 41

Section VIII Lead Identification Illustrations 95

NOTE

USE OF THIS GUIDE

1. If the complete part number is known, locate the component in Section I. Under the part number you will find Specifications with which you can locate an emergency replacement. Also listed are readily available general replacements that usually can be purchased at local electronic parts houses.
2. If the part number is not available, use the markings on the defective semiconductor. Locate the marking in Section IV, which will list the part number that corresponds to the markings.
3. If lead identification is needed, use the information in Section VII. Next to most part number listings in Section I is a lead I.D. number that corresponds to the drawings in Section VII.

Service Note:

Whenever semiconductors are used in pairs such as outputs, compliment drivers or rectifiers, all should be changed with brand used. Example: If one or the other of an output or driver transistor is defective and an emergency replacement is used, BOTH MUST be changed to the brand used for the emergency repair. In other words, DO NOT use one Seeburg with one other brand, it may not work.

Part Number	Description - Specifications	Replacements
303696.....	Germanium Diode..... 100MA..... 200PIV Surge-25A Lead Identification #75	IN368 GE.....GE-504A (Silicon) Motorola.....HEP 156 (Silicon) RCA.....SK-3017A (Silicon) Sylvania.....ECG 116 (Silicon)
305499.....	Selenium Rectifier..... 65MA..... 52Volt RMS.....120PIV..	Use.....309384 (Silicon)
305636.....	Selenium Rectifier..... 50MA..... 380PIV.....	Use.....309396 (Silicon)
308950.....	PNP Germanium Transistor..... V _{CE} 25V.....I _C .07A..... P _C .15W..... Gain 80..... TO-5 Case..... Lead Identification #6.....	2N109 GE.....GE-2 Int. Rect.....TR-14 Motorola.....HEP 631 RCA.....SK-3004 Sylvania.....ECG 102A
309115.....	Selenium Diode..... 200uA 52 Volt RMS 120PIV Surge-10MA..... Full Load Drop = 2 Volts..... Lead Identification #210	Can Use.....305499 Or one half of.309381, 309382, 309397, or 309398 Int. Rect.....4U1 Sylvania.....ECG 119
309370.....	Dual Selenium Diode (Non Polarized) Transient Voltage Suppressor .....(Common Cathods) 500MA.....33 Volt RMS....80PIV.. Lead Identification #211	(Can Use 2).....309374 (1R).....#44 Pair 1
309371.....	Silicon Control Switch (PNPN Planer) PRV 200V...VRGK 5V.....I _F (RMS) .2A I _{FM} 5A....I _{GF} .25A.....I _{GF} (AVE) 25MA Lead Identification #212	SW2216
309372.....	Silicon Rectifier..... .4A 600PIV..... Lead Identification #71	1N689 GE.....GE-504A Int. Rect.....10B6 Int. Rect.....10C6 Int. Rect.....10D6 Motorola.....HEP 158 RCA.....SK-3017A Seeburg.....309378 Sylvania.....ECG 116

Part Number	Description - Specifications	Replacements
309373.....	Silicon Rectifier..... 150MA..... 100PIV..... Lead Identification #71	1N676 GE.....GE-504A Int. Rect...10B1 Int Rect...10C1 Motorola...HEP 156 RCA.....SK 3016 or SK 3017A Seeburg....309374 Sylvania...ECG 116
309374	Silicon Rectifier..... 1A.....100PIV..... Lead Identification #75	1N2859 (GI).....G100B.....A14A2 GE.....GE-504A Int. Rect... 10B1 Int. Rect... 10C1 Motorola...HEP 156 RCA.....SK 3016 or SK 3017A Seeburg....309378 Sylvania...ECG 116
309375	Zener Diode..... 27V..... 10W .....10% Lead Identification #84	1N2988A (Mot.).....10M27Z10 Int. Rect. Z1320
309376.....	Zener Diode..... 150V.....10W.....10%..... Lead Identification #84	1N3011A (Mot).....10M150Z10 Int. Rect...Z1338
309377.....	Silicon Control Switch (PNPN Planer) PRV 60V..... V_{RGK} 5V..... I_F (RMS) .2A I_{FM} 5A..... I_{GF} (Surge) .25A..... I_{GF} (AVE) 25MA TO-18 Case Lead Identification #217	Use.....309472 Transitron..SW2085
309378.....	Silicon Rectifier..... 1A.....600PIV..... Lead Identification #75	1N4385 (GI).....G100J GE.....GE-504A Int. Rect....10D6 Motorola....HEP 158 RCA.....SK 3017A or SK 3032 Sylvania....ECG 116
309379.....	Zener Diode..... 130V.....10W.....10%..... Lead Identification #84 <u>Reversed..</u>	1N3009RA Int. Rect....Z1336 (Connections will have to be reversed and case insulated from chassis.)

Part Number	Description - Specifications	Replacements
309380.....	Germanium Diode..... 30MA..... 5PIV..... Lead Identification #72	1N128 Motorola.....HEP 134 RCA.....RCA SK-3087 Sylvania.....ECG 109
309381.....	Selenium Full Wave Diode (Common Cathods) ..Use.....	309397
309382.....	Selenium Full Wave Diode (Common Anode).....Use.....	309398
309384.....	Silicon Diode..... 170MA..... 170PIV..... Lead Identification #75	1N4817 (T.I.).....TI-57 Int. Rect.....,5A4D Motorola.....HEP 162 RCA.....SK 3016 or SK 3051 Sylvania.....ECG 116
309385.....	Silicon Rectifier..... .5A.....400PIV..... Lead Identification #77.....	Use.....309396 (IR)..... 2E4 GE.....GE-504A Int. Rect.....5A6D Motorola.....HEP 157 RCA.....SK 3016 or SK 3017A Seeburg.....309386 Sylvania.....ECG 116
309386.....	Silicon Rectifier..... .75A.....400PIV..... Lead Identification #78	1N2862 GE.....GE-504A Int. Rect.....IOB4, 10C4 Motorola.....HEP-157 RCA.....SK 3016 or SK 3017A Sylvania.....ECG-116
309387.....	Silicon Rectifier..... .75A.....200PIV..... Lead Identification #78	1N1488 (T.I.)..... U-212 Use.....309396 GE.....GE-504A Int. Rect.....10B2 Motorola.....HEP 156 RCA.....SK 3016 or SK 3017A Sylvania.....ECG 116
309389.....	Silicon Rectifier..... 1A..... 200PIV..... Lead Identification #78	1N4383 Use.....309477 GE.....GE-504A Int. Rect.....10C2 Motorola.....HEP 156 RCA.....SK 3030 or SK 3016 RCA.....SK 3017A Sylvania.....ECG-116

Part Number	Description - Specifications	Replacements
309390.....	Selenium Diode..... 12.5MA..... 144PIV.... .25A Surge. Lead Identification #210	1N1637 (IR).....3V1 GE.....GE-504A (Silicon) Int. Rect.....10B6 (Silicon) Motorola.....HEP 158 (Silicon) RCA.....SK 3016 (Silicon) Seeburg.....309378 (Silicon) Sylvania.....ECG-116 (Silicon) Sylvania.....ECG-177 (Silicon)
309391.....	Selenium Full Wave Rectifier..... 10MA Surge..... 120PIV (Each Diode) (2 Volt drop per Diode) Common Anode Lead Identification #213	Can use two....309390 GE.....6GX1 Int. Rect.....DD06, DD07 RCA.....SK 3121 Seeburg.....309398 Sylvania.....ECG-115
309392.....	Selenium Diode..... .5MA.....46PIV.....5MA Surge..... (2 Volt Drop) Lead Identification #72	(IR).....150 Seeburg.....309390
309393.....	Selenium Full Wave Rectifier..... 25uA.....46PIV..... 2.5MA Surge.... 1.5V Drop (Per Diode) Common Anode. Lead Identification #213	Can Use.....309391 or.....309398 GE.....6GX1 Int. Rect.....DD06, DD07 RCA.....SK 3121 Sylvania.....ECG-115
309394.....	Selenium Diode..... 12.5MA..... 225PIV..... .25A Surge Lead Identification #	1N1638 (IR).....4V1 GE.....GE504A (Silicon) Int. Rect.....10B6 (Silicon) Motorola.....HEP 158 (Silicon) RCA.....SK 3016 (Silicon) Sylvania.....ECG 177 (Silicon) Sylvania.....ECG 116 (Silicon)
309395.....	Zener Diode..... 15V..... 1W .....10%..... Lead Identification #78	1N3024A GE.....GEZD-15 Int. Rect.....Z1114 Motorola.....HEP 607 RCA.....SK 3063 Sylvania.....ECG 145
309396.....	Silicon Rectifier..... .75A.....400PIV..... Lead Identification #78..... RCA.....SK 3016 Sylvania..ECG-116	1N1490 (IR).....10D6 (TI).....U-213 GE.....GE-504A Int. Rect.....10C4, 10B4 Motorola.....HEP 157

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309397.....	Selenium Full Wave Rectifier..... 250uA....120PIV....10MA Surge.... (Per Diode) 2 Volt Drop..... (Yellow Cap) Common Cathods Lead Identification #214	Can use two...309390 GE.....6GC1 Int. Rect....DD04 RCA.....SK 3119 Seeburg.....309399 Seeburg.....309440 Sylvania.....ECG 113
309398.....	Selenium Full Wave Diode..... 500uA....120PIV....10MA Surge.. (Per Diode) 2 Volt Drop..... (Red Cap) Common Anode..... Lead Identification #213	Can use two...309390 GE.....6GX1 Int. Rect....DD06, DD07 RCA.....SK 3121 Sylvania.....ECG 115
309399.....	Selenium Full Wave Diode..... 500uA....120PIV....10MA Surge... (Per Diode) 2 Volt Drop..... Common Cathods..... Lead Identification #214	Can use two...309390 GE.....6GC1 Int. Rect....DD04 RCA.....SK 3119 Seeburg.....309440 Sylvania.....ECG 115
309400.....	PNP Germanium XTR..... V _{CE} 25V....I _C .07A....P _C .15W.. Gain 75..... TO-5 Case Lead Identification #11	2N217 Delco.....DS-26 GE.....GE-2 Int. Rect....TR-05, TR-14 Motorola.....HEP 636 RCA.....SK 3004 Sylvania.....ECG-102A Workman.....AA1
309401.....	PNP Germanium Transistor..... V _{CE} 18V....I _C .07A....P _C .15W.. Gain 70..... TO-5 Case Lead Identification #11	2N408 GE.....GE-2 Motorola.....HEP 636 RCA.....SK 3003 Sylvania.....ECG-102A
309402.....	NPN Germanium Transistor..... V _{CB} 25V....I _C .05A....P _C .1W.. Gain 70 TO-5 Case Lead Identification #11	2N647 GE.....GE-8 Motorola.....HEP 641 RCA.....SK 3010 Sylvania.....ECG-103A

Part Number	Description - Specifications	Replacements
309403.....	PNP Germanium PWR XTR..... VCE 50V....I _C 10A....P _C 10W..... (See note on page 2)..... Gain 100..... TO-3 Case..... Lead Identification #31.....	2N301 2N2869 Delco.....DS-503 GE.....GE-3 Int. Rect.....TR-01 Motorola.....HEP 232 RCA.....SK 3009 Semitronics....PT-40 Seeburg.....309412 Sylvania.....ECG-121 Workman.....AA4
309404.....	PNP Germanium XTR..... V _{CER} 32V....I _C .04A....P _C .05W.. Gain 70..... TO-5 Case..... Lead Identification #11	2N591 Delco.....DS-26 GE.....GE-2 Int. Rect.....TR-14 Motorola.....HEP 254 RCA.....SK 3004 Sylvania.....ECG 102A Workman.....AA1
309406.....	PNP Germanium PWR XTR..... V _{CES} 30V....I _C 3A....P _C 10W..... Gain 60..... TO-3 Case..... Lead Identification #31	2N176 GE.....GE-3 Motorola.....HEP 624 RCA.....SK 3009 Sylvania.....ECG 104 Seeburg.....309403
309407.....	PNP Germanium PWR XTR..... VCE 30V....I _C 5A....P _C 90W..... Gain 30..... TO-3 Case..... Lead Identification #31	Use.....309422 2N1530 GE.....GE-3 Motorola.....HEP 232 RCA.....SK 3009 Sylvania.....ECG 121
309408.....	PNP Germanium XTR..... V _{CER} 25V....I _C .2A....P _C .15W..... Gain 100..... TO-5 Case..... Lead Identification #1.....	2N1370 Delco.....DS-26 GE.....GE-2 Int. Rect.....TR-05 Motorola.....HEP 253 RCA.....SK 3004 Sylvania.....ECG 102 Workman.....AA1
309409.....	PNP Germanium XTR..... VCE 45V....I _C .2A....P _C .25W..... Gain 60..... TO-5 Case..... Lead Identification #11	2N1373 GE.....GE-2 Motorola.....HEP 253 RCA.....SK 3004 Sylvania.....ECG 102

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309410.....	NPN Germanium Transistor..... V _{CER} 50V.....I _C .15A.....P _C .15W Gain 80..... TO-5 Case..... Lead Identification #11..... Match to 309411 (See Note on Pg. 2)	(TI).....GC102A
309411.....	PNP Germanium Transistor..... V _{CER} 50V.....I _C .15A.....P _C .15A.. Gain 100..... TO-5 Case..... Lead Identification #11..... Match to 309410 (See Note on Pg. 2)	(TI).....GC113A
309412.....	PNP Germanium Power Transistor... V _{CER} 60V.....I _C 7A.....P _C 150W..... Gain 100..... TO-3 Case..... Lead Identification #31..... (See Note on Page 2)..... <i>(POWER PHYSICS) PPG 1061</i>	(TI).....GC114.....2N457A Delco.....DTG 110B Delco.....DS-503 GE.....GE-3 Int. Rect....TR-01 Motorola.....HEP 232 RCA.....SK 3009 Seeburg.....309415 Sylvania.....ECG104 Workman.....AA4 <i>POWER.</i>
309413.....	PNP Germanium Transistor (Low Noise)..... V _{CER} 18V.....I _C .01A.....P _C .05W... Gain 175..... Noise 8DB..... TO-5 Case..... Lead Identification #11.....	(TI).....GC112A.....2N1307 Delco.....DS-25 GE.....GE-1 Int. Rect....TR-06, TR-14 Motorola.....HEP 2 Sylvania.....ECG 158 Workman.....AA1
309414.....	PNP Germanium Transistor..... V _{CE} 25V.....I _C .15A.....P _C .15W.... Gain 105..... Noise 12DB..... TO-5 Case..... Lead Identification #11.....	(TI).....GC112.....2N1307 Delco.....DS-25 GE.....GE-1 Int. Rect....TR-06, TR-14 Motorola.....HEP 2 Sylvania.....ECG 158 Workman.....AA1
309415.....	PNP Germanium Power Transistor... V _{CE} 40V.....I _C 5A.....P _C 90W..... Gain 30 TO-3 Case..... Lead Identification #31.....	2N1531 GE.....GE-3 Motorola.....HEP 232 RCA.....SK 3009 Sylvania.....ECG 121 Seeburg.....309412

Part Number	Description - Specifications	Replacements
309416.....	PNP Germanium XTR..... V _{CE} 40V.....I _C 3A.....I _B 1A..... V _{EB} 20V.....P _C 20W..... TO-5 Case In Heat Sink..... Lead Identification #15.....	(TI).....GC185.....2N1039-1.....2N1040-1.....2N1043-1.....2N1044-1 GE.....GE-3 (In TO-3 Case) RCA.....SK 3009 (In TO-3 Case)
309418.....	NPN Silicon Transistor..... V _{CER} 55V.....I _C .2A.....P _C 1W..... Gain 85..... TO-5 Case..... Match to 309419 See Note on Pg. 2 Lead Identification #11	(TI).....SC350.....2N656 Int. Rect.....TR-25 Motorola.....HEP 243 RCA.....SK 3024 Sylvania.....ECG 128
309419.....	PNP Silicon Transistor..... V _{CER} 50V.....I _C .2A.....P _C 1W..... V _{EB} 5V..... Gain 85..... Match to 309418 See Note on Pg. 2 TO-5 Case..... Lead Identification #11	(TI).....SC365.....2N1132 GE.....GE-21 Int. Rect.....TR-19, TR-28 Motorola.....HEP 51 RCA.....SK 3025 Sylvania.....ECG 159
309420.....	PNP Germanium Transistor..... V _{CER} 30V.....V _{CE} 16V.....I _C .15A... P _C .15W.....V _{EB} 10V..... Gain 140..... TO-5 Case..... Lead Identification #11.....	(TI).....GC380.....2N1373 GE.....GE-2 Motorola.....HEP 253 RCA.....SK 3004 Sylvania.....ECG 102
309421.....	PNP Germanium XTR..... V _{CE} 35V.....V _{CER} 50V.....V _{EB} 25... I _C .15A.....P _C .15W..... Gain 100..... TO-5 Case..... Lead Identification #11.....	.....2N1373 (RCA).....34573 GE.....GE-2 Motorola.....HEP 253 RCA.....SK 3004 Sylvania.....ECG 102
309422.....	PNP Germanium PWR XTR..... V _{CE} 30V.....I _C 5A.....P _C 90W..... Gain 30..... TO-3 Case..... Lead Identification #31.....	(TI).....GC433.....2N1530 GE.....GE-3 Motorola.....HEP 232 RCA.....SK 3009 Sylvania.....ECG 121

Part Number	Description - Specifications	Replacements
309423.....	PNP Germanium Power XTR..... VCE 40V....IC 5A....PC 90W..... Gain 50..... Lead Identification #31 .....	.....2N1536 GE.....GE-3 Motorola.....HEP 232 RCA.....SK 3009 Sylvania.....ECG 121
309424.....	PNP Silicon XTR..... VCE 60V....VEB 40V....PC .6W.. Gain Min. 10..... TO-46 Case..... Lead Identification #11.....	.....2N3911 Hughes.....207-2 GE.....GE-21 RCA.....SK 3025, SK 3114 Sylvania.....ECG 159
309425.....	PNP Germanium Power XTR..... VCE 60V....VEB 20V..... IC 5A.....ICE .2A..... Gain 115..... Lead Identification #31..... TO-3 Case.....	Delco.....7299719 Delco.....DTG110B GE.....GE-3 Int. Rect....TR-01 Motorola.....HEP 232, HEP 236 Sylvania.....ECG 121
309426.....	NPN Silicon XTR..... VCE 25V....PC .2W..... Gain 195..... TO-98 Case..... Lead Identification #21 or #7...	.....SE1001 Fairchild....S1581.....2N2925.....2N3693 Delco.....DS-74 GE.....GE-17 Int. Rect....IRTR-51 Motorola.....HEP 726 RCA.....SK 3018 OR SK 3019, SK 3020 Sylvania.....ECG 123A
309427.....	NPN Silicon XTR..... VCE 18V....PC .2W..... TO-98 or TO-92 Case..... Lead Identification #21 or #23.. GE.....GE-17 Int. Rect.....TR-21 Int. Rect.....IRTR-51 Motorola.....HEP 724 RCA.....SK 3018 Or SK 3019, SK 3020 Sylvania.....ECG 123A Sylvania.....ECG 128	.....2N2926 (GE).....4JX16A673 (TI).....SM6787 Seeburg.....309426 Seeburg.....309434 Seeburg.....309438 Seeburg.....309439.....2N2712.....2N2924.....2N2925.....MPS6514 Delco.....DS-74

Part Number	Description - Specifications	Replacements
309428.....	Unijunction XTR (Silicon)..... Res: 4.7K-9.1KOHM..... V_{B2E} 30V... Ratio .56-.75..... I_P 5uA..... I_{EO} 12uA..... I_V 4MA... TO-18 Modified Case..... Lead Identification #52.....	.....2N2646 Seeburg.....654001 Seeburg.....309443
309429.....	PNP Silicon Transistor..... V_{CE} 35V..... I_C .6A..... P_C .6W..... Gain 30..... TO-5 InBolt Down Heat Sink Case... Match to 309430 See Note on Pg. 2 Lead Identification #12	.....2N1131 (TI).....SK 7443.....2N1132.....2N2800.....2N3245.....2N3763.....2N5022 GE.....*GE-21 Motorola....*HEP 51 RCA.....*SK 3114 Sylvania....*ECG 106
309430.....	NPN Silicon Transistor..... V_{CER} 40V..... P_C .6W..... TO-5 In BoltDown Heat Sink Case... Match to 309429 See Note on Page 2 Lead Identification #12.....	.....2N696 (TI).....SK7442.....2N2477.....2N3110.....2N3295 Int. Rect...*TR-25 Motorola....*HEP-53 RCA.....*SK 3020 Sylvania....*ECG 123
309432.....	PNP Silicon Transistor..... V_{CE} 40V..... P_C .2W..... Gain 350..... Plastic Case..... Lead Identification #7.....	.....2N4250.....2N3548.....2N3549.....2N3550 GE.....GE-22 RCA.....SK 3118, SK 3025 Seeburg.....309436, 309433 Sylvania....ECG-129
309433.....	PNP Silicon Transistor..... V_{CE} 60V..... P_C .2W..... Plastic Case Lead Identification #7..... Gain 280.....	.....2N4249.....2N4058.....2N5086.....D29A5 GE.....GE-21 Int. Rect....IR-52 Motorola....HEP 708 RCA.....SK 3118, SK 3025 Seeburg.....309437 Sylvania....ECG 159

*Add Heat Sink

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309434.....	NPN Silicon XTR..... V _{CE} 50V....V _{EB} 4V....I _C .1A..... P _C .3W..... TO-92 Case..... Match to 309435 See Note on Pg.2 Lead Identification #23	(Mot).....MPS 6512 (TI).....SK7910 (Mot).....SPS3751.....2N916.....2N2369.....2N2481.....2N2501.....2N3009 Int Rect.....TR-24 Motorola.....HEP 729 RCA.....SK 3122
	Seeburg.....309438 Sylvania.....ECG 128	
309435.....	PNP Silicon XTR..... V _{CE} 50V....V _{EB} 4V....I _C .1A..... P _C .3W..... TO-92 Case..... Match to 309434 See Note on Pg.2 Lead Identification #23.....	(Mot).....MPS6516 (Mot).....MSPS3750 (TI).....SK 7911.....2N2906.....2N3135.....2N3250.....2N3485 Motorola.....HEP 715 RCA.....SK 3114 Sylvania.....ECG 129
309436.....	PNP Silicon Transistor..... V _{CE} 30V....I _C .03A....P _C .25W... Gain 350..... TO-92 Case..... Lead Identification #25.....	.....2N4062 (Mot).....MSPS4086 (TI).....SK7912.....2N3964.....2N4288 GE.....GE-21 RCA.....SK 3118 Seeburg.....309435, 309437 Sylvania.....ECG 106
309437.....	PNP Silicon XTR..... V _{CE} 30V....I _C .03A....P _C .25W... Gain 170..... TO-92 Case..... Lead Identification #25.....	.....2N4061 (Mot).....MSPS4087 (TI).....SK 8264.....2N3582.....2N4058.....2N4980 GE.....GE-12 RCA.....SK 3118 Seeburg.....309435, 309436 Sylvania.....ECG 106

Part Number	Description - Specifications	Replacements
309438.....	NPN Silicon XTR..... V _{CE} 50V....I _C .5A....P _C .36W..... Gain 150..... TO-98 Case..... Lead Identification #21.....	.....2N3416 (CDC).....CS3416.....2N4954.....2N5175 GE.....GE-17 Int. Rect....TR-53 Motorola....HEP 55, HEP 726 RCA.....SK 3020 Sylvania....ECG 123A
309439.....	NPN Silicon XTR..... V _{CE} 25V....I _C .1A....P _C .2W..... Gain 300..... TO-106 Case..... Lead Identification #27.....	.....2N3565.....SE 4002.....MPS 6514 Delco.....DS-81 GE.....GE-10 Int. Rect....TR-53 Motorola....HEP-55 RCA.....SK 3020 Seeburg.....309438 Sylvania....ECG 123A
309440.....	Dual Selenium Diode (Yellow Cap)... 47V-PIV.....I .5MA...DCI 2.5MA..... Common Cathods..... Lead Identification #214.....	(IRC).....9LR2-3 GE.....6GC1 Int. Rect....DD04 RCA.....SK 3119 Sylvania....ECG 113
309441.....	NPN Silicon Power Transistor..... V _{CE} 55V....I _C 4A....P _C 25W..... Gain 60..... Lead Identification #31..... TO-66 Case.....	.....2N3054.....S32221 Int. Rect....TR-57 Motorola....HEP 241, HEP 703 Sylvania....ECG 152
309442.....	NPN Silicon Transistor..... V _{CE} 30V....I _C .6A....P _C .31W..... Gain 45..... TO-92 or TO-104 Case..... Lead Identification #23 or #12....	(Mot).....MPS6532.....2N3242B (RCA).....38975 Motorola....HEP 721 RCA.....SK 3039 Sylvania....ECG 128
309443.....	Unijunction Transistor..... Res. 4.7K-9.1KOHM....V _B 2E-30V..... Ratio .56-.75.....I _P 5uA..... I _{EO} 12ua.....I _V 4MA..... TO-18 Modified Case..... Lead Identification #52.....	.....2N2646 (GE).....D5E43 (GE).....4JD5E43 Seeburg.....309428 Seeburg.....654001

Replacements offered for Emergency use Only

Part Number	Description-Specifications	Replacements
309444.....	Programmable Unijunction Transistor PNPN Planer..... V _{GATE-Cathod} 40V....R _{VG-C} =-5V.... P _C .3W....I _F .15A....I _V 50uA..... I _P 2uA....V _T .2-1.6V..... TO-98 Case..... Lead Identification #228.....	(GE).....D13T1.....2N6027.....2N6028
309445.....	PNP Silicon Transistor..... V _{CE} 30V....I _C .2A....P _C .31W..... Gain 80..... TO-92 Case..... Lead Identification #23.....	.....2N4125 (Mot).....SPS 3342 (TI).....SX 4060.....MPS 6534 Int Rect.....TR-54 Motorola.....HEP-52 RCA.....SK 3025 Seeburg.....309683 (Use) Sylvania.....ECG 159
309446.....	PNP Silicon XTR..... V _{CE} 40 ...V _{EB} 5V....I _C 1A..... P _C 1W....P _C (With Heat Sink)6W... TO-5 Case.....Gain 200..... Lead Identification #11.....	.....2N4037 (Mot).....SPS 3343.....2N3763.....2N4406 RCA.....SK 3025 Sylvania.....ECG 129
309447.....	NPN Silicon XTR..... V _{CE} 30V....I _C .2A....P _C .31W..... Gain 80..... TO-92 Case..... Lead Identification #23.....	.....2N4123 (Mot).....SPS 3344 (TI).....TIS 98.....MPS 6530.....MPS 6531 GE.....GE-20 Int. Rect.....TR-53 Motorola.....HEP-54, HEP-724 RCA.....SK 3020 Sylvania.....ECG 123A
309448.....	NPN Silicon XTR..... V _{CE} 40V....V _{BE} 5V....I _C 4A..... P _C 36W..... Flat Style Case..... Lead Identification #47.....	.....2N5296.....2N5294 GE.....GE-18 Motorola.....HEP 245 RCA.....SK 3054 Sylvania.....ECG 152
309449.....	NPN Silicon Power Transistor.... V _{CE} 60V....I _C 15A....P _C 115W.... Gain 45..... TO-3 Case..... Lead Identification #31.....	(N.E.) <i>72202K</i>.....2N3055 GE.....GE-14 Int. Rect.....TR-26 Motorola.....HEP 704 RCA.....SK 3027 Seeburg.....318208 Sylvania.....ECG 130 <i>(RCA) --- 62382</i>

Part Number	Description - Specifications	Replacements
309450.....	NPN Silicon Transistor..... V _{CE} 25V....P _C .2W..... Gain 200..... Plastic Case..... Lead Identification #7.....	.....2N3692.....SE 2045.....2N3694.....MPS 3694.....MPS 6514.....MPS 6520 Int. Rect...IRTR-51 GE.....GE-17 RCA.....SK 3020 Sylvania...ECG 123
309451.....	PNP Silicon XTR..... V _{CE} 60V....I _C .5A....P _C .3W..... Gain 175..... TO-105 Case..... Lead Identification #27.....	.....2N3645.....2N2905.....2N2907.....2N3486 GE.....GE-21 Motorola...HEP-57 Sylvania...ECG 106, ECG 129
309452.....	NPN Silicon XTR..... V _{CE} 60V....I _C .5A....P _C .3W Gain 70..... TO-105 Case..... Lead Identification #27.....	.....2N3568.....2N718A.....2N735.....2N736.....2N870.....2N911 Delco.....DS-66 RCA.....SK 3020 Sylvania...ECG-128 GE.....GE-20 Motorola...HEP-53
309453.....	PNP Germanium XTR..... V _{CE} 40V....I _C 3A....P _C 37.5W..... Gain 120.....	.....2N3155
309454.....	PNP Germanium XTR..... V _{CE} 20V....I _C .01A....P _C .083W.... Gain 150..... TO-7 Case..... Lead Identification #4.....	.....AF 116.....2N2091.....2N2089.....2N2671 Delco.....DS-56 GE.....GE-9 Motorola...HEP 3 RCA.....SK 3006 Sylvania...ECG 126 Workman...AA3

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309455.....	PNP Germanium XTR..... V _{CB} 40V....I _C .01A....P _C .24W.. Gain 90..... TO-33 Case..... Lead Identification #14.....	.....2N1395.....AF106.....2N2955 GE.....GE-9 RCA.....SK 3006 Sylvania.....ECG-100
309456.....	NPN Silicon XTR..... V _{CE} 25V....P _C .2W..... Gain 200..... Plastic Case..... Lead Identification #7.....	.....2N3692.....SE-2002.....MPS 6513 GE.....GE-17 Int. Rect.....IRTR-51 RCA.....SK 3020 Sylvania.....ECG 108
309457.....	PNP Silicon XTR..... V _{CE} 40V....V _{EB} 5V....I _C 1A..... P _C 1.5W Min. With Heat Sink 5W. Gain 150..... Flat Style Case..... Lead Identification #42.....	.....2N4918 (Mot).....SJE543 GE.....GE-29 Int. Rect....*IRTR-56 Motorola.....HEP 246 Sylvania.....ECG 185 <i>RCA - - - - 61978</i>
309458.....	NPN Silicon XTR..... V _{CE} 180V....V _{EB} 5V..... I _C 1A With Heat Sink 1.5A..... P _C -1W..... Gain 80..... TO-5 Case..... Lead Identification #12.....	(RCA).....40412 (Fairchild)...S31648 RCA.....SK 3024 Sylvania.....ECG 128 <i>SE - - - - 7055</i>
309459.....	NPN Silicon XTR..... V _{CE} 40V....V _{EB} 5V....I _C 1A..... P _C 2W Min..... Gain 45..... Flat Style Case..... Lead Identification #47.....	.....TIP-31 (TI).....SP 8451 (Mot).....SJE557 (GE).....D44C5 GE.....GEMR-6 Motorola.....HEP 245 RCA.....SK 3054 Sylvania....*ECG 152 <i>FAIRCHILD - - - - S 35642</i>
309460.....	PNP Silicon XTR..... V _{CE} 40V....I _C .3A....P _C .36W..... Gain 175..... TO-92 Case..... Lead Identification #21.....	.....2N5366 (Mot).....MPS 6534.....TIS-93 RCA.....SK 3114 Sylvania.....ECG 159 <i>FAIRCHILD - - - - S FS 36309</i>

* Not Direct Replacement - Lead Functions Differ

Part Number	Description - Specifications	Replacements
309461.....	NPN Silicon XTR..... V _{CE} 40V....V _{EB} 5V.....I _C .6A..... P _C .31W..... Gain 85..... TO-92 Case..... Lead Identification #23.....	.....MPS 6530.....TIS-92.....MPS 6531 GE.....GE-18 Int. Rect.....TR-25 Motorola.....HEP 721 RCA.....SK 3024 Sylvania.....ECG 107, ECG 128
309462.....	PNP Silicon XTR..... V _{CE} 60V....V _{EB} 7V.....I _C 4A..... P _C 25W..... Gain 50..... TO-66 Case..... Lead Identification #31.....	.....2N3740.....2N3741 GE.....GE-26 Int. Rect.....IRTR-58 Motorola.....HEP 721 Sylvania.....ECG 153
309463.....	Silicon Stabistor (Passivated Dual Chip)..... PIV-5V....I-.01A..... Lead Identification #230 Seeburg.....(2).....309384 Seeburg.....309478 Sylvania.....(2).....ECG 116	Use 2 .....IN251 GE (2).....IN91 GE (2).....GE-504A Int. Rect. (2)..5A6D Int. Rect. (2)..R210 Motorola...(2)..HEP 156 RCA.....(2)..SK 3016 Seeburg....(2)..309473
309464.....	Germanium Signal Diode..... PRV-45V....I _C -10MA..... Lead Identification #72.....	.....1N541 GE.....1N60, 1N295 Int. Rect.....1N295, 1N60 Motorola.....HEP 134 RCA.....SK 3088 Sylvania.....ECG 110
309465.....	Two Germanium Signal Diodes..... (Matched Pair)..... 10MA.... 45PIV (Each Diode)..... Lead Identification #72.....	.....IN542 GE.....(2)..IN60 Int. Rect..(2)..IN60 Motorola..(2)..HEP-134 RCA.....(2)..SK 3087 Sylvania..(2)..ECG 109, ECG 110
309466.....	Silicon Power Rectifier..... 2A.....100PIV..... Lead Identification #78 or #75 Seeburg.....318212	.....IN4721, IN4720 GE.....GE-504A Int. Rect.....3F40D Motorola.....HEP 162 RCA.....SK 3051 Sylvania.....ECG 156

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309468.....	Silicon Rectifier..... 750MA.....400PIV..... Lead Identification #74.....	.....CER 70 GE.....GE-504A Int. Rect....5A4D, 8D4 Motorola.....HEP 157 RCA.....SK 3016 SK 3017A and SK 3051 Sylvania.....ECG 116
309469.....	Germanium Signal Diode..... 50MA.....30PIV..... Lead Identification #72.....	.....IN910 Motorola.....HEP 135 RCA.....SK 3087 Sylvania.....ECG 109
309470.....	Selenium Non Polarized Diode.... 33V RMS..... 1A RMS..... Lead Identification #215.....	(IR).....544PA2R2 (Can Use Seeburg 309373 Polarized Diode)
309471.....	Selenium Non Polarized Diode.... 33V RMS.....3A.RMS..... Lead Identification #216.....	(IR).....59-6752 (Can Use Polarized Diode Seeburg.....309373)
309472.....	Silicon Controlled Switch..... PRV 60V...VRGK 5V..... I_F (RMS)200MA I_{FM} Surge 1A..... I_{GF} .25A (Surge).. I_{GF} (AV) 25MA..... I_{GR} 3MA..... PGF (AVE) .02W...PGFM .2W..... TO-18 Case..... Lead Identification #217.....	.....KT39C.....B1010 Transitron...SW2085 Fairchild....S-1859 Seeburg.....309371 (200V) Seeburg.....309377
309473.....	Silicon Stabistor-Passivated-..... Single Chip..... 5V-PIV..... .01MA..... Lead Identification #73	.....IN251 GE.....GE-504A Int. Rect....5A6D, R210 Motorola.....HEP 156 RCA.....SK 3016 Seeburg.....309384 Or Any Silicon Signal Diode Sylvania.....ECG 116
309474.....	Zener Diode..... 20V.... 1W.... 5%..... DO-41 or DO-13 Case..... Lead Identification #78.....	.....LMZ20A.....IN4747.....IN3027
309475.....	Silicon Controlled Switch..... I_T (RMS) .111A..... V_{DRM}/V_{RRM} 40V. I_{GT} .01MA..... V_{GT} .65V..... TO-18 Case..... Lead Identification #229.....	.....3N84 Seeburg.....309480

Part Number	Description - Specifications	Replacements
309476.....	Silicon Rectifier..... 1A... 100PIV..... Lead Identification # .....	.....1N4817.....SR 520.....TI-57.....CER 68.....IN4002 Int Rect.....5A4D Motorola.....HEP 162 RCA.....SK 3016, SK 3051
	Seeburg.....309474 (Use) Sylvania.....ECG 116	
309477.....	Silicon Rectifier..... 1A.... 200PIV (30A Surge)..... RCA.....SK 3016 RCA.....SK 3051 Sylvania.....ECG 116	.....P100D.....ER183.....IN4818 Int. Rect.....8D4, R210 Int. Rect.....5A4D Motorola.....HEP 162
309478.....	Silicon Stabistor (Passivated Dual Chip)..... 5V-PIV..... .01MA (2 Silicon Signal Diodes)..... Lead Identification #230..... Seeburg (2).....309473 Seeburg (1).....309463 Seeburg (2).....309384	.....MR 2361.....MZ 2361 Use (2).....IN251 GE... (2).....IN91 GE... (2).....GE-504A Int. Rect. (2)...5A6D, Int. Rect. (2)...R210 Motorola... (2)...HEP 156 RCA..... (2)...SK 3016 Sylvania... (2)...ECG 116
309479.....	Zener Diode..... 13V.... 1W 10% (69MA)..... Lead Identification #78.....	.....IN3023.....IN4743 Int Rect.....Z1112 RCA.....SK 3062 Sylvania.....ECG 142
309480.....	Silicon Controlled Switch..... (Used in DBV-2)..... V_{DRM}/V_{RRM} 40V I_T (RMS) .111A I_{GT} .01MA..... V_{GT} .65V..... TO-18 Case..... Lead Identification #229.....	(GE).....X13B629.....3N84 Seeburg.....309475
309481.....	Silicon Signal Diode..... 40V-PIV..... .07A..... DO-7 Case..... Lead Identification #72.....	(Semicon).....SX2.....IN458A GE.....GE-504A Motorola.....HEP 156 RCA.....SK 3016 Sylvania.....ECG 177 Seeburg.....309483

Replacements offered for Emergency Use Only

Part Number	Description - Specifications	Replacements
309482.....	Zener Diode..... 27V..... 10W..... DO-4 Case..... Lead Identification #84.....	.....IN2988 Int. Rect.....Z1320
309483.....	Silicon Signal Diode..... 40V-PIV..... .07A DO-7 Case..... Lead Identification #72.....	(Semicon).....SX2 Use Seeburg...309481.....IN458A GE.....GE-504A Motorola.....HEP 156 RCA.....SK 3016 Sylvania.....ECG 177
309484.....	Zener Diode..... 30V.... 1W.... 10%..... DO-41 Case..... Lead Identification #78.....	.....IN972B.....IN3031.....IN4751 Int. Rect.....Z1120
309485.....	Zener Diode..... 150V... .5W..... DO-7 Case..... Lead Identification #71	.....IN5276.....MZ92-150
309486.....	Zener Diode..... 14V.... .4W.... 5%.... (22MA).... DO-7 Case..... Lead Identification #71 RCA.....SK 3063 Sylvania.....ECG 145	(Mot).....4M14Z5.....MZ92-14 (15V).....IN965 (15V).....IN5245 GE.....GEZD-15 Int. Rect.....Z1016 Motorola.....HEP 607
309487.....	Zener Diode..... 20V.... .4W..... 5% 10% DO-7 Case..... Lead Identification #71.....	.....IN5250.....IN968A
309488.....	Zener Diode..... 13V..... .4W.... 5%... (24MA).... DO-7 Case..... Lead Identification #71.....	.....IN5243.....IN964B
309489.....	Zener Diode..... 60V..... .5W..... (8MA)..... DO-7 Case..... Lead Identification #71.....	(Mot).....SZ12618 (62V).....IN5265.....MZ92-60 Motorola.....HEP 611 RCA.....SK 3097 Sylvania.....ECG 149

Part Number	Description - Specifications	Replacements
309490.....	Photo Cell (Sold in Pairs).....	.....21K283
309491.....	Minature Photo Cell.....	.....21K124
309492.....	Photo Voltaic Cell.....	
309500.....	Reverse Blocking Thyristor (SCR).. PRV-60V.... I_F (RMS) .8A..... I_{FM} (Surge) 6A.... P_{GFM} .1W..... P_{GF} (AV) .01W.... I_{GFM} -1A..... V_{GFM}/V_{GRM} 5V..... TO-92 Case..... Lead Identification #55.....	.....2N5061 (TI).....W1656 GE.....GEMR-5 Seeburg.....309501
309501.....	Reverse Blocking Thyristor (SCR).. PRV-60V.... V_{RGK} 5V.... I_F (RMS) .8A. I_{FM} (Surge) 6A.... P_{GFM} .1W.... P_{GF} (AVE) .02W..... TO-92 Case..... Lead Identification #55.....	(Mot).....SCR 710 Seeburg.....309500 T.I. - - - 6932
309502.....	Bi-Directional Thyristor..... V_{DRM} 200V.... I_T -8A I_M (Surge)100A P_{GM} 10W.... P_G (AVE) .5W.... I_{GM} 2A..... TO-5 (Modified) Case.....	(Mot).....SAC 13
309503.....	Reverse Blocking Thyristor..... PRV 50V.... V_{RGK} 5V.... I_F (RMS) 1A... I_{GF} .1A.... P_{GF} (AVE) .05W..... I_{FM} (Surge) 10A..... TO-5 (Modified) Case.....	(Transitron)...TCR42C
309504.....	Bi-Directional Thyristor..... V_{DRM} 50V.... I_T 2.5A.... I_M (Surge)25A P_{GM} 10W.... P_G (AVE) .15W.... I_{GM} .5A.... TO-5 (Modified) Case..... Lead Identification #231.....	(RCA).....40525 (RCA).....39633 Seeburg.....309502 Seeburg.....309506
309505.....	Reverse Blocking Thyristor..... PRV 400V.... V_{RGK} 6V.... I_F (RMS) 1A.. I_{FM} (Surge) 15A.... I_{GF} .25A Peak..... I_{GF} .025A (AVE).... I_{GR} 3MA.....	SSPI.....EA1014

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309506.....	Bi-Directional Thyristor..... V _{DRM} 50V....I _T 8A..... I _M (Surge) 100A....P _{GM} 10W..... P _G (AVE) .5W....I _{GM} 2A..... TO-5(Modified) Case.....	(Mot).....MAC3-2 Seeburg.....309502
309507.....	Reverse Blocking Thyristor..... (Silicon PNP)..... PRV-60V....V _{RGK} 5V....I _F -200MA.... I _F (Surge) 2A....I _{GF} 250MA..... P _{GFM} .1W (Peak)...P _{GF} (AVE) .01W.. TO-18 Case..... Lead Identification #212.....	(Transitron).....TSW60C (Fairchild).....BA151 (SSPI).....SE9210
309509.....	Reverse Blocking Thyristor.....	Use.....309502
309510.....	<i>SILICON CONTROLLED SWITCH</i> Reverse Blocking Thyristor..... (Silicon PNP)..... PRV 75V....V _{RGK} 5V....I _F (RMS) .6A I _{FM} (Peak) 1A....I _{FM} (Surge) 6A.. TO-92 Case..... Lead Identification #55 or #218...	(Fairchild).....S29549 <i>T.I. ———— TI-6932 TI-7005 TI-7007 FAIR ———— FAIR-60144 SSPI-CD1185 309511 SEEBURG</i>
309511.....	<i>SILICON CONTROLLED SWITCH</i> Reverse Blocking Thyristor..... (Silicon PNP)..... PRV-200V....V _{RGK} 5V..... I _F (RMS) .6A....I _{FM} 1A..... I _{FM} (Surge) 6A..... TO-92 Case..... Lead Identification #55 or #218...	<i>2N5791 (TI) TI-7002 (MOT) MCR 206 (TI) TI-7025 (MOT) SCR 810 (SSP) BA-1175 (MOT) NSCR 810</i>
309512.....	Reverse Blocking Thyristor..... (Silicon PNP)..... PRV 50V....V _{RGK} 5V....I _F 1.5A.... I _{FM} (Surge) 10A....I _{GF} 100MA (Peak) P _{GF} .01W..... TO-5 or Flat Style Case..... Lead Identification #212 or #219..	(Motorola).....SCR 824
309610.....	Zener Diode..... 33V.... .5W 10%..... DO-7 Case..... Lead Identification #71.....	.....IN5257A Motorola.....HEP 609 RCA.....SK 3095 Sylvania.....ECG 147
309611.....	Zener Diode..... 27V.... 1W..... 10%..... DO-41 Case..... Lead Identification #78.....	.....1N4750A GE.....GEZD-27 Motorola.....HEP 608 RCA.....SK 3064 Sylvania.....ECG 146

Part Number	Description - Specifications	Replacements
309612.....	Zener Diode..... 8.2V..... .5W.... 10%..... DO-7 Case..... Lead Identification #71.....	.....IN5237A.....IN959
309613.....	Zener Diode..... 13V.... 1W.....5%..... DO-41 Case..... Lead Identification #78.....	.....IN4743A RCA.....SK 3062 Sylvania.....ECG 142
309614.....	Zener Diode..... 6.2V..... 1W..... 10%..... DO-41 Case..... Lead Identification #78.....	.....IN4735.....IN1766 GE.....GEZD-6.2 Int. Rect.....Z1106 Motorola.....HEP 103 Sylvania.....ECG 137
309615.....	Zener Diode..... 6.8V..... 1W..... 10%..... DO-41 Case..... Lead Identification #78.....	.....IN4736 Int. Rect.....Z1106 Seeburg.....309617
309616.....	Zener Diode..... 6.2V..... 1W..... 5%..... DO-41 Case..... Lead Identification #78.....	.....IN4735A GE.....GEZD 6.2 Motorola.....HEP 103 RCA.....SK 3058 Sylvania.....ECG 137
309617.....	Zener Diode..... 6.8V..... 1W..... 5%..... DO-41 Case..... Lead Identification #78.....	.....IN4736A
309618.....	Zener Diode..... 4.7V..... .5W..... 5%..... DO-7 Case..... Lead Identification #71.....	.....IN5230B RCA.....SK 3056 Sylvania.....ECG 135
309650.....	Integrated Circuit..... RST Flip Flop..... P Channel Enhancement Transistor. TO-74 Case..... Lead Identification #220.....	General Instrument MEM1005
309651.....	Integrated Circuit..... 4 Bit Binary Counter..... 14 P.D.I.L. Case..... Lead Identification #221.....	(TI).....SN7493N

Replacements offered for Emergency use Only

Part Number	Description - Specifications	Replacements
309652.....	Integrated Circuit..... Quad 2 Input Nand/Nor Gate.... 14 P.D.I.L. Case..... Lead Identification #222.....	(TI).....SN15846N.....MC846P
309653.....	Integrated Circuit..... Dual JK Master Slave Flip/Flop.. 14 P.D.I.L. Case..... Lead Identification #223.....	(TI).....SN7473N.....MC7473P
309654.....	Integrated Circuit..... Quad 2 Input Positive Nor Gate. 14 P.D.I.L. Case..... Lead Identification #224.....	(TI).....SN7402N.....MC7402P
309655.....	Integrated Circuit..... BCD Binary Coded Decimal to Decimal Decoder..... 16 P.D.I.L. Case..... Lead Identification #225.....	(TI).....SN7441AN
309681.....	NPN Silicon Transistor..... V_{CE} 35.... V_{EB} 4V.... I_C .1A..... P_C .31W..... Gain 150..... TO-92 Case..... Lead Identification #23.....	(Mot).....SPS 1463.....2N3904.....2N2222A.....2N3947.....2N4401.....2N5582 Int. Rect.....IRTR-53 RCA.....SK 3024 Seeburg.....309684 Sylvania.....ECG 123A
309682.....	NPN Silicon Transistor..... V_{CE} 40V.... I_C 10A.... P_C 3.5W.... Flat Style (Plastic) Case..... Lead Identification #47.....	(TI).....TIP-33
309683.....	PNP Silicon Transistor..... V_{CE} 40V.... V_{EB} 6V.... I_C .1A..... P_C .31W..... Gain 150..... TO-92 Case..... Lead Identification #23.....	(Fairchild)....FS36309.....2N3906.....2N3251.....2N3251A.....2N5447 GE.....GE-21 Motorola.....HEP 715 RCA.....SK 3025 Seeburg.....309685 (Use) Sylvania.....ECG 106

Part Number	Description - Specifications	Replacements
309684.....	NPN Silicon Transistor..... VCE 40V....VEB 6V....IC .1A..... PC .31W..... Gain 150..... TO-92 Case..... Lead Identification #23.....	(Fairchild).....FS34519.....2N3904.....2N2222A.....2N3947.....2N4401.....2N5582 Int. Rect.....IRTR-53 RCA.....SK 3024 Seeburg.....309681 Sylvania.....ECG 123A <i>KA4411 AND (I.T.) TS 3329</i>
309685.....	PNP Silicon XTR..... VCE 40V....VEB 6V....IC .1A.... PC .6W..... Gain 250..... TO-5 Case..... Lead Identification #12.....	(Fairchild).....S37260.....2N3671.....2N2905.....2N2905A.....2N3503.....2N4405 Motorola.....HEP 51 RCA.....SK 3025 Sylvania.....ECG 128 <i>(FAIR) - - - - FS37260</i>
318200.....	PNP Germanium Power XTR..... VCE 50V....VEB 15V....IC 5A..... PC 12.5 W..... Gain 150..... TO-3 Case..... Lead Identification #31.....	.....2N2147 Delco.....DS 503 GE.....GE-16 Motorola.....HEP 232 RCA.....SK 3014 Semitronics.....PT-40 Sylvania.....ECG 104
318201.....	NPN Silicon Transistor..... VCE 30V....VEB 5V....PC .3W..... Gain 300..... TO-105 Case..... Lead Identification #27.....	.....2N3566.....2N2586.....2N3117 GE.....GE-20 Int. Rect.....IRTR-51 Motorola.....HEP 55 RCA.....SK 3020 Seeburg.....318202 Seeburg.....318203 Sylvania.....ECG 128
318202.....	NPN Silicon Transistor.....	Use.....318201, 318203.....2N3566
318203.....	NPN Silicon Transistor.....	Use.....318201, 318202.....2N3566

PART II

309686.....	NPN Silicon Transistor..... V _{CE} 30V - V _{EB} 5V - I _C .5A P _C .25W - Gain 400 TO-18 Case - Lead I.D. #26	GE.....GE-17 - GE-18 Int. Rect.....TR-25 - TR-53 Motorola.....HEP 721 RCA.....SK 3024 - SK 3020 Seeburg.....309438 Seeburg.....309461 Sylvania.....ECG 107, ECG 108 Sylvania.....ECG 123A
309687.....	NPN Silicon Transistor..... V _{CE} 70V - V _{EB} 5V - I _C .75A P _C .5W - Gain 150 TO-92 Case - Lead I.D. #23 Compliment to 309688	2N5822 GE.....GE-63 Motorola.....HEP 243
309688.....	PNP Silicon Transistor..... V _{CE} 70V - V _{EB} 5V - I _C .75A P _C .5W - Gain 150 TO-18 Case - Lead I.D. #26 Compliment to 309687	2N5823 GE.....GE-67 Motorola.....HEP 242
309689.....	NPN Silicon TAB Transistor..... V _{CE} 75V - V _{EB} 5V - I _C 3A P _C 2.1W-(TAB 12.5W) Gain 50-100 Flat Style Case - Lead I.D. #41 (Collector connected to case) Compliment to 309690 (Replace with matched pairs)	GE (Red).....D42C11 *2N5192 2N6292 RCA.....SK 3054 Sylvania.....ECG 186
309690.....	PNP Silicon TAB Transistor..... V _{CE} 75V - V _{EB} 5V - I _C 3A P _C 2.1W-(TAB 12.5W) Gain 50-100 Flat Style Case - Lead I.D. #41 (Collector connected to case) Compliment to 309689 (Replace with matched pairs)	GE (Green).....D43C11 *2N5195 2N6107 RCA.....SK-3083 Sylvania.....ECG 187
309691.....	NPN Silicon Transistor..... V _{CE} 75V - V _{EB} 4V - I _C .1A P _C .3W - Gain 75 TO-18 Case - Lead I.D. #26 Compliment to 309692	2N2622 GE.....GE-63 Motorola.....HEP 243 Seeburg.....309687
309692.....	PNP Silicon Transistor..... V _{CE} 75V - V _{EB} 4V - I _C .1A P _C .3W - Gain 75 TO-18 Case - Lead I.D. #26 Compliment to 309691	2N6223 GE.....GE-67 Motorola.....HEP 242 Seeburg.....309688

*Lead Functions differ - when making replacements compare terminals

309693.....	NPN Silicon Transistor with heat sink V _{CE} 35V - V _{EB} 5V - I _C .1A P _C .36W - Gain 300 TO-98 Case with J1 Heat Sink Lead Identification #21	2N3405 GE.....GE-10* Motorola.....HEP 54* RCA.....SK 3020* Sylvania.....ECG 123A* * Add Heat Sink
309701.....	Silicon Rectifier..... 3A - 100 PIV - Surge 300A Lead I.D. #73 or #76 Case Epoxy or Glass	1N4720 GE.....GE-504A Motorola.....HEP-R0091 RCA.....SK-3051 Sylvania.....ECG 156
311260.....	Pricing Integrated Circuit..... 40 Pin Case Used in Black Box (DTPI)	Special Make.....CU1-54141.....7017UY
311263.....	Transmitter Integrated Circuit... 40 Pin Case Used in Black Box (DTPI)	Special Make.....MEM 5108.....7010LC.....7020BA
311266.....	Receiver Integrated Circuit..... 40 Pin Case Used in Gray Box (DRDI)	Special Make.....TMC1742JC.....7012AX.....7041JX

Replacements offered for Emergency use Only
H.A.B. Service & Supply Co. Rock Creek, Ohio 44084

Part Number	Description - Specifications	Replacements
318204.....	PNP Silicon Transistor..... V _{CE} 25V....V _{EB} 4V....I _C .5A..... P _C .3W..... Gain 65..... Plastic Case..... Lead Identification #7.....	.....2N3638.....2N727.....2N2695.....2N2927.....2N3829.....MPS 3638 Delco.....DS-66 GE.....GE-22 Int. Rect....IRTR-54 Motorola....HEP 716
318205.....	NPN Silicon Transistor..... V _{CE} 70V....V _{EB} 4V.....I _C .7A. P _C 1W..... Gain 90..... (Matched to 318207)..... TO-5 Case..... Lead Identification #11.....	(RCA).....40360.....2N3725A.....40408.....40635 RCA.....SK 3024 Sylvania....ECG 128
318206.....	NPN Silicon Transistor..... V _{CER} 70V....V _{EB} 4V.....I _C .7A.. P _C 1W..... Gain 150..... TO-5 Case..... Lead Identification #11.....	(RCA).....40361 RCA.....SK 3024 Sylvania....ECG 128
318207.....	PNP Silicon Transistor..... V _{CER} 70V....V _{EB} 4V....I _C .7A... P _C 1W..... Gain 90..... Matched to 318205..... TO-5 Case..... Lead Identification #11.....	(RCA).....40362.....2N4404 Sylvania....ECG 129
318208.....	NPN Silicon Power Transistor... V _{CE} 60V....I _C 15A....P _C 115W... Gain 45..... TO-3 Case..... Lead Identification #31 .....	.....2N3055 GE.....GE-14 Int. Rect....TR-26 Motorola....HEP 704 RCA.....SK 3027 Seeburg.....309449 Sylvania....ECG 130
318209.....	Germanium Signal Diode..... PIV-45V....I _C .01A..... DO-7 Case..... Lead Identification #72.....	.....IN542 GE.....IN60 Int. Rect....IN60 Motorola....HEP 134 RCA.....SK 3087 Seeburg.....309464, 309465 Sylvania....ECG 109, ECG 110

Part Number	Description - Specifications	Replacements
318210.....	Silicon Diode..... 170MA..... 170PIV.....	Use.....309384.....IN4817
318211.....	Germanium Temperature Control Diode..... PRV .5V..... I .1A..... TO-1 Case..... Lead Identification #232.....	(RCA).....40428 RCA.....SK 3506
318212.....	Silicon Rectifier..... 2A..... 100PIV..... Lead Identification #78 or #75.... Seeburg.....309466 Sylvania.....ECG 156	.....2A100.....IN4720 GE.....GE-504A Int. Rect.....3F40D Motorola.....HEP 162 RCA.....SK 3051
318213.....	Zener Diode..... 16V..... 5%..... 1W..... DO-41 Case..... Lead Identification #78.....	.....IN4745A.....IN3025A Int. Rect.....Z1114
400587.....	Selenium Bridge Rectifier..... 250MA..... 52V RMS..... 5 Lead Selenium Case..... Lead Identification #227.....	
423420.....	Integrated Circuit - Operational Amplifier..... 14 P.D.I.L. Case..... Lead Identification #226	(TI).....SN72709N
654000.....	NPN Silicon Transistor..... VCE 18V....IC .1A....PC .2W..... Gain 200..... TO-98 Case..... Lead Identification #21.....	.....2N2926 Delco.....DS-74 Int. Rect.....TR-21, IRTR-51 Motorola.....HEP 724 RCA.....SK 3018 Seeburg.....654008 Sylvania.....ECG 123A Sylvania.....ECG 128
654001.....	Silicon Unijunction Transistor.... Res. 4.7K-9.1K OHM..... Ratio .56 - .75..... VB2E 30V.....IP 5uA....IEO 12ua.. IV 4MA..... TO-18 Case..... Lead Identification.#52.....	.....2N2646 Seeburg.....309428 Seeburg.....309443

Replacements offered for Emergency Use Only

Part Number	Description - Specifications	Replacements
654008.....	NPN Silicon Transistor..... V _{CE} 18V.....I _C .1A.....P _C .2W..... Gain 200..... TO-98 Case..... Lead Identification #21.....	.....2N2926 Delco.....DS 74 Int. Rect.....TR-21 Int. Rect.....IRTR-51 Motorola.....HEP 724 RCA.....SK 3018 Seeburg.....654000 Sylvania.....ECG 123A Sylvania.....ECG 128
654031.....	Dual Selenium Rectifier.....	.....
654032.....	Silicon Signal Diode..... 10 75 MA..... 50 PIV..... DO-7 Case..... Lead Identification #71	.....IN914 RCA.....SK 3016 Sylvania.....ECG 177 (TRANSITRON) - SG 3259

PAGE 29 PART # 4805-00377 - SHOULD BE 4820-00377?

Cross Reference of Stereo Tuner Part Numbers

SECTION II

SEEBURG STEREO TUNER - SR500

General Instrument Part Number to JEDEC Type and Seeburg Part Number

General Instrument	Description	JEDEC Type	For Specifications And Replacements See
77-271029-1.....	PNP Germanium Transistor	AF116	309454
		2N2091.....	
77-271166-3.....	PNP Germanium Transistor	AF106.....	309455
		2N1395.....	
77-271708-1.....	NPN Silicon Transistor	SE4002.....	309439
		2N3565	
77-271710-1.....	NPN Silicon Transistor	SE2002.....	309456
		2N3692	309450
77-271798-2.....	NPN Silicon Transistor	SE2045.....	309450
		2N3692	309456
77-271799-1.....	PNP Germanium Transistor	2N3155.....	309453
77-271818-1.....	PNP Silicon Transistor.....	2N3645.....	309451
		40634	
77-271819-1.....	NPN Silicon Transistor.....	2N3568.....	309452
		40635	
77-272212-1.....	NPN Silicon Power Transistor..	2N3055.....	309449
			318208
78-271031-1.....	Germanium Signal Diode.....	1N541.....	309464
78-271031-2.....	Germanium Signal Diode.....	1N542.....	309465
	(Matched Pair).....		318209
78-272160-1.....	Silicon Rectifier 2A-100PIV..	P100-D.....	309466
			318212

Replacements offered for Emergency use Only

Cross Reference of Stereo Tuner Part Numbers Cont'd.

SEEBURG STEREO TUNER SR300

ADC Part Number to JEDEC Type and Seeburg Part Number

ADC Number	Description	JEDEC Type	For Specifications And Replacements See
4805-00272	NPN Silicon Transistor	2N3566	318201
4805-00273	NPN Silicon Transistor	2N3566	318203
4805-00274	NPN Silicon Transistor	2N3566	318203
4805-00329	PNP Germanium Power Transistor	2N2147	318200
4805-00332	NPN Silicon Power Transistor ..	2N3055	318208 309449
4805-00333	PNP Silicon Transistor	2N3638	318204
4805-00334	NPN Silicon Transistor	40360	318205
	(Match to 4805-00366)		
4805-00335	NPN Silicon Transistor	40361	318206
4805-00338	NPN Silicon Power Transistor ..	2N3055	318208 309449
4805-00366	PNP Silicon Transistor	40362	318207
	(Match to 4805-00334)		
4805-00377	Temperature Compensating Diode.	40428	318211
4820-00165	Germanium Signal Diode	IN542	318209 309465
4820-00325	Zener Diode	IN4745A	318213
	16V - 1W - 5%	1N3025A	309395 (15V)
4820-00327	Silicon Rectifier	2A100	318212
	2A - 100PIV	1N4720	309466
4820-00328	Silicon Rectifier .....	.....	Use 318212
	.75A - 100PIV	Use 309466
4820-00380	Germanium Signal Diode	IN542	318209
	(Matched Pair).....		309465

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SECTION III

SEMICONDUCTOR SYMBOLS USED IN THIS MANUAL

A - Ampere (AMP)	P_G (AVE) Average Gate Power Dissipation
BV - Breakdown Voltage	P_{GF} -(AV) AVE Gate Power-Forward
Gain- Typical Beta Gain	P_{GFM} - Peak Gate Power-Forward
I_C - Maximum Collector Current	P_{GM} - Peak Gate Power Dissipation
I_{DC} - DC Current	P_{IV} - Peak Inverse Voltage: The maximum reverse (non-conducting) voltage that can safely be applied between the anode-cathode of a rectifier.
I_{DSS} - Zero - Bias Drain Current	PRV - Peak Reverse Voltage - Similar to PIV.
I_{EO} - Current Emitter Open	μA - Micro Amp
I_{GSS} - Gate Leakage Current	μS - Microsecond
I_F - Maximum DC Forward Current (RMS)	V - Volt
I_{FM} - (Surge) Peak Forward Current (Surge)	V_{BB} - Maximum Voltage - Base 1 to Base 2
I_{GF} - Forward Gate Current	V_{B2E} - Maximum Voltage between Base 2 and Emitter.
I_{GFM} - Peak Gate Current-Forward	V_{CB} - Collector to Base Voltage: The maximum voltage difference that can safely be applied between the base and collector. (Emitter Open)
I_{GM} - Peak Gate Current	V_{CE} - Collector to Emitter Voltage: The maximum voltage difference that can safely be applied between the emitter and collector. (Base Open)
I_{GR} - Reverse Gate Current	V_{CE--R} Same as V_{CE} but with a resistor between base and emitter.
I_{GT} - Average Gate Trigger Current	V_{DRM} - Peak Forward Blocking Voltage
I_M - Peak Current	
I_P - Peak Point Current	
I_T (RMS) - On State (RMS) Current	
I_V - Valley Point Current	
MA - Milliampere	
P_C - Power Dissipation: The Maximum internal collector power dissipation at 25° C case temperature.	
P.D.I.L. Pin - Dual In Line	

(Continued)

Semiconductor Symbols Used In This Manual Cont'd.

- V_{DROM} - Repetitive Peak Off - State Voltage
- V_{GFM} - Peak Gate Voltage-Forward
- V_{GRM} - Peak Gate Voltage-Reverse
- V_{GT} - Gate Trigger Voltage
- V_{RGK} - Gate-Cathode Reverse Voltage
- V_{RMS} - RMS Supply Voltage
- V_{RRM} - Peak Reverse Blocking Voltage
- V_{RXM} (REP)- Peak Reverse Blocking Voltage
- V_T - Instantaneous On - State Voltage
- Y_{FS} - Forward Transfer Admittance
- W - Watt

Markings on Semiconductors (Other than complete part numbers)

SECTION IV

Markings on Component	Made By	Seeburg Part No.	Markings on Component	Made By	Seeburg Part No.
4M14Z5	Mot	309486	1N4148	M.S.	309481
4Z14B	Burns & Towne	309486	1N4148	N.P.C.	309481
1D200	Unitrode	309512	1N4154	I.T.T.	309481
1N276	N.P.C.	309469	1N4383	I.T.T.	309389
1N645	T.I.	309384	1N4383	T.I.	309389
1N910	G.I.	309469	1N4383	Transitron	309389
1N914-9141	N.P.C.	309481	1N4385	G.I.	309372
1N959A	Semcor	309612	1N4385	I.T.T.	309372
1N964B	Mot	309488	1N4385	I.T.T.	309378
1N964B	Transitron	309487	1N4385	T.I.	309378
1N964B	Nucleonic	309488	1N4385	I.T.T.	309389
1N968A	Motorola	309487	1N4735	Mot	309614
1N968A	Nucleonic	309487	1N4735A	Mot	309616
1N968B	Nucleonic	309487	1N4736	M.S.	309615
1N972B	T.I.	309484	1N4736	Mot	309615
1N1812	S.T.	309376	1N4736	Semcor	309615
1N2069	T.I.	309374	1N4736A	Mot	309617
1N2069	Transitron	309477	1N4743A	Mot	309613
1N2988	I.R.	309482	1N4743A	Semcor	309613
1N2988	Mot	309482	1N4750A	Mot	309611
1N2988A	Mot	309375	1N4817	Westinghouse	309476
1N2988A	Transitron	309375	1N4818	Westinghouse	309477
1N3009RA	Dickson	309379	1N5003E	T.S.	309442
1N3009RA	Semicon	309379	1N5059	G.E.	309477
1N3009RA	Transitron	309379	1N5060	G.E.	309477
1N3011	Continental	309376	1N5060	G.E.	309384
1N3011A	Dickson	309376	1N5061	G.E.	309372
1N3011A	Diodes	309376	1N5230B	Mot	309618
1N3011A	Mot	309376	1N5237A	Mot	309612
1N3011A	T.I.	309376	1N5237B	Mot	309612
1N3255	R.C.A.	309372	1N5243B	Mot	309488
1N4002	Mot	309373	1N5244B	Mot	309486
1N4002	Mot	309374	1N5250A	Mot	309487
1N4002	Fairchild	309476	1N5257A	M.S.	309610
1N4002	N.P.C.	309476	1N5257A	Mot	309610
1N4003	Mot	309477	1N5276B	Mot	309485
1N4003	Mot	309384	1S312	Hitachi	309373
1N4005	T.I.	309372	2E4	I.R.	309385
1N4005	Mot	309372	2N457A	P.P.	309412
1N4148	GE	309373	2N457A	S. D.	309412

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H.A.B. Service & Supply Co.

Rock Creek, Ohio 44084

Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.	Markings on Component	Made By	Seeburg Part No.
2N457A.....	T.I.....	309412	10.....	G.I.....	309481
2N1131.....	Cont. Semi.....	309429	10C1.....	Diodes.....	309476
2N1530.....	Bendix.....	309422	10C2.....	Diodes.....	309477
2N1536.....	Clevite.....	309423	10D1.....	I.R.....	309476
2N1546.....	Mot.....	309412	10D2.....	I.R.....	309477
2N2218.....	Marcof.....	309434	10R27B.....	Solitron.....	309482
2N2646.....	G.E.....	309428	16A673.....	G.E.....	309427
2N2926.....	Sprague.....	309427	44PA1-2B.....	I.R.....	309370
2N3054.....	Fairchild.....	309441	44PA1R1.....	I.R.....	309370
2N3274.....	Fairchild.....	309377	72-5.....	Fairchild.....	309372
2N3392.....	Sprague.....	309426	102F.....	Fairchild.....	309476
2N3393.....	Sprague.....	309426	122.....	N.P.C.....	309469
2N3567.....	Fairchild.....	309434	207-2.....	E.D.....	309424
2N3615.....	Mot.....	309425	359U.....	Westinghouse...	309473
2N3644.....	Fairchild.....	309435	435.....	Sprague.....	309435
2N4111.....	Fairchild.....	309425	442.....	Sprague.....	309442
2N5061.....	Mot.....	309500	481.....	G.E.....	309481
2N5496-4.....	R.C.A.....	309459	481.....	ITT.....	309481
2N5788.....	Fairchild.....	309510	683.....	Nucleonic.....	309683
2N5790.....	Fairchild.....	309510	1005.....	G.I.....	309650
2N5791.....	Fairchild.....	309510	1139.....	G.E.....	309460
2N5791.....	.....	309511	1163.....	G.E.....	309445
2N5954-4.....	RCA.....	309462	1463.....	Mot.....	309681
2N6027.....	G.E.....	309444	1656.....	T.L.....	309500
2N6107.....	R.C.A.....	309690	1749.....	G.E.....	309435
2N6292.....	R.C.A.....	309689	2048.....	ITT.....	309384
2SC281.....	Hitachi.....	309426	207-2.....	Solitron.....	309424
2SC458.....	Hitachi.....	309426	2502-A.....	Edal.....	309471
3F1052.....	SSP.....	309377	2607.....	Diodes.....	309478
3V1.....	I.R.....	309390	2731.....	Diodes.....	309476
4E-284.....	Delco.....	309422	2732.....	Diodes.....	309477
4JD5E43.....	G.E.....	309443	2751.....	Burns & Towne..	309373
4V1.....	I.R.....	309394	3008.....	ITT.....	309481
4JX16A673.....	G.E.....	309427	3028M.....	T.I.....	309412
59.....	I.R.....	309471	3342.....	Mot.....	309445
5A1.....	I.R.....	309476	3344.....	Mot.....	309447
5A2.....	I.R.....	309477	3750.....	Mot.....	309435
5JE557.....	Mot.....	309459	3751.....	Mot.....	309434
9LR2-3.....	I.R.....	309440	4086.....	Mot.....	309436
9LRZ-3.....	I.R.C.....	309440	4087.....	Mot.....	309437
2N5788.....	Fairchild.....	309501	10M27Z7.....	Mot.....	309482

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H.A.B. Service & Supply Co. Rock Creek, Ohio 44084

Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.
4287	G.E.	309681
6309		309460
6752	I.R.	309471
7910	T.I.	309434
7911	T.I.	309435
7912	T.I.	309436
8264	T.I.	309437
8706	Unitrode	309611
8727	Unitrode	309617
9373	Teledyne	309373
9412	Mot	309412
9434	Sprague	309434
9436	Sprague	309436
9437	Sprague	309437
9445	Sprague	309445
9460	Sprague	309460
9476	Diodes	309476
9477	Diodes	309477
9683	Sprague	309683
9684	Sprague	309684
29548	Fairchild	309511
34519	Fairchild	309684
34573	RCA	309421
36309	Fairchild	309683
37260	Fairchild	309685
38748	RCA	309441
38975	RCA	309442
39633	RCA	309504
40529	RCA	309504
45-271	Delco	309423
60144	Fairchild	309510
61838	RCA	309458
61978	RCA	309457
157106	Westinghouse	309441
5160103	G.I.	309430
5260102	G.I.	309429
7285519	Delco	309412
7299719	Delco	309425
A2G5	Edal	309372
A14A	G.E.	309476
4411	Fairchild	309684
4412	Fairchild	309445

Markings on Component	Made By	Seeburg Part No.
A14A2	G.I.	309374
A14AX96	G.E.	309374
A14AX335	G.E.	309375
A14AX349	G.E.	309476
A14AZ	GE	309476
A14BX335	G.E.	309584
A14MX335	G.E.	309372
A15A	G.E.	309701
AR70	IRC	309478
BI010	SSPI	309472
BI0047	Bendix	309412
B-10229	Bendix	309422
BA1174	SSPI	309510
BA1175	Unitrode	309511
BA1206	SSPI	309500
BF258	N.P.C.	309458
BTD0205	Transitron	309504
BTG-2093	Burns & Towne	309469
BTM100	Burns & Towne	309476
BTS2705	Burns & Towne	309478
BTX-2176	Burns & Towne	309426
BTS2794M	Burns & Towne	309481
BTX-2229	Burns & Towne	309424
C103A	G.E.	309510
C103B	G.E.	309511
C103AX40	G.E.	309510
C103YY	G.E.	309500
C106F1	G.E.	309512
CB1019	SSP	309371
CB1819	SSP	309371
CC-12-301	Mot	309424
CD1185	Unitrode	309512
CD-8-1227	Teledyne	309481
CD1185	SSPI	309510
CD12863	Con. Dev.	309384
CDC-CS-3416	Fairchild	309438
CER68	Solitron	309476
CER69	Solitron	309477
CER70		309468
CS3416	Fairchild	309438

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H.A.B. Service & Supply Co. Rock Creek, Ohio 44084

Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.	Markings on Component	Made By	Seeburg Part No.
CS23278	T.S.	309434	FDA515	Fairchild	309373
CS33004	T.S.	309437	FDH400	Fairchild	309384
CS43023	Cont. Dev.	309435	FDH6563	Fairchild	309481
CS43023	T. S.	309435	FPS6532	Fairchild	309442
CS43024	T.S.	309436	FR102	Fairchild	309373
CSR-678	Mot.	309685	FR102	Fairchild	309476
D5E43	G.E.	309443	FR103	Fairchild	309477
D13T1	G.E.	309444	FS29529	Fairchild	309500
D27D1	G.E.	309457	FS34518	Fairchild	309683
D40D4	G.E.	309459	FS34518	Fairchild	309685
D41D5	G.E.	309457	FS34519	Fairchild	309684
D42C5	G.E.	309459	FS36309	Fairchild	309683
D42C8	G.E.	309441	FS37260	Fairchild	309685
D43C4	G.E.	309457	FZ2085	Fairchild	309487
D44C9	G.E.	309441	FZ2086	Fairchild	309488
D45C7	G.E.	309462	FZ4050	Fairchild	309611
D600	Mallory	309372	FZ4051	Fairchild	309610
DA1701	G.E.	309373	G-1	S-T	309372
DA1766	G.E.	309481	G-2	S-T	309384
DJ2006	G.E.	309373	G-6	S-T	309373
DL79	T.I.	309373	G100B	G.I.	309374
DT2004	G.E.	309384	G100J	G.I.	309378
DZ80514B-NI	Dickson	309485	G100J-128	G.I.	309372
EA1014	SSPI	309505	G-716	ITT	309380
EL231	Mot.	309463	G1061	P-P	309412
EL282	Mot.	309424	GC102A	T.I.	309410
EL503	Mot.	309458	GC112	T.I.	309414
EL542	Mot.	309458	GC112A	T.I.	309413
EL664	Mot.	309685	GC113A	T.I.	309411
EM501	ITT	309476	GC114	T.I.	309412
EM1167	ITT	309476	GC185	T.I.	309416
EP683	TI	309690	GC380	T.I.	309420
ER182	Transitron	309476	GC433	T.I.	309422
ER183	Transitron	309477	GC4060	T.I.	309425
ES367	Solitron	309425	GD775	G. I.	309469
EVR150A	Transitron	309485	GE-A13A2	G.E.	309374
EVR150B	Transitron	309485	GR-17	I.R.C.	309476
F-1	Sarkes Tar	309476	GR-18	I.R.C.	309477
F-2	Sarkes Tar	309477	GR-64	I.R.C.	309476
F2N3275-413	Fairchild	309371	HI23S	H.I.	309504
F663	T.I.	309375	HTP 1009	H.A.	309412
FD500	Fairchild	309463	I/06	S.I.	309372
			FS-3		309460

Replacements offered for Emergency Use Only
H.A.B. Service & Supply Co. Rock Creek, Ohio 44084

Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.
IR59	I.R.	309471
IR150	I.R.	309392
K106	Diodes	309476
K107	Diodes	309477
K1615AC	ITT	309397
K1615AC	ITT	309398
K1615AC	ITT	309440
KA4411		309684
KA4412	T.I.	309445
KT39C		309472
M2N5087	Mot.	309437
MAC3-2	Mot.	309506
MB2215	M.S.	309372
MB2237	M.S.	309384
MB6519	M.S.	309487
MB6520	M.S.	309610
MB6521	M.S.	309612
MB6522	M.S.	309488
MB6523	M.S.	309611
MB6524	M.S.	309616
MB6525	M.S.	309617
MB6526	M.S.	309615
MCR206	Mot.	309511
MCR1906-2	Mot.	309503
MEM1005	G.I.	309650
MD481	M.D.	309481
MJE521	Mot.	309459
MJE2801	Mot.	309682
MO6606	M.S.	309479
MPS6513	Mot.	309426
MPS6514	Mot.	309426
MPS6532	Mot.	309442
MPSA06	Mot.	309691
MPSA55	Mot.	309692
MP0131	Mot.	309444
MR100	M.S.	309476
MR150A	Solitron	309485
MR200	M.S.	309477
MR2361		309478
MSCR810	Mot.	309511

Markings on Component	Made By	Seeburg Part No.
MSPS1463	Mot.	309681
MSPS3342	Mot.	309445
MSPS3750	Mot.	309435
MSPS3751	Mot.	309434
MSPS4085	Mot.	309426
MSPS4086	Mot.	309436
MSPS4087	Mot.	309437
MZ215	M.S.	309485
MZ-1000-16	Mot.	309479
MZ2361	Mot.	309478
NP1001	Unitorde	309510
NP1002	Unitorde	309511
NZK27	ITT	309375
NZK150	ITT	309376
P13T1	Unitorde	309444
P100B	G.I.	309476
P100D	G.I.	309466
P100D	G.I.	309477
PA2R2	I.R.	309470
PG1176	T.I.	309481
PP3549	P.P.	309449
FRS6439	I.T.	309376
PR56440	I.R.	309375
PT058	Hudson	309506
PT40528	Pitgo	309504
Q1007	Unitorde	309444
REX	N.P.C.	309684
RG1213	ITT	309372
RS118	M.S.	309478
RXN	N.P.C.	309683
S3A1	Semicon	309701
S44FA2R2	I.R.	309470
S100-05	Semicon	309370
S-222	Semicon	309387
S-389	ITT	309473
S1000G	Transitron	309380
S-1001	ITT	309373
S-1157	ITT	309384
S1581	Fairchild	309426
S-1859	Fairchild	309377

Replacements offered for Emergency use Only
H.A.B. Service & Supply Co. Rock Creek, Ohio 44084

Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.	Markings on Component	Made By	Seeburg Part No.
S1859	Fairchild	309472	SJ3615	Mot	309441
S2109	Fairchild	309436	SJE543	Mot	309457
S2109	Fairchild	309432	SK11R2R1000	Bradley	309471
S2110	Fairchild	309433	SK7442	T.I.	309430
S26015	R.C.A.	309458	SK7443	T.I.	309429
S26730	Fairchild	309507	SK7910	T.I.	309435
S29549	Fairchild	309510	SK7911	T.I.	309435
S29590	Fairchild	309501	SK7912	T.I.	309436
S31621	Fairchild	309447	SK7913	T.I.	309436
<i>(Superseded by part number 309684)</i>			SK8264	F.I.	309437
S31648	Fairchild	309457	SK44461	T.I.	309442
S31648	Fairchild	309458	SKA4047	T.I.	309426
S32221	Fairchild	309441	SKA4831	T.I.	309460
S34518	Fairchild	309685	SKA4832	T.I.	309461
S34519	Fairchild	309684	SKA5824	T.I.	309683
S35642	Fairchild	309459	SKA5825	T.I.	309684
S36713	Fairchild	309434	SKA6683	T.I.	309685
S37260	Fairchild	309685	SL766	Transitron	309387
SAC-13	Mot	309502	SM-120	Semicon	309387
SC350	T.I.	309418	SM1168	IIT	309477
SC365	T.I.	309419	SM6787	T.I.	309427
SCR710	Mot	309501	SP1181	Mot	309422
SCR809	Mot	309510	SP-2433	Mot	309412
SCR824	Mot	309512	SP8620	T.I.	309682
SDM345	Fairchild	309459	SP8441	T.I.	309457
SESA259	Solitron	309412	SP8451	T.I.	309459
SG-1259-1	Transitron	309373	SPS408	Mot	309442
SG1859	Transitron	309478	SPS1432	Mot	309458
SG3561	Transitron	309384	SPS1463	Mot	309681
SG3608	Transitron	309372	SPS1872	Mot	309683
SGR100	Transitron	309374	SPS1873	Mot	309684
SI	Semicon	309372	SPS3342	Mot	309445
SI-1	Semicon	309476	SPS3750	Mot	309435
SI-2	Semicon	309373	SPS3751	Mot	309434
SI-6	Semicon	309372	SPS4066	Mot	309427
SI-26	Semicon	309372	SPS4086	Mot	309436
SI-50	Semicon	309370	SPS4087	Mot	309437
SI-100B	Semicon	309476	SPS5854	Mot	309460
SI-200F	Semicon	309477	SPS5855	Mot	309461
SI2039	Mot	309462	SPS6759	Mot	309686
SI1794	Fairchild	309462	SKA4412	T.I.	309445
SCR-810	Mot	309511			
SI-2	Semicon	309477			

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Markings on Semiconductors (Other than complete part numbers) Cont'd.

Markings on Component	Made By	Seeburg Part No.
SP86759	Mot.	309688
SP88451	T.I.	309459
SR520	Mot.	309476
SR521	Mot.	309477
SR866	ITT	309384
SSPI-B1010	SSPI	309472
SSPI-EA1014	SSPI	309505
SI26032	Transitron	309441
SI75112	Transitron	309462
STB567	G.E.	309478
STB586	G.E.	309478
SVR305	Transitron	309616
SVR4750A	Transitron	309611
SW2085	Transitron	309377
SW2085	Transitron	309472
SW-2216	Transitron	309371
SX2	Semicon	309481
SX3710	T.I.	309426
SX3710	T.I.	309684
SX4060	T.I.	309445
SX4061	T.I.	309683
SZ12618	Mot.	309489
SZ12619	Mot.	309478
SZ51046	Mot.	309485
SZ51157	Mot.	309463
TA7802	RCA	309477
TA7806	RCA	309477
TA7996	RCA	309476
TCR42C	Transitron	309503
TD81227	Teledyne	309481
TE13055	Teledyne	309442
TE23643	Teledyne	309684
TE43121	Teledyne	309683
TGB0419	Fairchild	309462
TGH0345	Fairchild	309459
TI-56	T.I.	309373
TI-57	T.I.	309476
TI-57	T.I.	309384
TI-59	T.I.	309384
TI3027	T.I.	309412

Markings on Component	Made By	Seeburg Part No.
TI3028	T.I.	309412
TI6932	T.I.	309510
TI7002	T.I.	309511
TI7005	T.I.	309510
TI7007	T.I.	309510
TI7025	T.I.	309511
TI7117	T.I.	309512
TI7442	T.I.	309430
TI7443	T.I.	309429
TIP-30	T.I.	309457
TIP-33	T.I.	309682
TIR01	T.I.	309374
TIS-98	T.I.	309447
TJ2145	ITT	309436
IR701	Sprague	309500
TS2145	ITT	309436
TS2146	ITT	309437
TS3329	ITT	309684
TSB0018HA	ITT	309684
TSC59	Transitron	309510
TSC61	Transitron	309510
TSJ 11	Transitron	309510
TSJ 12	Transitron	309511
TXB3517MA	ITT	309445
T.B3518MB	ITT	309683
TXY0019/S29265	Fairchild	309445
TSY0215/S29265	Fairchild	309445
TXY0810	Fairchild	309511
TXY0810	Fairchild	309510
TXY1718/S29265	Fairchild	309445
TXY2019	Fairchild	309683
TXZ4206EBX	Fairchild	309434
TZ1538	Sprague	309693
U13T1	Unitrode	309444
U212	T.I.	309387
U213	T.I.	309396
UG2103	T.I.	309481
UR6-2A	S.T.	309616
VR6-8A	S.T.	309617
VR27A	S.T.	309611

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Markings on Semiconductors (Other than complete part numbers) Cont'd.

40 Pin Special Integrated Circuits

Markings on Component	Made By	Seeburg Part No.
VR 33.....	S.T.....	309610
W1656.....	T.I.....	309500
W1739.....	T.I.....	309510
W1740.....	T.I.....	309511
W1740.....	T.I.....	309512
WG408.....	ITT.....	309373
WG620.....	ITT.....	309481
X13B629.....	GE.....	309480
X16A2316-2.....	GE.....	309427
X16E1681-4.....	GE.....	309427
X32C4446.....	GE.....	309434
X32C4450.....	GE.....	309461
X32C4914.....	Fairchild.....	309684
X32C5326.....	GE.....	309434
X32D4447.....	GE.....	309442
X32D5325.....	GE.....	309442
X32D5949.....	Mot.....	309687
X32DS949.....	GE.....	309687
X32R5943.....	GE.....	309691
X34A1100 D34A.....	GE.....	309445
X34A1542.....	GE.....	309683
X3204914.....	GE.....	309684
X34E1931.....	GE.....	309685
X34G2040.....	GE.....	309688
X37G2036.....	GE.....	309692
X42C224 A-C.....	GE.....	309689
X43C225 A-C.....	GE.....	309690
ZC1001.....	S.S.P.....	309444

Marking on Component	Made By	Seeburg Part No.
7010LC.....		311263
7012AX.....		311266
7017UY.....		311260
7020BA.....		311263
7041JX.....		311266
CUI-S4141.....		311260
MEM5108.....		311263
TMC1742JC.....		311266

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SECTION V

CANADIAN TO JEDEC CROSS REFERENCE

Canadian Letter Code Chart

U - 25 Volt - PRV
 F - 50 Volt - PRV
 A - 100 Volt - PRV
 G - 150 Volt - PRV
 B - 200 Volt - PRV
 H - 250 Volt - PRV
 C - 300 Volt - PRV
 D - 400 Volt - PRV
 E - 500 Volt - PRV
 M - 600 Volt - PRV

4JA211AH1AC1	1N151	AC128.....	2N2431
4JA211BH1AC1	1N152	(2)-AC128.....	2N2431MP
4JA211CH1AC1	1N153	AC127/32	2N2707
4JA211BH2AC1	1N158	AD139	2N2835
A70B	1N3289	AD149	2N2836
A70C	1N3290	AF10Z	2N2494
A70D.....	1N3291	AF114.....	2N2089
A70E.....	1N3292	AF115.....	2N2090
A70M.....	1N3293	AF116.....	2N2091
A70N.....	1N3294	AF117.....	2N2092
A70P.....	1N3295	AF118.....	2N2207
A71B.....	1N3289R	AF139.....	2N3399
A71C.....	1N3290R	AF178.....	2N2495
A71D.....	1N3291R	AF179.....	2N2654
A71E.....	1N3292R	AF180.....	2N3074
A71M.....	1N3293R	AF181.....	2N3075
A71N.....	1N3294R	AFY19.....	2N2786
A71P.....	1N3295R	AFZ12.....	2N2496
A90B.....	1N3736	ASZ15.....	2N1666
A90C.....	1N3737		OC28
A90D.....	1N3738	ASZ16.....	2N1667
A90E.....	1N3739		OC29
A90M.....	1N3740	ASZ17.....	2N1668
A90N.....	1N3741		OC35
A90P.....	1N3742	ASZ21.....	2N2717
A90PA.....		BA102.....	1N3182
AC125.....	2N2429	BCZ11.....	2N2617
AC126.....	2N2429	C5U.....	2N2322
AC127.....	2N2430	C5F.....	2N2323
AC127.....	2N2707	C5A.....	2N2324

Canadian to JEDEC Cross Reference (Cont'd)

C5G.....	2N2325	C50U.....	2N1909
C5B.....	2N2326	C50F.....	2N1910
C5H.....	2N2327	C50A.....	2N1911
C5C.....	2N2328	C50G.....	2N1912
C5D.....	2N2329	C50B.....	2N1913
C7U.....	2N2344	C50H.....	2N1914
C7F.....	2N2345	C50C.....	2N1915
C7A.....	2N2346	C50D.....	2N1916
C7G.....	2N2347	C52F.....	2N1792
C7B.....	2N2348	C52A.....	2N1793
C8U.....	2N1929	C52G.....	2N1794
C8F.....	2N1930	C52B.....	2N1795
C8A.....	2N1931	C52H.....	2N1796
C8G.....	2N1932	C52C.....	2N1797
C8B.....	2N1933	C52D.....	2N1798
C8H.....	2N1934	C60U.....	2N2023
C8C.....	2N1935	C60F.....	2N2024
C10U.....	2N1770A	C60A.....	2N2025
C10F.....	2N1771A	C60G.....	2N2026
C10A.....	2N1772A	C60B.....	2N2027
C10G.....	2N1773A	C60H.....	2N2028
C10B.....	2N1774A	C60C.....	2N2029
C10H.....	2N1775A	ME941.....	2N3077
C10C.....	2N1776A	ME942.....	2N3078
C10D.....	2N1777A	MF1161.....	2N3287
C11U.....	2N1770	MF1162.....	2N3288
C11F.....	2N1771	MF1163.....	2N3289
C11A.....	2N1772	MF1164.....	2N3290
C11G.....	2N1773	MM1151.....	2N3279
C11B.....	2N1774	MM1152.....	2N3280
C11H.....	2N1775	MM1153.....	2N3281
C11C.....	2N1776	MM1154.....	2N3282
C11D.....	2N1777	OA70.....	IN87
C11E.....	2N1778	OA79.....	IN541
C11M.....	2N2619	(2) OA79.....	IN542
C35U.....	2N681	OA85.....	IN478
C35F.....	2N682	OA90.....	IN87A
C35A.....	2N683	OA95.....	IN618
C35G.....	2N684	OC26.....	2N1314
C35B.....	2N685	OC28.....	2N1666
C35H.....	2N686		ASZ15
C35C.....	2N687	OC29.....	2N1667
C35D.....	2N688		ASZ16
C35E.....	2N689	OC35.....	2N1668
C35M.....	2N690		ASZ17
C35S.....	2N691	OC36.....	2N1669
C35N.....	2N692	OC72.....	2N281
C36U.....	2N1842	OC76.....	2N284
C36F.....	2N1843	OC77.....	2N284A
C36A.....	2N1844	OC169.....	2N1515
C36G.....	2N1845	OC170.....	2N1516
C36B.....	2N1846	OC171.....	2N1517
C36H.....	2N1847	OC200.....	BCZ10
C36C.....	2N1848	OC203.....	BCZ12
C36D.....	2N1849	OC204.....	BCY10
C36E.....	2N1850	OC205.....	BCY11

Canadian to JEDEC Cross Reference (Cont'd)

OC206.....	BCY12
TD1.....	IN3712
TD1A.....	IN3713
TD2.....	IN3714
TD2A.....	IN3715
TD3	IN3716
TD3A.....	IN3717
TD4.....	IN3718
TD4A.....	IN3719
TD5.....	IN3720
TD5A.....	IN3721

SECTION VI

SEEBURG SELECTION LISTS

If a specific type of component is needed, and the Seeburg part number is not available, the following lists can be used to select a replacement.

<u>Integrated Circuits</u>	<u>NPN Transistors</u>	<u>PNP Transistors</u>
309650	<u>Germanium</u>	<u>Germanium</u>
309651		
309652	309402- TO-5	308950- TO-5
309653	309410- TO-5	309400- TO-5
309654		309401- TO-5
309655	<u>Silicon</u>	309403- TO-3
423420		309404- TO-5
<u>Diode Rectifiers</u>	309418- TO-5	309406- TO-3
<u>Germanium</u>	309426- TO-98	309407- TO-3
	309427- TO-92	309408- TO-5
303696	309430- TO-5 W/H.S.	309409- TO-5
309380	309434- TO-92	309411- TO-5
309464	309438- TO-98	309412- TO-3
309465	309441- TO-66	309413- TO-5
309469	309442- TO-92	309414- TO-5
318209	309447- TO-92	309415- TO-3
318211	309448- Flat	309416- TO-5 W/H.S.
	309449- TO-3	309420- TO-5
<u>Silicon Rectifiers</u>	309450- Plastic	309421- TO-5
	309452- TO-105	309422- TO-3
309372 . 4-600V	309456- Plastic	309423- TO-3
309373 .15-100V	309458- TO-5	309425- TO-3
309374 1-100V	309459- Flat	309453-
309378 1-600V	309461- TO-92	309454- TO-7
309384 .17-170V	309681- TO-92	309455- TO-33
309385 . 5-400V	309682- Flat	318200- TO-3
309386 .75-400V	309684- TO-92	
309387 .75-200V	318201- TO-105	<u>Silicon</u>
309389 1-200V	318202- TO-105	
309396 .75-400V	318203- TO-105	309419- TO-5
309466 2-100V	318205- TO-5	309424- TO-46
309468 .75-400V	318206- TO-5	309429- TO-5 W/H.S.
309476 1-100V	318208- TO-3	309432- Plastic
309477 1-200V	654000- TO-98	309433- Plastic
309481 .07- 40V	654008- TO-98	309435- TO-92
309483 .07- 40V	309439- TO-106	309436- TO-92
318210 .17-170V	309689 - FLAT	309437- TO-92
318212 2-100V	309686 - TO-92	309445- TO-92
654032 .07- 75V	309691 - TO-92	309446- TO-5
309701 3A - 100V	309687 - TO-92	309451- TO-105
	309693 - TO-92 W/H.S.	309457- Flat
		309460- TO-92
		309462- TO-66
		309683- TO-92

Replacements offered for Emergency use Only

Seeburg Selection Lists (Cont'd)

PNP Transistors

Silicon (Cont'd)

309685-T0-5
318204- Plastic
318207- T0-5
309690 - FLAT
309688 - T0-92
309692 - T0-92

Selenium Rectifiers

Single

305499
305636
309115
309390
309392
309394
400587

Common Cathods

309381
309397
309399
309440

Common Anode

309382
309391
309393
309398

Non Polarized

309370
309470
309471

Silicon Controlled Switches

(SCS)

309377 (60V)
309371 (200V)
309472 (60V)
309475 (40V)
309480 (40V)

Reverse Blocking Thyristors

(RBT)

309500 (60V)
309501 (60V)
309503 (50V)
309505 (400V)
309507 (60V)
309509 (200V)
309510 (75V)
309511 (200V)
309512 (50V)

Bi-Directional Thyristors

(BDT)

309502 (200V)
309504 (50V)
309506 (50V)

Stabistors

309463 (Dual)
309473 (Single)
309478 (Dual)

Unijunctions

309428
309443
654001

Programable Unijunction

309444

Zener Diodes

309375 27V-10W
309376 150V-10W
309379 130V-10W
309395 15V-1W
309474 20V-1W
309479 13V-1W
309482 27V-10W
309484 30V-1W
309485 150V-.5W
309486 14V-.4W
309487 20V-.4W
309488 13V-.4W
309489 60V-.5W
309610 33V-.5W
309611 27V-1W
309612 8.2V-.5W
309613 13V-1W
309614 6.2V-1W
309615 6.8V-1W
309616 6.2V-1W
309617 6.8V-1W
309618 4.7V-.5W
318213 16V-1W

SEMICONDUCTOR PARTS LISTS FOR D.T.P.I. (Black Box)

CR3700 thru CR3718----- 309481 - Silicon Diode 40 PIV - .07A
CR3719----- 309478 - Silicon Stabistor 5 PIV - .01MA
CR3720 thru CR3723----- 309481 - Silicon Diode 40 PIV - .07A
CR3726 thru CR3732----- 309481 - Silicon Diode 40 PIV - .07A
CR3733----- 309478 - Silicon Stabistor 5 PIV - .01MA
CR3734----- 309488 - Zener Diode 13V - .4W - 5%
CR3735 thru CR3741----- 309481 - Silicon Diode 40 PIV - .07A
CR3742----- 309610 - Zener Diode 33V - .5W - 10%
CR3743----- 309487 - Zener Diode 20V - .5W - 10%
CR3744----- 309610 - Zener Diode 33V - .5W - 10%
CR3745----- 309487 - Zener Diode 20V - .5W - 10%
CR3746 thru CR3754----- 309481 - Silicon Diode 40 PIV - .07A
Q3700 thru Q3719----- 309683 - PNP Silicon Transistor
Q3720----- 309684 - NPN Silicon Transistor
Q3721----- 309683 - PNP Silicon Transistor
Q3722----- 309684 - NPN Silicon Transistor
Q3723 thru Q3727----- 309683 - PNP Silicon Transistor
Q3728----- 309444 - Programmable Unijunction
Q3729 thru Q3733----- 309683 - PNP Silicon Transistor
Q3734----- 311263 - Integrated Circuit Special
Q3735----- 311260 - Integrated Circuit Special
Q3738 thru Q3741----- 309683 - PNP Silicon Transistor
SC53700 & 01----- 309511 - Reversed Biased Thyristor

SEMICONDUCTOR PARTS LISTS FOR DRD (Grey Box)

CR3201 thru CR3218----- 309373 - Silicon Rectifier 100 PIV - .15A
CR3219 and CR3220----- 309384 - Silicon Signal Diode 170 PIV - .17A
CR3221 thru CR3222----- 309373 - Silicon Rectifier 100 PIV - .15A
CR3223----- 309481 - Silicon Signal Diode 40 PIV - .07A
CR3224----- 309469 - Germanium Signal Diode 30 PIV - .05A
CR3225----- 309489 - Zener Diode 60 PIV - .5W
CR3226 and CR3227----- 309481 - Silicon Signal Diode 40 PIV - .07A
CR3228----- 309610 - Zener Diode 33V - .5W - 10%
CR3229----- 309487 - Zener Diode 20V - .4W - 10%
Q3201----- 309684 - NPN Silicon Transistor
Q3202 and Q3203----- 309683 - PNP Silicon Transistor
Q3205----- 309458 - NPN Silicon Transistor 180V
Q3206----- 311266 - Integrated Circuit - Special
Q3207----- 320683 - PNP Silicon Transistor
Q3208----- 309444 - Programmable Unijunction
SCS3201 thru SCS3221--- 309510 - Reversed Biased Thyristor - 75V
(or) 309511 - Reversed Biased Thyristor - 200V

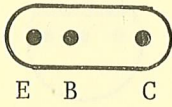
SEMICONDUCTOR PARTS LISTS FOR SHPI (100 Watt Amp)

CR5101 and CR5102----- 309481 - Silicon Signal Diode
CR5103 thru CR5106----- 309483 - Silicon Stabistor
CR5107 thru CR5110----- 309481 - Silicon Signal Diode
CR5111----- 309384 - Silicon Diode
CR5112 thru CR5115----- 309701 - Silicon Rectifier 100 PIV
Q5101 thru Q5110----- 309686 - NPN Silicon Transistor
Q5111----- 309693 - NPN Silicon Transistor
Q5112 and Q5113----- 309687 - NPN Silicon Transistor
Q5114----- 309688 - PNP Silicon Transistor
Q5115----- 309689 - NPN Silicon Flat Style Driver Transistor
Q5116----- 309690 - PNP Silicon Flat Style Driver Transistor
Q5117 and Q5118----- 309449 - NPN Silicon Power Output Transistor
Q5119----- 309691 - NPN Silicon Transistor
Q5120----- 309692 - PNP Silicon Transistor
Q5121----- 309693 - NPN Silicon Transistor
Q5122 and Q5123----- 309687 - NPN Silicon Transistor
Q5124----- 309688 - PNP Silicon Transistor
Q5125----- 309689 - NPN Silicon Flat Style Driver Transistor
Q5126----- 309690 - PNP Silicon Flat Style Driver Transistor
Q5127 and Q5128----- 309449 - NPN Silicon Power Output Transistor

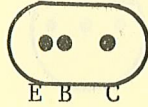
SEMICONDUCTOR LEAD IDENTIFICATION SECTION

NOTE: Pictorials not drawn to scale.

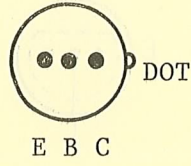
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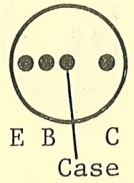
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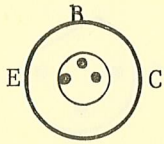
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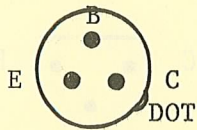
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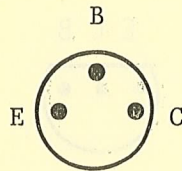
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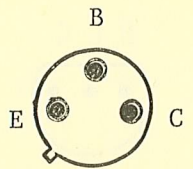
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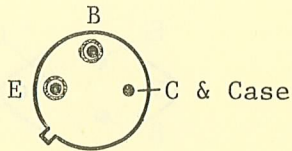
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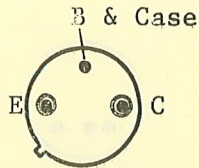
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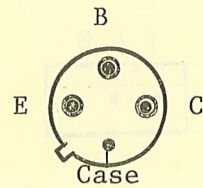
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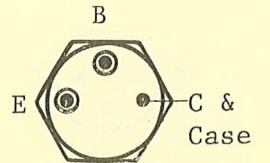
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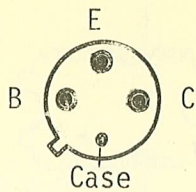
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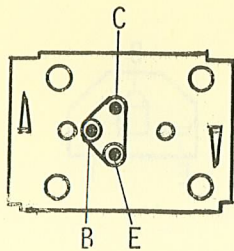
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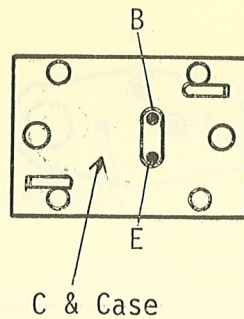
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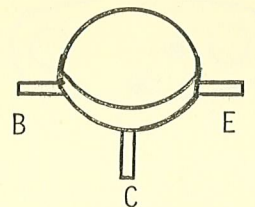
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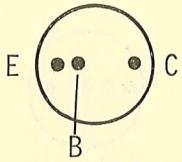


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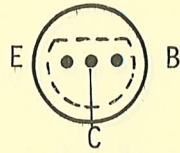


Lead Identification

20



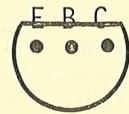
21



22



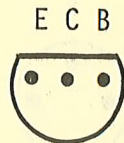
23



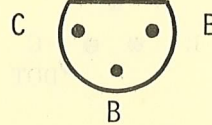
24



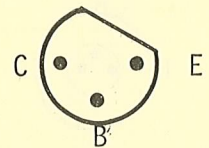
25



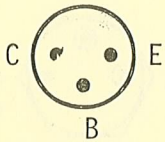
26



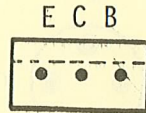
27



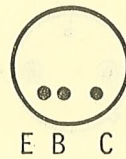
28



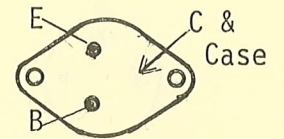
29



30

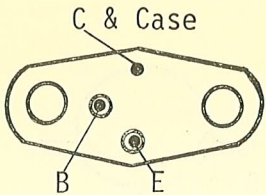


31

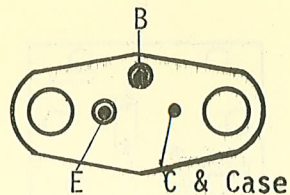


NOTE: T0-66 Case is smaller than T0-3 Case.

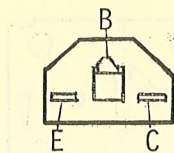
32



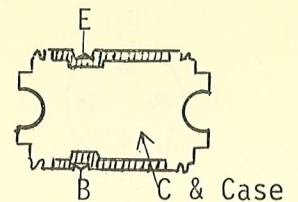
33



34

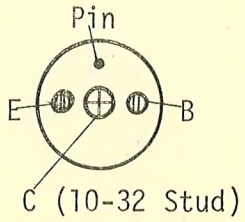


35

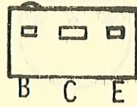


Lead Identification

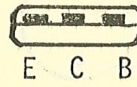
36



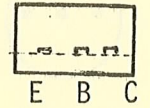
41



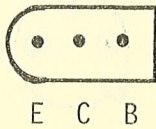
42



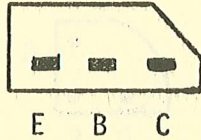
43



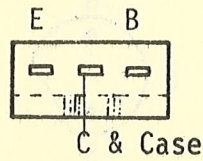
45



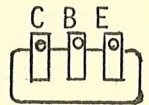
46



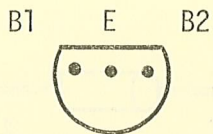
47



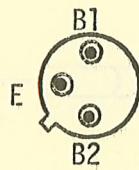
48



51



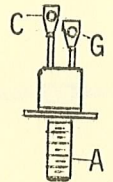
52



55



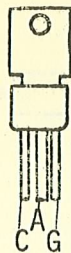
56



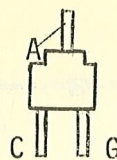
57



58



59



61

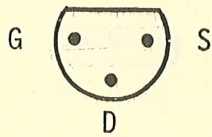


Lead Identification

62



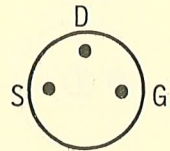
63



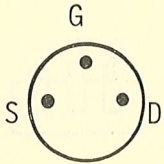
64



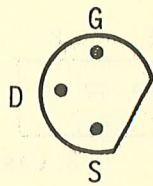
65



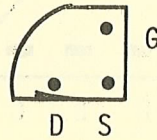
66



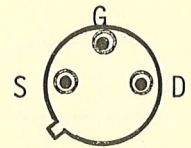
67



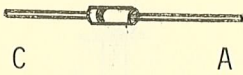
68



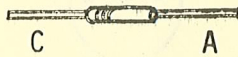
69



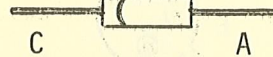
71



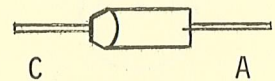
72



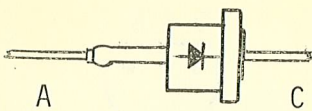
73



74



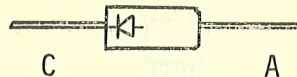
75



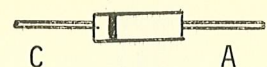
76



77

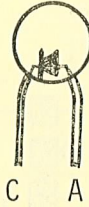


78

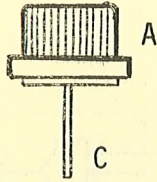


Lead Identification

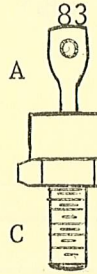
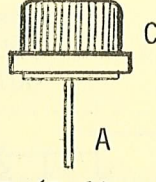
79



81



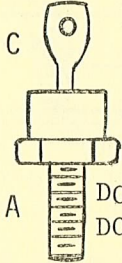
82



DO-4=10-32
DO-5=1/4"

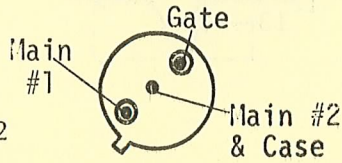
REVERSED: (Indicated by an "R" in type number)

84

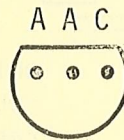


DO-4=10-32
DO-5=1/4"

91



92



93



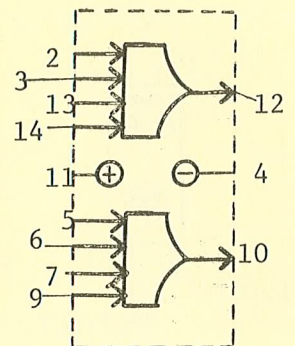
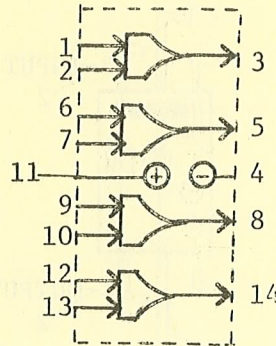
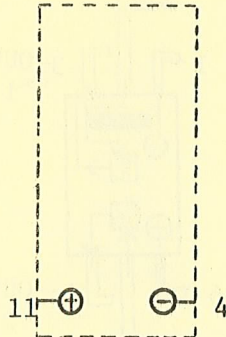
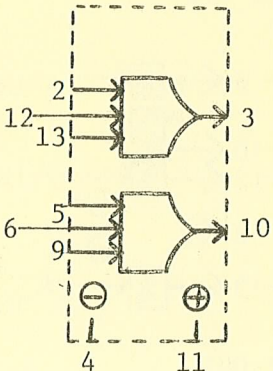
REVERSED: (Indicated by an "R" in type number)

101*

102*

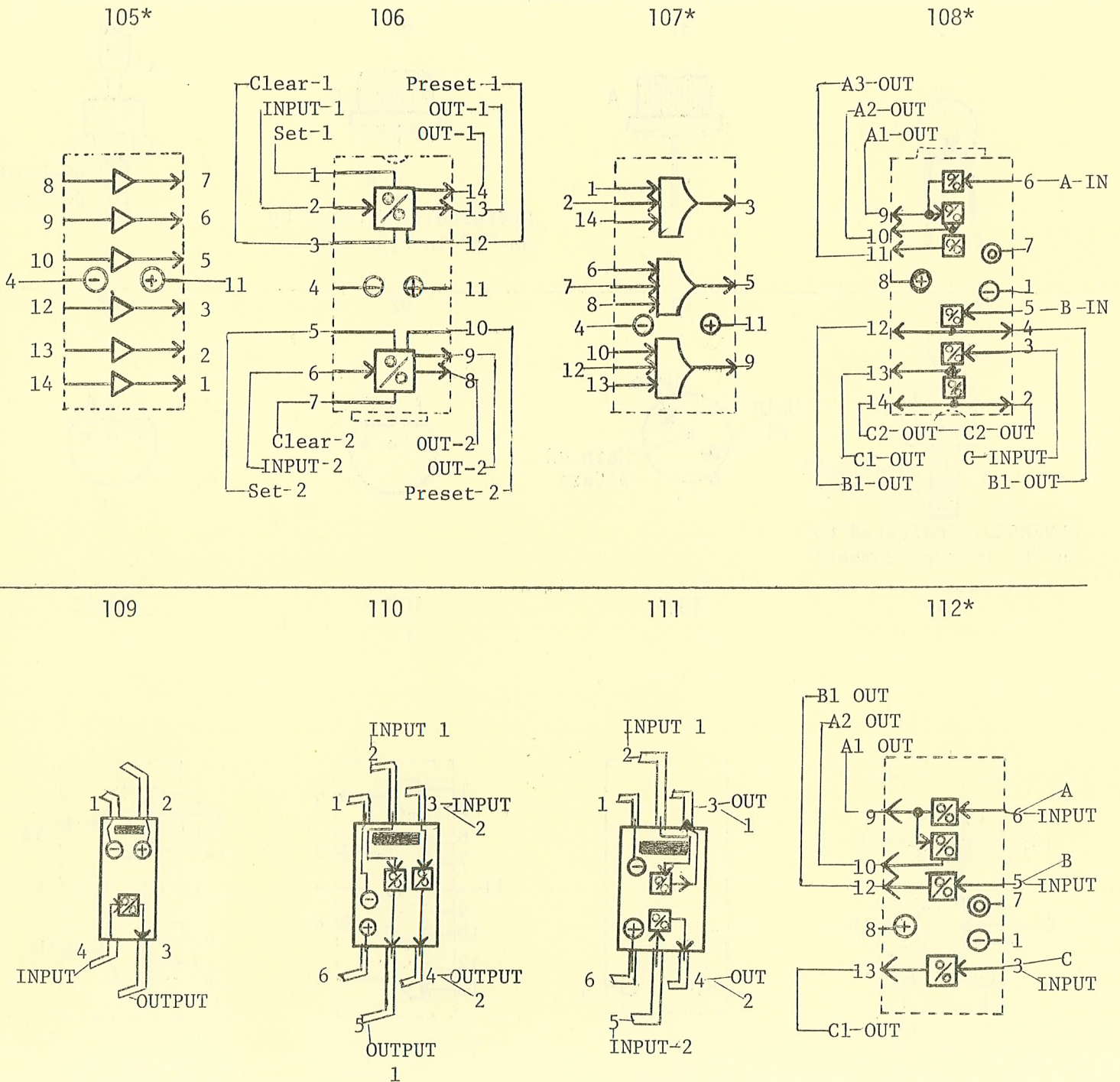
103*

104*



* I.C. leads are not drawn in position of physical location. See figure 200 for lead location.

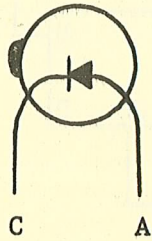
Lead Identification



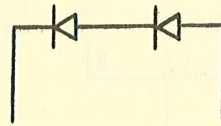
* I.C. Leads are NOT drawn in position of physical location. See Figure 200 for Lead location.

Lead Identification

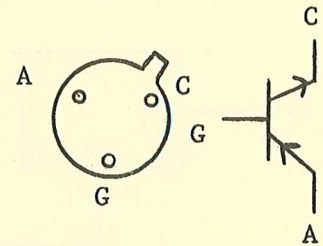
210



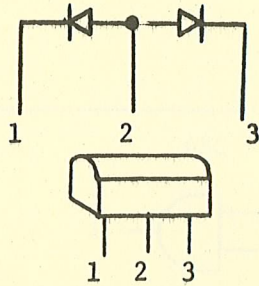
211



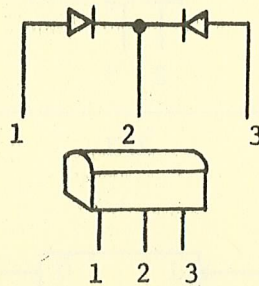
212



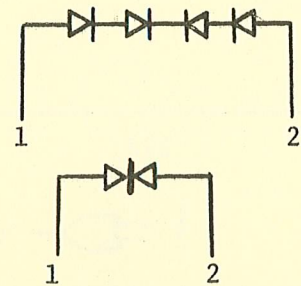
213



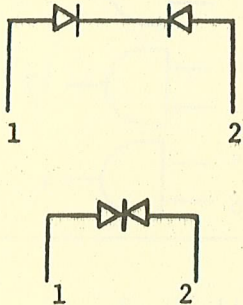
214



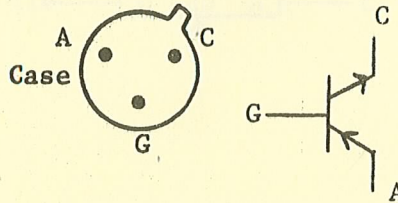
215



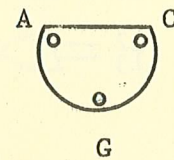
216



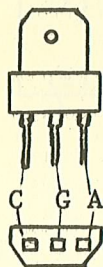
217



218

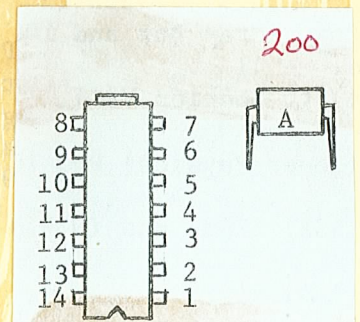
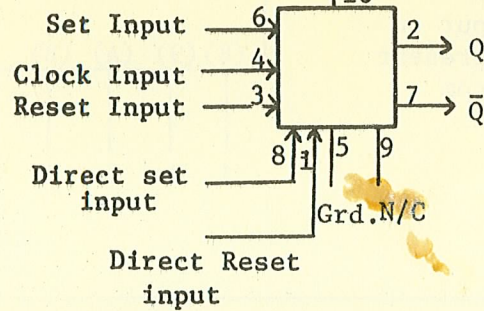


219



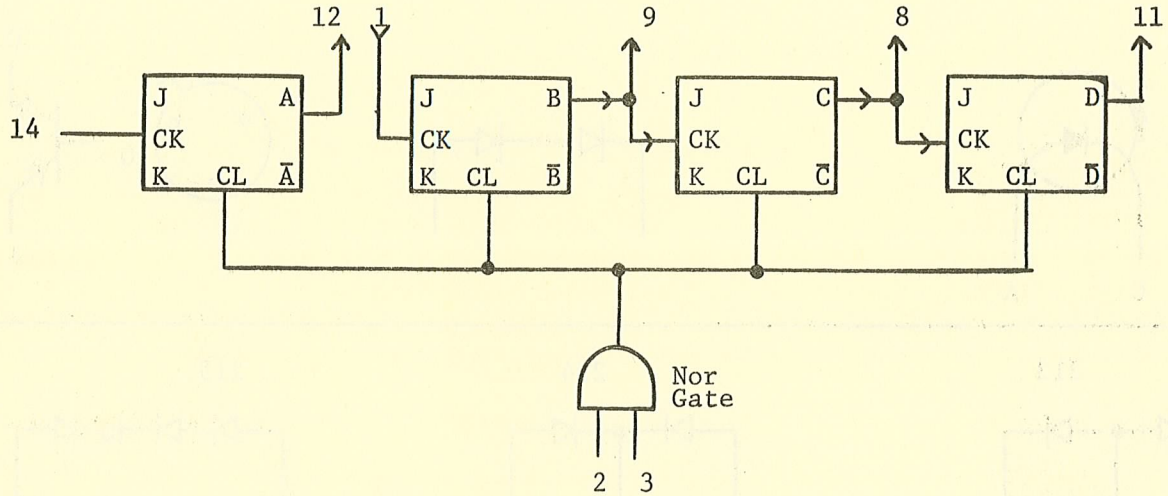
Vdd 220

Mem-1005

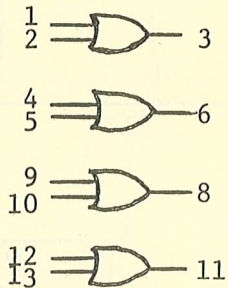


Lead Identification

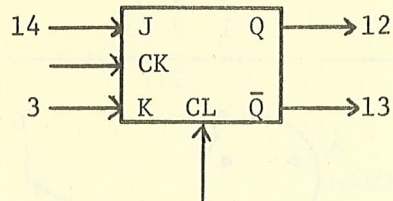
221



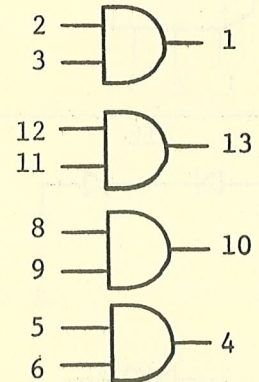
222



223

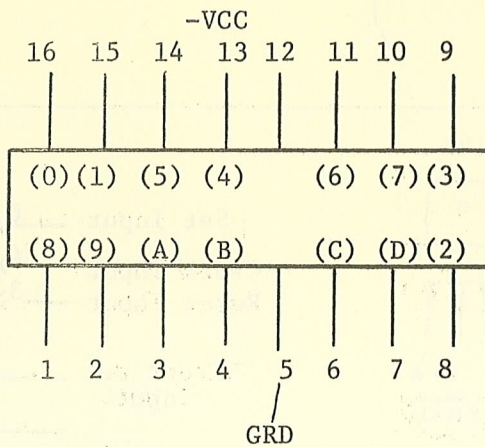


224

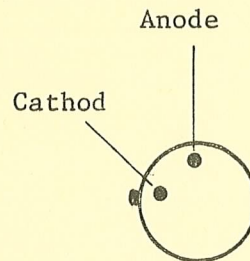
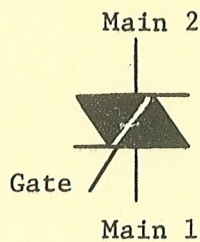
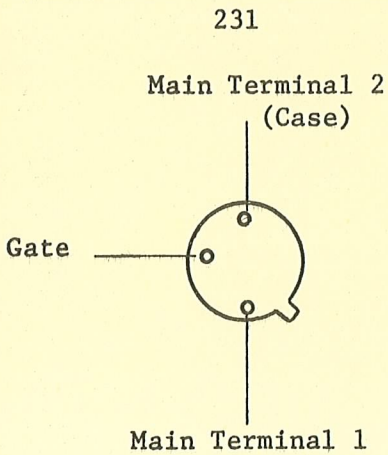
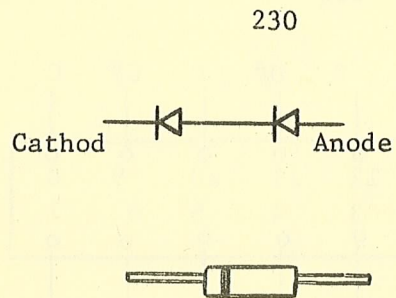
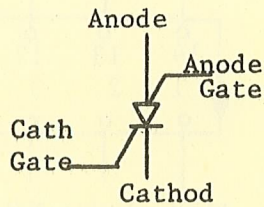
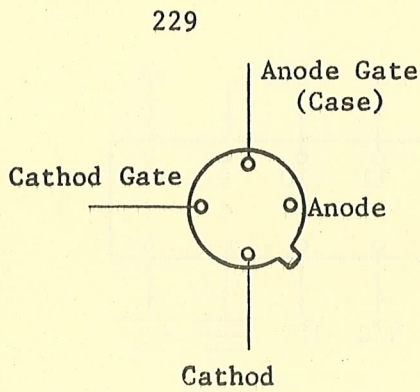
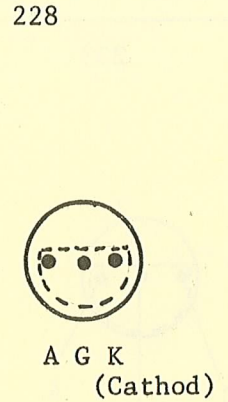
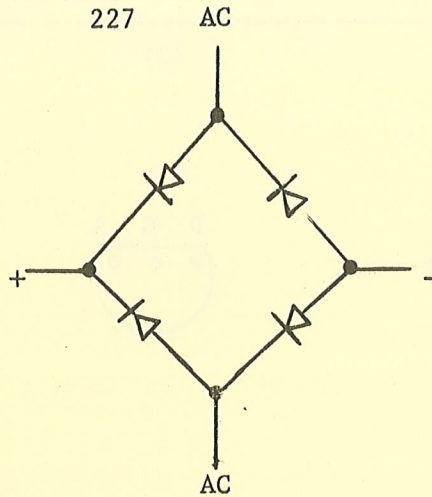
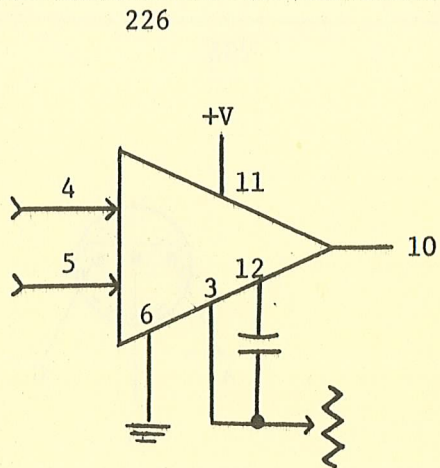


225

Binary type information is feed in on Lines A-B C & D (Pins 3-4-6 & 7) which produces output on remaining pin to represent a decimal signal from 0 thru 9.

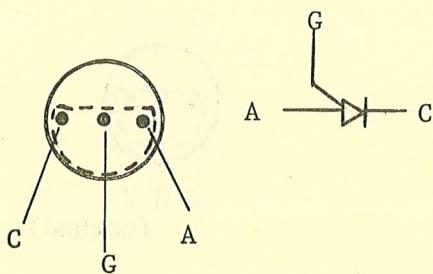


Lead Identification

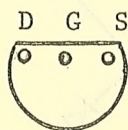


Lead Identification

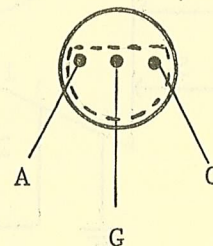
233



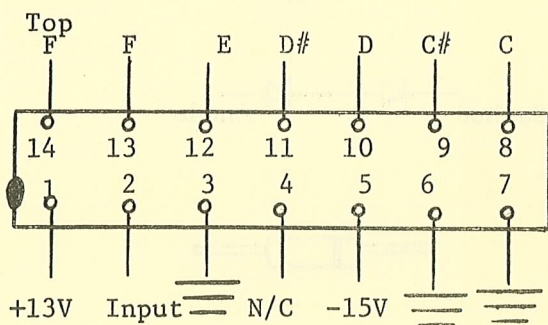
234



235



236



237

