RCA
Solid State
Division

Power Transistors

40594 40595 40611 40613
40616 40618 40621 40622
40624 40625 40627–40632
40634–40636

H-1534R1

40613 40627
40618 40629
40621 40630
40622 40631
40624 40632

JEDEC TO-220AA
(For TO-66 Sockets)

H-1468

40625L or S
40628L or S

With Heat-Radiator

See NOTE at right above

H-1570

40636
JEDEC TO-3

40594L
40595L
40611L
40616L
40635L

JEDEC TO-5

40594S
40595S
40611S
40616S
40634S
40635S

JEDEC TO-39

See NOTE at right

H-1380 H-1381

Silicon Transistors for Audio-Frequency Linear-Amplifier Applications

Transistors for Driver Applications:

N-P-N Types

40594 40616 40628
40611 40625 40635

P-N-P Types

40595 40634

NOTE:

These devices are available with either 1½-inch leads (TO-5 package) or ½-inch leads (TO-39 package). The longer-lead versions are specified by suffix "L" after the type number; the shorter-lead versions are specified by suffix "S" after the type number.

Transistors for Output Applications:

N-P-N Types

40613	40624	40631
40618	40627	40632
40621	40629	40636
40622	40630	

TERMINAL CONNECTIONS FOR TYPES IN TO-220AA PACKAGE

Lead No.1 – Base
Stub – Do not use stub as tie point.
Lead No.3 – Emitter
Mounting Flange – Collector

TERMINAL CONNECTIONS FOR 40636

Pin 1 – Base
Pin 2 – Emitter
Case – Collector
Mounting Flange – Collector

TERMINAL CONNECTIONS FOR TYPES IN TO-5 OR TO-39 PACKAGE

Lead 1 – Emitter
Lead 2 – Base
Case, Lead 3 – Collector

TERMINAL CONNECTIONS FOR 40625 AND 40628

Lead 1 – Emitter
Lead 2 – Base
Heat-Radiator, Lead 3 – Collector

RCA-40594, 40595, 40611, 40613, 40616, 40618, 40621, 40622, 40624, 40627–40632, and 40634–40636, inclusive are silicon n-p-n and p-n-p transistors intended for driver and output stages in high-fidelity amplifier circuits.

These devices have been specifically designed for use in complementary-and-quasi-complementary-symmetry audio-amplifier circuits.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

RCA Type	$V_{CEO(sus)}$ V	$V_{CER(sus)}$* V	V_{EBO} V	I_C A	I_B A	P_T – W° T_C = 25°C	P_T – W° T_A = 25°C	Temp. Range (Storage & Operating) °C		
								–		+
40594	–	95	4	2	1	10	1.2	65	to	200
40595	–	−95	−4	−2	−1	10	1.2	65	to	200
40611	25	–	2.5	0.7	0.2	5	1	65	to	200
40613	25	–	5	4	2	36	1.8	65	to	150
40616	32	–	2.5	0.7	0.2	5	1	65	to	200
40618	30	–	5	4	2	36	1.8	65	to	150
40621	32	–	5	4	2	36	1.8	65	to	150
40622	40	–	5	4	2	36	1.8	65	to	150
40624	45	–	5	6	3	50	1.8	65	to	150
40625	45	–	7	1	–	–	3.5	65	to	200
40627	55	–	5	6	3	50	1.8	65	to	150
40628	55	–	7	1	–	–	3.5	65	to	200
40629	–	35	5	4	2	36	1.8	65	to	150
40630	–	40	5	4	2	36	1.8	65	to	150
40631	–	45	5	4	2	36	1.8	65	to	150
40632	–	60	5	6	3	50	1.8	65	to	150
40634	–	−75	−7	−0.7	−0.2	5	1	65	to	200
40635	–	75	7	0.7	0.2	5	1	65	to	200
40636	–	95	7	15	7	115	–	65	to	200

* R_{BE} = 68 Ω (40612, 40623, & 40626)
= 100 Ω (40594, 40595, 40629, 40630, 40631, 40632, 40633, 40634, 40635, & 40636)

° P_T at temperatures above 25°C, derate linearly to 0 watts at maximum temperature (e.g. + 100, + 150, or + 200 °C).

ELECTRICAL CHARACTERISTICS, *At Case Temperature = 25°C*

RCA Type	I_{CBO} Max.		I_{CER} Max.				I_{EBO} Max.			$V_{CEO(sus)}$ Min.	
		V_{CB}			V_{CE}	R_{BE}			V_{EB}		I_C
	μA	V	μA	mA	V	Ω	μA	mA	V	V	mA
40611	0.5	15	–	–	–	–	–	1	2.5	25	100
40613	2	25	–	–	–	–	–	1	5	25	100
40616	0.5	15	–	–	–	–	–	1	5	32	100
40618	2	30	–	–	–	–	–	1	5	30	100
40621	0.5	30	–	–	–	–	–	1	5	32	100
40622	–	–	500	–	40	100	–	1	5	40	100
40624	–	–	500	–	45	100	–	1	5	45	100
40625	0.25	60	–	–	–	–	1	–	5	45	100
40627	–	–	500	–	55	100	–	1	5	55	100
40628	0.25	60	–	–	–	–	1	–	5	55	100
40629	–	–	–	0.5	30	100	–	1	5	–	–

ELECTRICAL CHARACTERISTICS, *At Case Temperature = 25°C (Cont'd)*

RCA Type	I_{CBO} Max.		I_{CER} Max.				I_{EBO} Max.			V_{CEO}(sus) Min.	
		V_{CB}			V_{CE}	R_{BE}			V_{EB}		I_C
	μA	V	μA	mA	V	Ω	μA	mA	V	V	mA
40630	–	–	–	0.5	35	100	–	1	5	–	–
40631	–	–	–	0.5	40	100	–	1	5	–	–
40632	–	–	–	0.5	50	100	–	1	5	–	–
40634	–	–	– 10	–	– 65	100	–	– 0.1	– 4	–	–
40635	–	–	10	–	65	100	–	0.1	4	–	–
40636	–	–	–	0.5	85	100	–	1	4	–	–
40594	–	–	10	–	85	100	–	0.1	4	–	–
40595	–	–	– 10	–	– 85	100	–	– 0.1	– 4	–	–

V_{CER}(sus) Min.			V_{CE}(sat) Max.			V_{BE} Max.			h_{FE}				RCA Type
	I_C	R_{BE}		I_C	I_B		V_{CE}	I_C			I_C	V_{CE}	
V	mA	Ω	V	mA	mA	V	V	mA	Min.	Max.	mA	V	
–	–	–	–	–	–	–	–	–	70	500	50	4	40611
–	–	–	–	–	–	1.3	4	1000	30	120	1000	4	40613
–	–	–	–	–	–	–	–	–	70	500	50	4	40616
–	–	–	–	–	–	–	–	–	30	120	1000	4	40618
–	–	–	1	1500	150	1.5	4	1500	25	100	1500	4	40621
–	–	–	1	1500	150	1.5	4	1500	25	100	1500	4	40622
–	–	–	1	2500	250	1.7	4	2500	20	100	2500	4	40624
–	–	–	0.5	150	15	1	4	150	100	300	150	10	40625
–	–	–	1	2500	250	1.7	4	2500	20	100	2500	4	40627
–	–	–	0.5	150	15	1	4	150	100	300	150	10	40628
35	100	100	1	1000	100	1.3	4	1000	20	70	1000	4	40629
40	100	100	1	1500	150	1.4	4	1500	20	70	1500	4	40630
45	100	100	1	2000	200	1.5	4	2000	20	70	2000	4	40631
60	100	100	1	3000	300	1.4	4	3000	20	70	3000	4	40632
– 75	– 100	100	– 0.8	– 150	– 15	– 1.4	– 4	– 150	50	250	– 150	– 4	40634
75	100	100	0.8	150	15	1.4	4	150	50	250	150	4	40635
95	200	100	1	4000	400	1.4	4	4000	20	70	4000	4	40636
95	100	100	0.8	300	30	1.4	4	300	70	350	300	4	40594
– 95	– 100	100	– 0.8	– 300	– 30	– 1.4	– 4	– 300	70	350	– 300	– 4	40595