BASES

1-TERMINAL TYPES (CAPS)

MINIATURE WITH WAFER

SKIRTED MINIATURE

SKIRTED MINIATURE

SKIRTED MINIATURE

SMALL

SMALL WITH TUBULAR SUPPORT

CONNECTOR SHOULD NOT EXERT MORE THAN 7 POUNDS RADIAL COMPRESSION AT ANY POINT AROUND THE CIRCUMFERENCE OF THE CAP.

* Add 0.020" for solder on finished tube.
BASES

1-TERMINAL TYPES (CAPS)

SKIRTED SMALL

- .360" ±.008" ±.010"
- .563" min.
- .328" min.
- .500" min.

JETEC No. CI-22

MEDIUM

- .566" ±.007"
- .400" min.
- .500" min.
- .576" min.

JETEC No. CI-5
RCA No. 3903

MEDIUM

WITH TUBULAR SUPPORT

- .566" ±.007"
- .531" min.
- .400" min.
to glass

CONNECTOR SHOULD NOT EXERT MORE THAN 10 POUNDS RADIAL COMPRESSION AT ANY POINT AROUND THE CIRCUMFERENCE OF THE CAP.

JETEC No. CI-39
RCA No. R7062

SKIRTED MEDIUM

- .566" ±.007"
- .300" min.
- .485" min.
- .938" min.
- 1.052"

JETEC No. CI-14
RCA No. 3980

* Add 0.020" for solder on finished tube.
* Add 0.040" for solder on finished tube.
BASES

1-TERMINAL TYPES (CAPS)

SKIRTED MEDIUM

SKIRTED MEDIUM WITH ROLLED EDGE

JETEC No.CI-29

JETEC No.CI-19
RCA No.3940

SKIRTED MEDIUM

SKIRTED MEDIUM

JETEC No.CI-27
RCA No.3985

JETEC No.CI-6
RCA No.3904

* Add 0.040" for solder on finished tube.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CAPS 2
Bases

1-Terminal Types (Cafs)

LARGE

\[ \text{JETEC No.C1-13} \]
\[ \text{RCA No.3917} \]

LARGE

\[ \text{JETEC No.C1-8} \]
\[ \text{RCA No.3910} \]

SKIRTED LARGE

\[ \text{JETEC No.C1-41} \]
\[ \text{RCA No.3915} \]

* Add 0.060" for solder on finished tube.
BASES
1-TERMINAL TYPES (CAPS)

SKIRTED LARGE

2.281" MIN.
.625" MIN.
.813" R
.800" ±.007"

2.230"

JETEC No. CI-10
RCA No. 1904

SKIRTED LARGE

2.750" MIN.
.713" MIN.
.813" R
.800" ±.007"

2.656"

JETEC No. CI-30
RCA No. 1902

* Add 0.060" for solder on finished tube.

MAY 3, 1954
TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
DETAILS OF
RECESSED SMALL BALL CAP
& BULB ASSEMBLY

JETEC NO. J1-22

OUTSIDE CONTOUR
OF BULB

.140" R. MIN.
TO FILLET
.113" ± .005" DIA.

.056" R.
.080" ± .005" DIA.

.150° ± .015° ± .010° POST
.150° ± .030° ± .010° RIM

ALTERNATE EDGE DESIGN

.5/16" R. MAX.
.3/16" MAX.

.3/32" MAX.

.200" R. MIN.

.3/16" MAX.

VARIANT SEAL SHAPES

.3/32" MAX.

.3/32" MAX.

.3/32" MAX.

NOTE: PROTRUSION OF GLASS AROUND CAP
ABOVE BULB CONTOUR IS LIMITED
TO AREA BOUNDED BY CIRCLE
CONCENTRIC WITH CAP AXIS AND
HAVING RADIUS OF 3/4" MAX.

FOR ATTACHING OR DETACHING, THE CONNECTOR SHOULD REQUIRE NOT MORE THAN 8
POUNDS TOTAL FORCE PERPENDICULAR TO
THE PLANE OF THE RIM OF THE CAP.

ANGLE BETWEEN PLANE OF THE RIM OF CAP
AND PLANE TANGENT TO ORIGINAL CONTOUR
OF BULB AT CENTER OF CAP WILL NOT BE
MORE THAN 10°.

92CM-6535R4
## Bases

### Caps (I-Terminal Types)

#### Details of Recessed Small Cavity Cap & Bulb Assembly

**JEDEC No. J1-21**

![Diagram of caps and bulb assembly](image)

#### Variant Seal Shapes

![Diagrams of variant seal shapes](image)

---

### Table of Dimensions

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>INCHES</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Nom</td>
</tr>
<tr>
<td>A</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>0.307</td>
<td>0.312</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>D</td>
<td>0.153</td>
<td>-</td>
</tr>
<tr>
<td>E</td>
<td>0.136</td>
<td>-</td>
</tr>
<tr>
<td>F</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>G</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>H</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>J</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>K</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTES**

2

3

See Notes on reverse side.

---

**RCA**

Electronic Components and Devices

Harrison, N. J.

**CAPS 4**

10-65
Bases
Caps (1-Terminal Types)

Note 1: Connector shall not extend beyond this line. Bottom contour optional.

Note 2: Protrusion or depression of glass around cap above bulb contour is limited to areas bounded by circle concentric with cap axis and having radii as shown above.

Note 3: When measured in a plane perpendicular to axis of contact cone.

Note 4: When attaching or detaching the connector the total force required should not exceed eight pounds as applied perpendicular to the plane of the rim of the cap.

Note 5: The angle between plane of the rim of the cap and plane tangent to original contour of bulb at center of cap shall not exceed 10°.
Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No.GA3-1) having thickness of 1/4" and three holes with diameters of 0.1030" - 0.1035" so located on a 0.3440" ± 0.0005" diameter circle that the distance along the chord between two adjacent hole centers is 0.2340" ± 0.0005" and the distance along the chord between the remaining pin and the two adjacent pins is 0.3175" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 2 pounds will not be lifted when pins are withdrawn.

* Add 0.020" for solder on finished tube.
BASES
3-TERMINAL TYPES

120°

1 1/4

120°

4 3/16

DIA

LARGE TERMINAL CONNECTED TO SHELL

2 SMALL TERMINALS INSULATED FROM SHELL

0.015 MAX

0.007" ± 0.007"

1 1/16 MIN.

1 1/16 MIN.

3/16 MAX.

7/8" MAX.

JETEC No. A3-80
RCA No. 5232

* Add 1/8" for solder on finished tube.

NOV. 5, 1954
TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
"SMALL 4-PIN"
PIN DIMENSIONS AND ORIENTATION

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GA4-1) having thickness of 1/4" and four holes, two with diameters of 0.1650" ± 0.0005" and two with diameters of 0.1340" ± 0.0005" so located on a 0.6400" ± 0.0005" diameter circle that the distance between the adjacent 0.1650" diameter pins is 0.4680" ± 0.0005" and the distance between the adjacent 0.1340" diameter pins is 0.4370" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

* Add 0.030" for solder on finished tube.

8-56 TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
For other dimensions, see first page of the "Small 4-Pin" series.

* Add 0.030" for solder on finished tube.
BASES

4-PIN TYPES

With Bottom View

JUMBO 4-PIN

No. 1839

* on finished tube, add .060" for solder.

Dec. 1, 1942

RCA RADIOSTRON DIVISION
RCA MANUFACTURING COMPANY, INC.
Bases
4-Pin Types
With Bottom View

Super-Jumbo 4-Pin

Dimensions:
- .062" MAX.
- .082" MAX.
- 1.546" MAX.
- 2.219" MAX.
- 1.438" NOM.
- .718" MAX.

No. 4310

4 Pins
.186" .103" DIA.

On finished tube, add .030" for solder.

Dec. 1, 1942
RCA Radiotron Division
RCA Manufacturing Company, Inc.
MEDIUM-METAL-SHELL
SUPER-JUMBO 4-PIN

Detail of Groove

For other dimensions, see first page of the "Super-Jumbo" series.

* Add 0.060" for solder on finished tube.
LARGE-SHELL
SUPER-JUMBO 4-PIN
WITH BAYONET

For other dimensions, see first page
of the "Super-Jumbo" series.

* Add 0.060" for solder on finished tube.
LARGE-METAL-SHELL
SUPER-JUMBO 4-PIN
WITH BAYONET

For other dimensions, see first page of the "Super-Jumbo" series.

* Add 0.060" for solder on finished tube.
"SMALL 5-PIN"
PIN DIMENSIONS AND ORIENTATION

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No.GA5-1) having thickness of 1/4" and five holes with diameters of 0.1360" ± 0.0005" so located on a 0.7500" ± 0.0005" diameter circle that the distance between centers of the four adjacent holes is 0.3750" ± 0.0005" and the distance between the center of the remaining hole and its adjacent hole centers is 0.5300" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

SMALL-SHELL
SMALL 5-PIN

MEDIUM-SHELL
SMALL 5-PIN

* Add 0.030" for solder on finished tube.
MEDIUM-SHELL GIANT 5-PIN WITH BAYONET

SPECIAL METAL-SHELL GIANT 5-PIN
See Tube Types 4-125A/4D21 and 4-250A/5D22

SPECIAL METAL-SHELL SUPER-GIANT 5-PIN
See Tube Type 4-1000A

* Add 0.030" for solder on finished tube.

MAR. 1, 1955
BASSES
5-PIN TYPES

SMALL-SHELL DUODECAL 5-PIN
For details of this base, see corresponding DUODECAL 12-PIN type

DWARF-SHELL OCTAL 5-PIN
SMALL-SHELL OCTAL 5-PIN
SMALL-WAFER OCTAL 5-PIN
SMALL-WAFER OCTAL 5-PIN
WITH SLEEVE
INTERMEDIATE-SHELL OCTAL 5-PIN
SHORT INTERMEDIATE-SHELL OCTAL 5-PIN
SHORT INTERMEDIATE-SHELL OCTAL 5-PIN
WITH EXTERNAL BARRIERS
MEDIUM-SHELL OCTAL 5-PIN
SHORT JUMBO-SHELL OCTAL 5-PIN
For details of above bases, see corresponding OCTAL 8-PIN type

SMALL RADIAL 5-PIN
See OUTLINES—Glass Types

MEDIUM-MOLDED-FLARE
SEPTAR 5-PIN
See Tube Type 4-65A
Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GA6-1) having thickness of 1/4" and six holes, two adjacent with diameters of 0.1650" ± 0.0005" and four with diameters of 0.1360" ± 0.0005" so located on a 0.7500" ± 0.0005" diameter circle that the distance between any two adjacent hole centers is 0.3750" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

**SMALL-SHELL SMALL 6-PIN**

**MEDIUM-SHELL SMALL 6-PIN**

*Add 0.030" for solder on finished tube.*
Bases

6-Pin Types

Long Medium-Shell Small 6-Pin

For other dimensions, see first page of the "Small 6-Pin" series.

Small-Shell Duodecal 6-Pin
For details of this base, see corresponding Duodecal 12-Pin type

Small-Shell Octal 6-Pin
Intermediate-Shell Octal 6-Pin
Short Intermediate-Shell Octal 6-Pin
Short Intermediate-Shell Octal 6-Pin With External Barriers
Medium-Shell Octal 6-Pin
Short Jumbo-Shell Octal 6-Pin
Small-Wafer Octal 6-Pin
Small-Wafer Octal 6-Pin With Sleeve

For details of above bases, see corresponding Octal-8 Pin type

* Add 0.030" for solder on finished tube.

Mar. 1, 1955
Tube Division
Radio Corporation of America, Harrison, New Jersey
BASSES

6-TERMINAL TYPES

1 1/2 R.

2" R.

3.345"  

6 STUDS

3/8"-16 TH D.

1/4"

INSULATING
INSERT

2 1/16" 3/16"

2" MAX.

6 3/8" MAX.

SPACE FOR CONNECTOR BETWEEN WING NUT AND LOCK NUT IS 3/16" MAX.

JETEC No. FO-6
RCA No. 6628

MAR. 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
Base-pin positions are held to tolerances such that entire length of pins will without undue force pass into and disengage from flat-plate gauge (part of gauge JETEC No. GE7-1) having thickness of 1/4" and eight holes with diameters of 0.0520" ± 0.0005" so located on a 0.3750" ± 0.0005" diameter circle that the distance along the chord between any two adjacent hole centers is 0.1434" ± 0.0005".

The design of the socket should be such that circuit wiring can not impress lateral strains through the socket contacts on the base pins. The point of bearing of the contacts on the base pins should not be closer than 1/8" from the bottom of the seated tube.

* This dimension around the periphery of any individual pin may vary within the limits shown.
"SMALL 7-PIN"
PIN DIMENSIONS AND ORIENTATION

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GA7-1) having thickness of 1/4" and seven holes, two adjacent with diameters of 0.1650" ± 0.0005" and five with diameters of 0.1360" ± 0.0005" so located on a 0.7500" ± 0.0005" diameter circle that the distance between centers of the adjacent 0.1650" diameter holes is 0.3288" ± 0.0005" and the distance between centers of the adjacent 0.1360" diameter holes is 0.3229" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

SMALL-SHELL
SMALL 7-PIN

* Add 0.030" for solder on finished tube.

MAY 1, 1955
TUBE DIVISION
RADIO CORPORATION OF AMERICA, MARRISON, NEW JERSEY
"MEDIUM 7-PIN"
PIN DIMENSIONS AND ORIENTATION

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No.A7-21) having thickness of 1/4" and seven holes, two adjacent with diameters of 0.1650" ± 0.0005" and five with diameters of 0.1360" ± 0.0005" so located on a 0.8550" ± 0.0005" diameter circle that the distance between centers of the adjacent 0.1650" diameter holes is 0.3748" ± 0.0005" and the distance between centers of the adjacent 0.1360" diameter holes is 0.3681" ± 0.0005".

Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

MEDIUM-SHELL MEDIUM 7-PIN

MEDIUM-SHELL MEDIUM 7-PIN WITH BAYONET

JETEC No.A7-13
RCA No.7306

JETEC No.A7-14
RCA No.7302

* Add 0.030" for solder on finished tube.
MEDIUM-METAL-SHELL
GIANT 7-PIN
WITH BAYONET

VENTILATED MEDIUM-METAL-SHELL
GIANT 7-PIN

See Tube Type 4E27A/5-125B

* Add 0.060" for solder on finished tube.
"SEPTAR"
PIN DIMENSIONS AND ORIENTATION

1. PIN
.125\(\pm\) .003" DIA.

6 PINS
.058\(\pm\) .002" DIA.

Septar Base Pin Contour

Base-pin positions are held to tolerances such that entire length of pins will without undue force pass into and disengage from flat-plate gauge having thickness of 3/8" and seven holes, one with diameter of 0.1450" \(\pm\) 0.0005" and six with diameters of 0.0800" \(\pm\) 0.0005" located on a 1.0000" \(\pm\) 0.0005" diameter circle at specified angles with a tolerance of \(\pm 5^\circ\) for each angle. Gauge is also provided with a hole 0.500" \(\pm\) 0.010" concentric with pin circle.

It is essential that the socket shall be constructed with floating-contact clips.
MEDIUM-BUTTON SEPTAR 7-PIN

13\(\frac{3}{16}\)" MAX. DIA.

JETEC No. E7-20
RCA No. FSB6014

SMALL-WAFER SEPTAR 7-PIN

15\(\frac{1}{16}\)" MAX. DIA.

JETEC No. E7-21
RCA No. FSB712

MEDIUM MOLDED-FLARE SEPTAR 7-PIN

2\(3\frac{3}{8}\)" MAX. DIA.

JETEC No. E7-2
RCA No. FSB603

JUMBO-BUTTON SEPTAR 7-PIN

2.56" MAX. DIA.

JETEC No. E7-46
RCA No. FSB6038

For other dimensions of above bases, see first page of the "Septar" series.
SMALL-SHELL DUODECAL 7-PIN
For details of this base, see corresponding SMALL-SHELL DUODECAL 12-PIN type

SMALL-BUTTON EIGHTAR 7-PIN
For details of this base, see corresponding SMALL-BUTTON EIGHTAR 8-PIN type

SMALL-SHELL OCTAL 7-PIN
SHORT INTERMEDIATE-SHELL OCTAL 7-PIN
SHORT INTERMEDIATE-SHELL OCTAL 7-PIN WITH EXTERNAL BARRIERS
INTERMEDIATE-SHELL OCTAL 7-PIN
SHORT MEDIUM-SHELL OCTAL 7-PIN
SHORT MEDIUM-SHELL OCTAL 7-PIN WITH EXTERNAL BARRIERS, STYLES A AND B
MEDIUM-SHELL OCTAL 7-PIN
SHORT JUMBO-SHELL OCTAL 7-PIN
WITH EXTERNAL BARRIERS
SMALL-WAFER OCTAL 7-PIN
SMALL-WAFER OCTAL 7-PIN WITH SLEEVE
For details of above bases, see corresponding OCTAL 8-PIN type

SMALL RADIAL 7-PIN
See OUTLINES--Glass Tubes