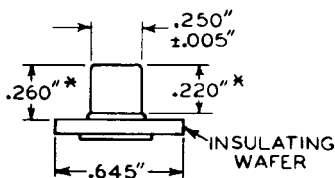




BASES

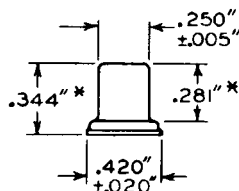
1-TERMINAL TYPES (CAPS)

MINIATURE WITH WAFER



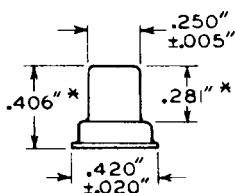
JETEC No. CI-4
RCA No. M399

SKIRTED MINIATURE



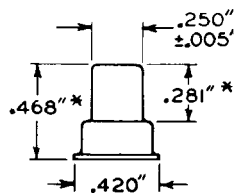
JETEC No. CI-3
RCA No. 3933

SKIRTED MINIATURE



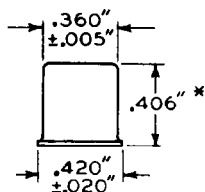
JETEC No. CI-2
RCA No. 3927

SKIRTED MINIATURE



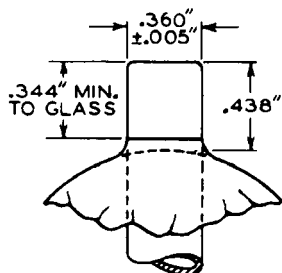
JETEC No. CI-33

SMALL



JETEC No. CI-1
RCA No. 3907

SMALL WITH TUBULAR SUPPORT



JETEC No. CI-34
RCA No. 3999

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

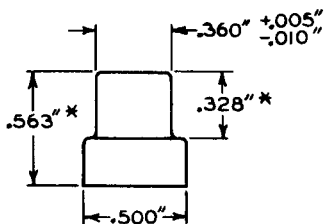
* Add 0.020" for solder on finished tube.



BASES

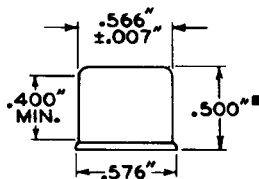
1-TERMINAL TYPES (CAPS)

SKIRTED SMALL



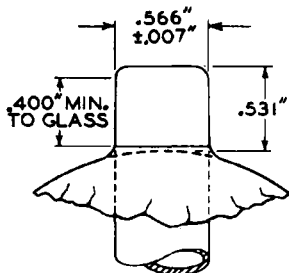
JETEC No. CI-22

MEDIUM



JETEC No. CI-5
RCA No. 3903

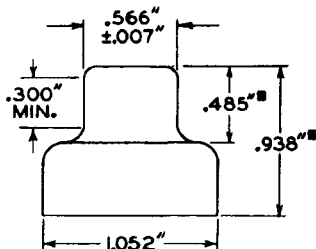
MEDIUM WITH TUBULAR SUPPORT



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



JETEC No. CI-14
RCA No. 3980

* Add 0.020" for solder on finished tube.

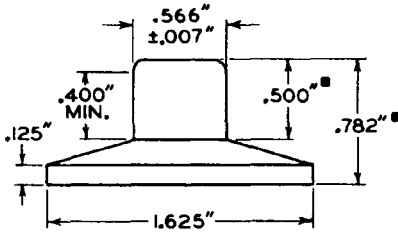
■ Add 0.040" for solder on finished tube.



BASES

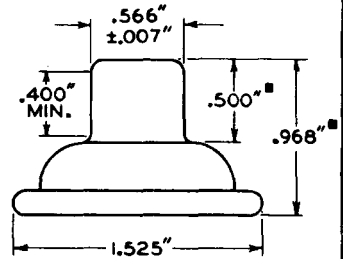
1-TERMINAL TYPES (CAPS)

SKIRTED MEDIUM



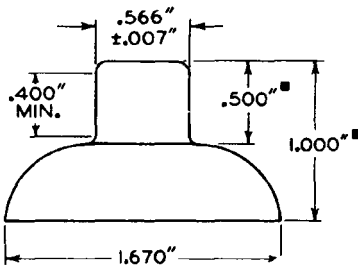
JETEC No. CI-29

SKIRTED MEDIUM
WITH ROLLED EDGE



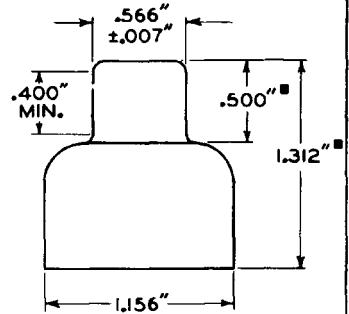
JETEC No. CI-19
RCA No. 3940

SKIRTED MEDIUM



JETEC No. CI-27
RCA No. 3985

SKIRTED MEDIUM



JETEC No. CI-6
RCA No. 3904

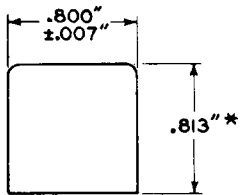
■ Add 0.040" for solder on finished tube.



BASES

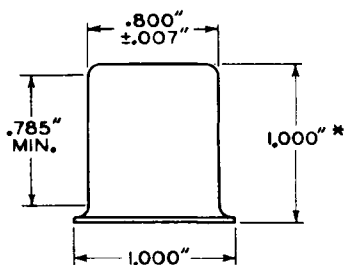
1-TERMINAL TYPES (CAPS)

LARGE



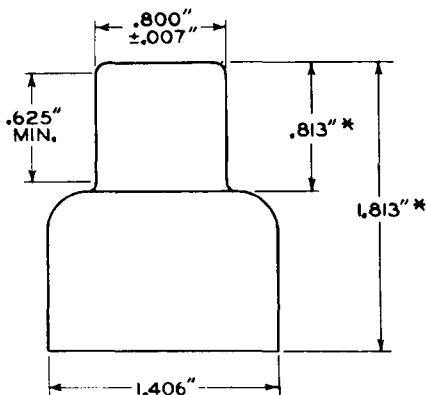
JETEC No. CI-15
RCA No. 3917

LARGE



JETEC No. CI-8
RCA No. 3910

SKIRTED LARGE



JETEC No. CI-9
RCA No. 3905

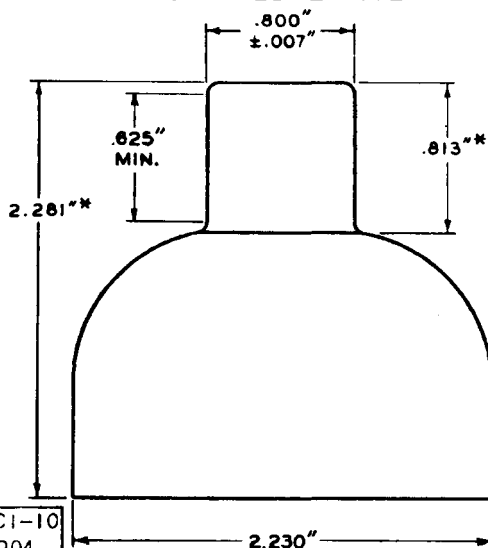
* Add 0.060" for solder on finished tube.



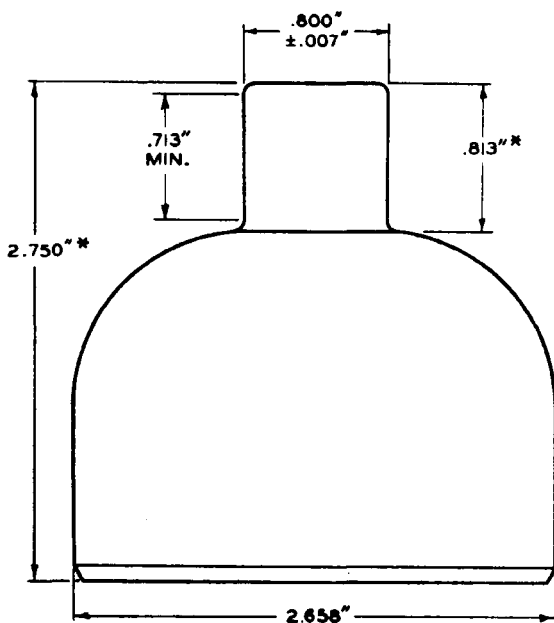
BASES

1-TERMINAL TYPES (CAPS)

SKIRTED LARGE



SKIRTED LARGE



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

CAPS 3

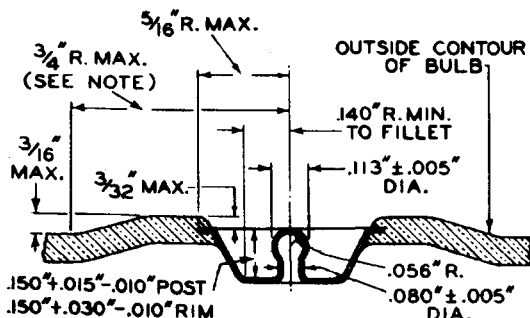


BASES

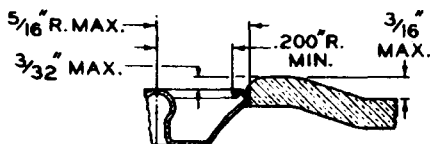
1-TERMINAL TYPES (CAPS)

DETAILS OF RECESSED SMALL BALL CAP & BULB ASSEMBLY

JETEC No. J1-22



ALTERNATE EDGE DESIGN



VARIANT SEAL SHAPES



NOTE: PROTRUSION OF GLASS AROUND CAP ABOVE BULB CONTOUR IS LIMITED TO AREA BOUNDED BY CIRCLE CONCENTRIC WITH CAP AXIS AND HAVING RADIUS OF $\frac{3}{4}$ \" 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.

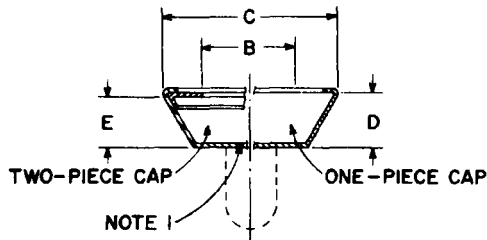
ANGLE BETWEEN PLANE OF THE RIM OF CAP AND PLANE TANGENT TO ORIGINAL CONTOUR OF BULB AT CENTER OF CAP WILL NOT BE MORE THAN 10° .

92CM-6535R4

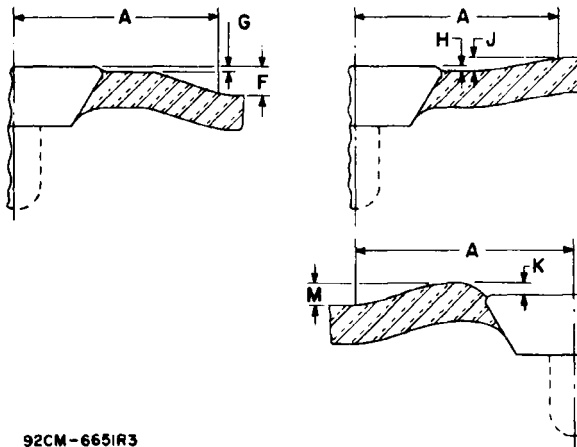
Bases

Caps (1-Terminal Types)

Details of Recessed Small Cavity Cap & Bulb Assembly JEDEC No. J1-21



VARIANT SEAL SHAPES



92CM-6651R3

DIMEN- SION	INCHES			MILLIMETERS			NOTES
	Min	Nom	Max	Min	Nom	Max	
A	—	—	0.750	—	—	19.05	2
B	0.307	0.312	0.317	7.798	7.925	8.051	
C	—	—	0.570	—	—	14.47	
D	0.153	—	0.173	3.89	—	4.39	
E	0.136	—	0.166	3.46	—	4.21	
F	—	—	0.188	—	—	4.78	
G	—	—	0.031	—	—	0.78	
H	—	—	0.031	—	—	0.78	
J	—	—	0.047	—	—	1.19	
K	—	—	0.094	—	—	2.38	
M	—	—	0.188	—	—	4.78	3

See Notes on reverse side.



RADIO CORPORATION OF AMERICA
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° .

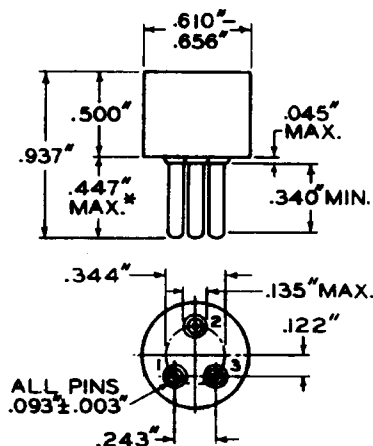




BASES

3-PIN TYPES

SMALL-SHELL PEEWEE 3-PIN



JETEC No. A3-1
RCA No. 3313

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 $0.3440" \pm 0.0005"$ diameter circle that the distance along the chord between two adjacent hole centers is $0.2340" \pm 0.0005"$ and the distance along the chord between the remaining pin and the two adjacent pins is $0.3175" \pm 0.0005"$.

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

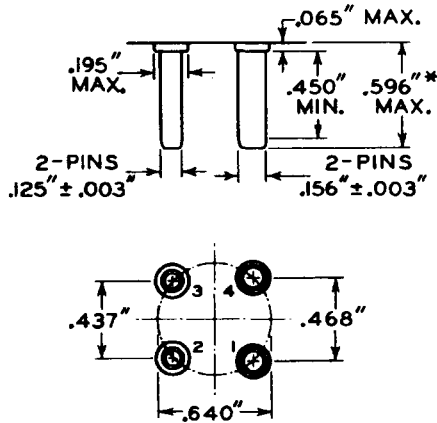
* Add $0.020"$ for solder on finished tube.



BASES

4-PIN TYPES

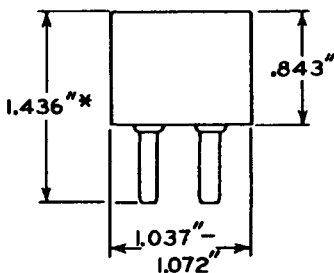
"SMALL 4-PIN" PIN DIMENSIONS AND ORIENTATION



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 $0.1650" \pm 0.0005"$ and two with diameters of $0.1340" \pm 0.0005"$ so located on a $0.6400" \pm 0.0005"$ diameter circle that the distance between the adjacent $0.1650"$ diameter pins is $0.4680" \pm 0.0005"$ and the distance between the adjacent $0.1340"$ diameter pins is $0.4370" \pm 0.0005"$.

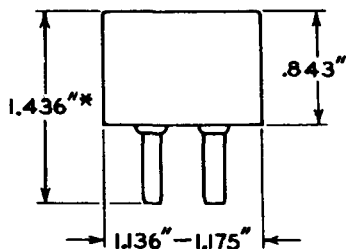
Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

DWARF-SHELL SMALL 4-PIN



JETEC No. A4-26
RCA No. 4107

SMALL-SHELL SMALL 4-PIN



JETEC No. A4-5
RCA No. 4108

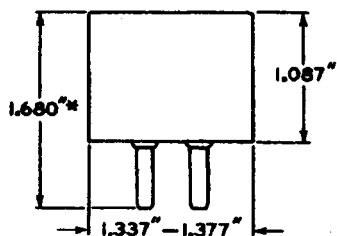
* Add 0.030" for solder on finished tube.



BASES

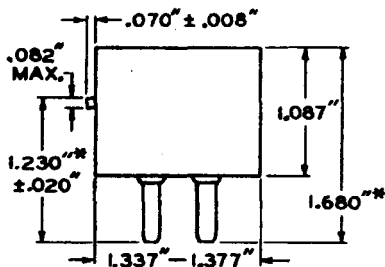
4-PIN TYPES

MEDIUM-SHELL SMALL 4-PIN



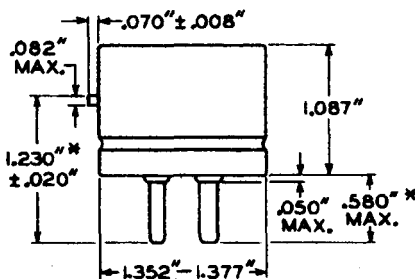
JETEC No. A4-9
RCA No. 4106

MEDIUM-SHELL SMALL 4-PIN WITH BAYONET



JETEC No. A4-10
RCA No. 4102

MEDIUM-METAL-SHELL SMALL 4-PIN WITH BAYONET



JETEC No. A4-89
RCA No. 4102-M1

*For other dimensions, see first page
of the "Small 4-Pin" series.*

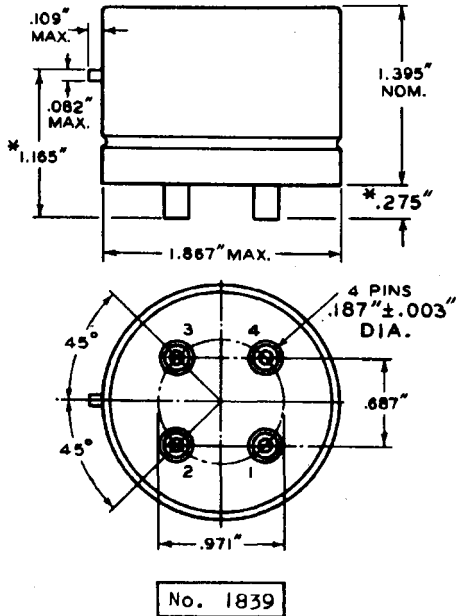
* Add 0.030" for solder on finished tube.



BASES

4-PIN TYPES
With Bottom View

JUMBO 4-PIN



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

Dec. 1, 1942

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

BASES

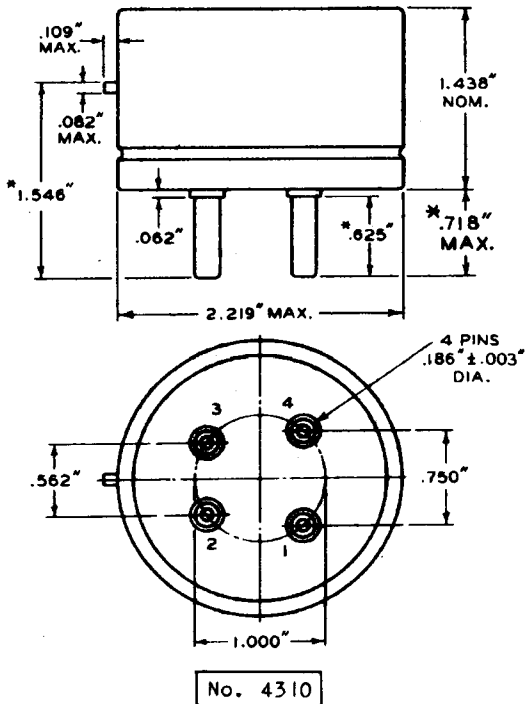


BASES

4-PIN TYPES

With Bottom View

SUPER-JUMBO 4-PIN



* On finished tube, add .030" for solder;

Dec. 1, 1942

RCA RADOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

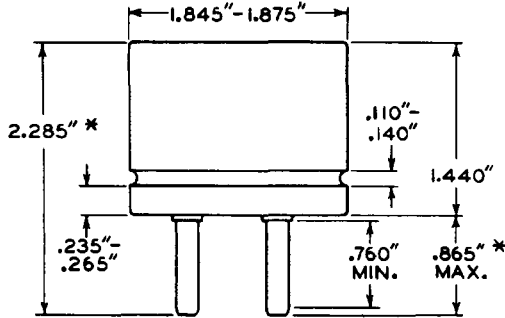
BASES



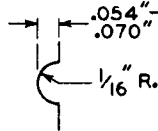
BASES

4-PIN TYPES

MEDIUM-METAL-SHELL SUPER-JUMBO 4-PIN



Detail of Groove



JETEC No. A4-81

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

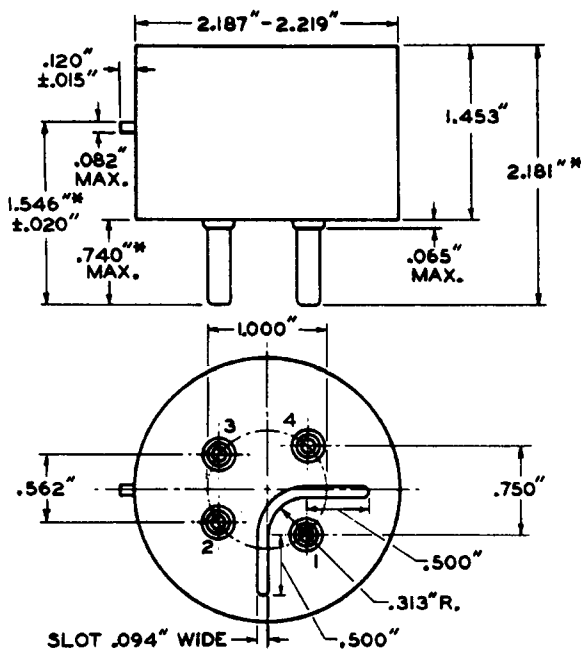
* Add 0.060* for solder on finished tube.



BASES

4-PIN TYPES

LARGE - SHELL SUPER-JUMBO 4 - PIN WITH BAYONET



JETEC No. A4-88

RCA No. 3982

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

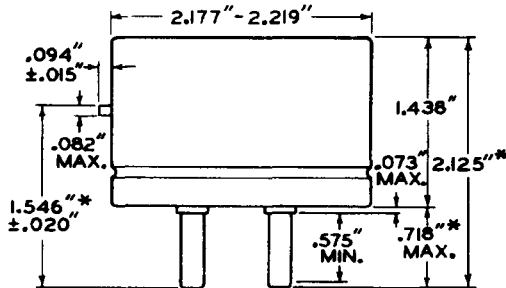
* Add 0.060" for solder on finished tube.



BASES

4-PIN TYPES

LARGE - METAL - SHELL SUPER - JUMBO 4 - PIN WITH BAYONET



JETEC No. A4-18

RCA No. 4310

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

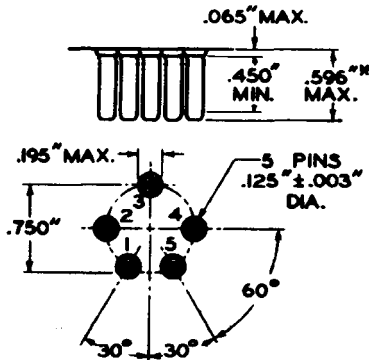
* Add 0.060" for solder on finished tube.



BASES

5-PIN TYPES

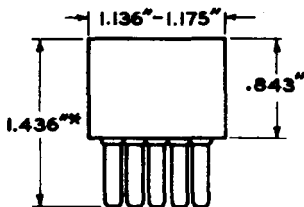
"SMALL 5-PIN" PIN DIMENSIONS AND ORIENTATION



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 $0.1360" \pm 0.0005"$ so located on a $0.7500" \pm 0.0005"$ diameter circle that the distance between centers of the four adjacent holes is $0.3750" \pm 0.0005"$ and the distance between the center of the remaining hole and its adjacent hole centers is $0.5300" \pm 0.0005"$.

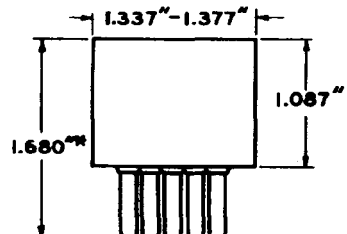
Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

SMALL-SHELL SMALL 5-PIN



JETEC No. A5-6
RCA No. 5108

MEDIUM-SHELL SMALL 5-PIN



JETEC No. A5-11
RCA No. 5106

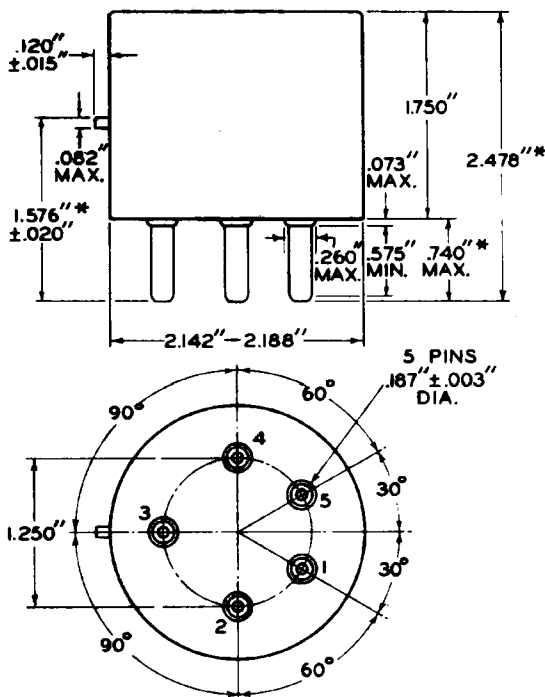
* Add 0.030" for solder on finished tube.



BASES

5-PIN TYPES

MEDIUM-SHELL GIANT 5-PIN WITH BAYONET



JETEC No. A5-19
RCA No. 5325

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.



BASES

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

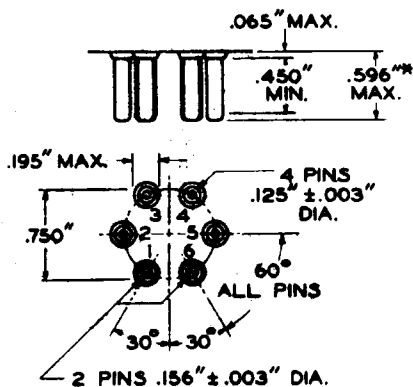
SEPTAR 5-PIN

See Tube Type 4-65A

(RCA)
BASES

6-PIN TYPES

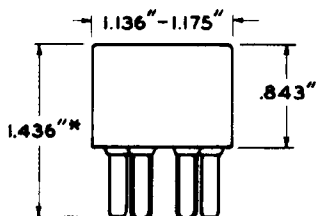
"SMALL 6-PIN"
PIN DIMENSIONS AND ORIENTATION



Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GA6-1) having thickness of 1/4" and six holes, two adjacent with diameters of $0.1650" \pm 0.0005"$ and four with diameters of $0.1360" \pm 0.0005"$ so located on a $0.7500" \pm 0.0005"$ diameter circle that the distance between any two adjacent hole centers is $0.3750" \pm 0.0005"$.

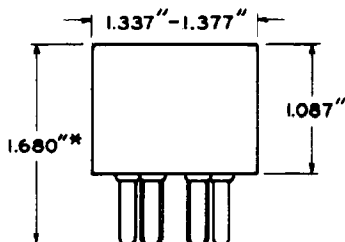
Pin fit in gauge is such that gauge together with supplementary weight totaling 4 pounds will not be lifted when pins are withdrawn.

**SMALL-SHELL
SMALL 6-PIN**



JETEC No. A6-7
RCA No. 6108

**MEDIUM-SHELL
SMALL 6-PIN**



JETEC No. A6-12
RCA No. 6106

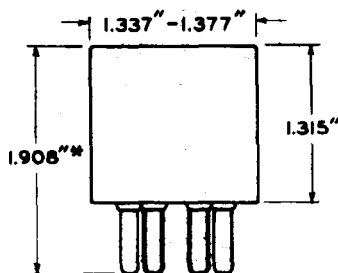
* Add 0.030" for solder on finished tube.



BASES

6-PIN TYPES

LONG MEDIUM-SHELL SMALL 6-PIN



RCA No. 6105

*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

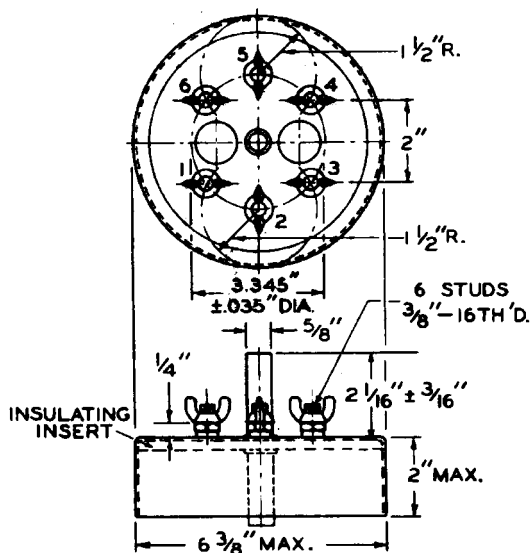
*For details of above bases, see corresponding
OCTAL-8 PIN type*

* Add 0.030" for solder on finished tube.



BASES

6-TERMINAL TYPES



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

JETEC No. FO-6

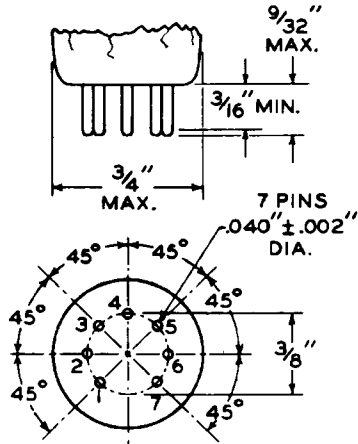
RCA No. 6628



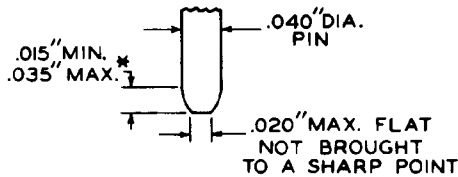
BASES

7-PIN TYPES

SMALL-BUTTON MINIATURE 7-PIN



Miniature Base Pin Contour



JETEC No. E7-1

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 $0.0520" \pm 0.0005"$ so located on a $0.3750" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1434" \pm 0.0005"$.

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.

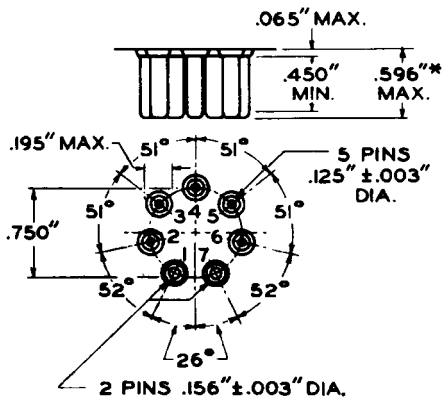
* This dimension around the periphery of any individual pin may vary within the limits shown.



BASES

7-PIN TYPES

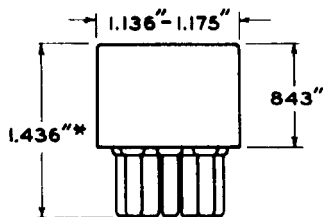
"SMALL 7-PIN" PIN DIMENSIONS AND ORIENTATION



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 $0.1650" \pm 0.0005"$ and five with diameters of $0.1360" \pm 0.0005"$ so located on a $0.7500" \pm 0.0005"$ diameter circle that the distance between centers of the adjacent $0.1650"$ diameter holes is $0.3288" \pm 0.0005"$ and the distance between centers of the adjacent $0.1360"$ diameter holes is $0.3229" \pm 0.0005"$.

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



JETEC No. A7-8
RCA No. 7108

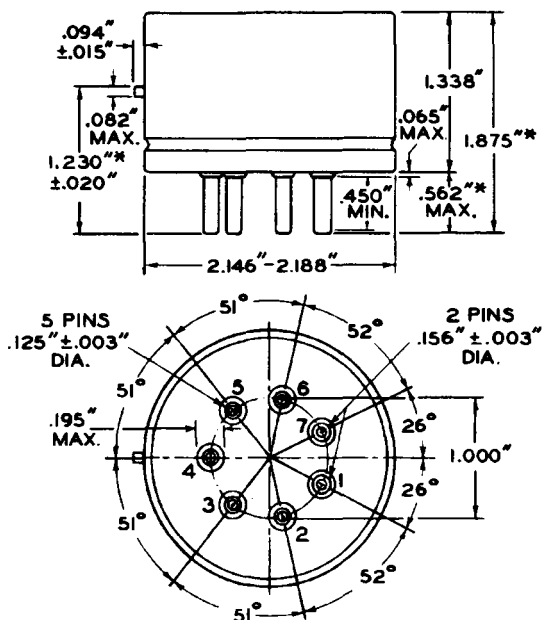
* Add 0.030" for solder on finished tube.



BASES

7-PIN TYPES

MEDIUM-METAL-SHELL GIANT 7-PIN WITH BAYONET



JETEC No. A7-17
RCA No. 7609

VENTILATED MEDIUM-METAL-SHELL GIANT 7-PIN

See Tube Type 4E27A/5-125B

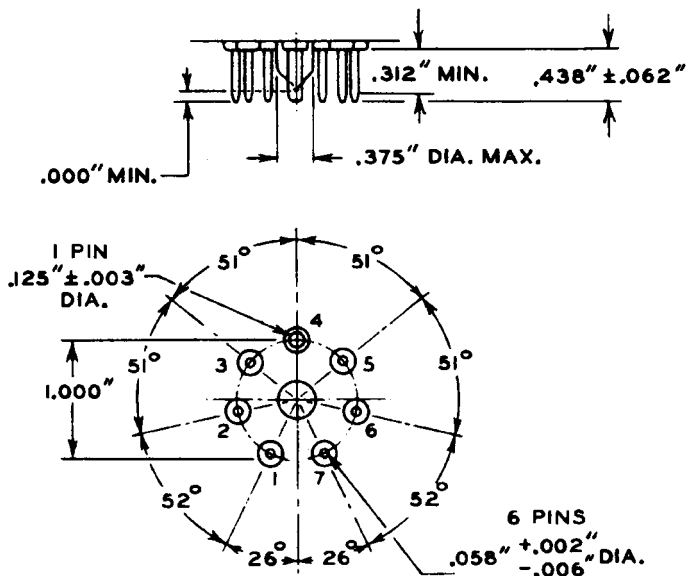
* Add 0.060" for solder on finished tube.



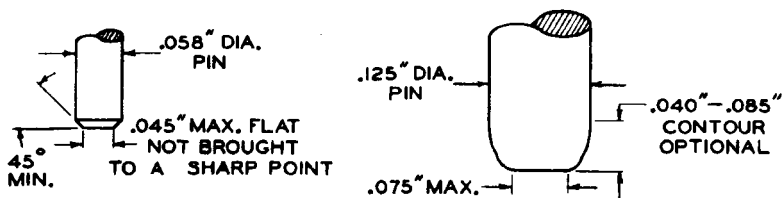
BASES

7-PIN TYPES

"SEPTAR" PIN DIMENSIONS AND ORIENTATION



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 $\pm 5'$ for each angle. Gauge is also provided with a hole $0.500" \pm 0.010$ " concentric with pin circle.

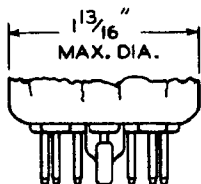
It is essential that the socket shall be constructed with floating-contact clips.



BASES

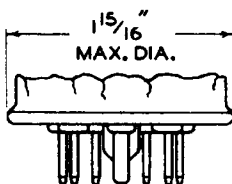
7-PIN TYPES

MEDIUM-BUTTON SEPTAR 7-PIN



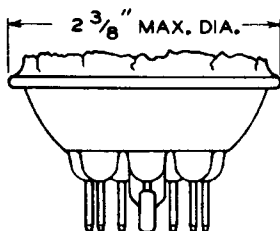
JETEC No. E7-20
RCA No. FSB6014

SMALL-WAFER SEPTAR 7-PIN



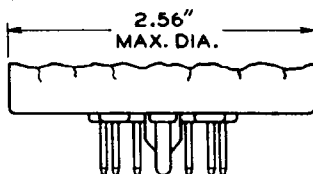
JETEC No. E7-21
RCA No. FSB712

MEDIUM MOLDED-FLARE SEPTAR 7-PIN



JETEC No. E7-2
RCA No. FSB603

JUMBO-BUTTON SEPTAR 7-PIN



JETEC No. E7-46
RCA No. FSB6038

*For other dimensions of above bases, see first
page of the "Septar" series*



BASES

7-PIN TYPES

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
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

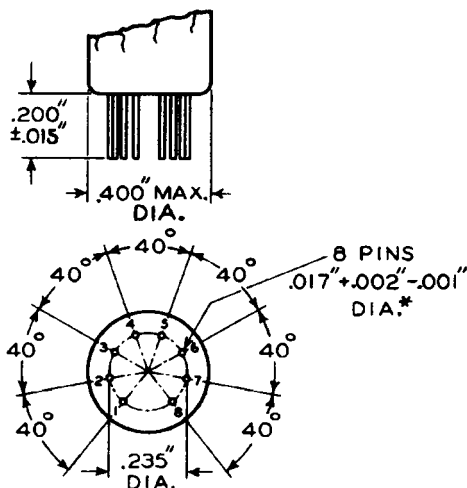
See OUTLINES--Glass Tubes



BASES

8-PIN TYPES

SMALL-BUTTON SUB-MINAR 8-PIN



JETEC No. E8-9

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 JETEC No. GE8-1. This gauge contains a flat-plate section having thickness of 13/64" and nine holes with diameters of $0.0240" \pm 0.0005"$ so located on a $0.2350" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.0804" \pm 0.0005"$.

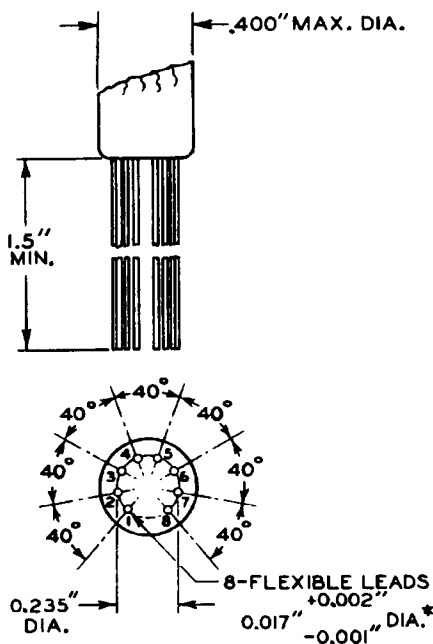
The design of the socket should be such that circuit wiring can not impress lateral strains through the socket contacts on the base pins. The point of bearing of the contacts on the base pins should not be closer than 0.050" from the bottom of the seated tube.

* The specified pin diameter applies only in the zone between 0.050" from the base seat and the end of the pin.



BASES

8-LEAD TYPES



JETEC No. E8-10

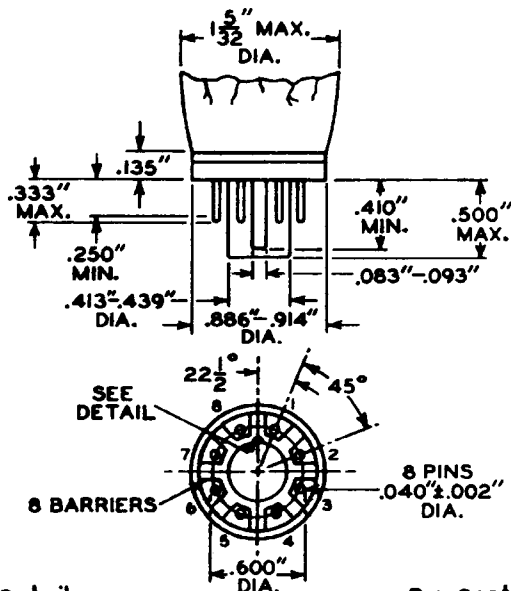
* The specified lead diameter applies only in the zone between 0.050" and 0.250" from the base seat. Between 0.250" and 1.500", a maximum diameter of 0.021" is held. Outside of these zones, the lead diameter is not controlled.



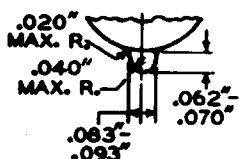
BASES

8-PIN TYPES

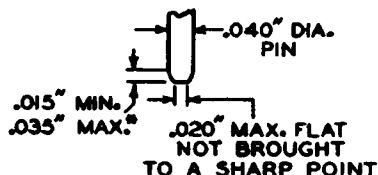
SMALL-BUTTON NEOEIGHTAR



Detail



Pin Contour



No. of Pins	Pins	JEDEC No.	RCA No. #
8-Pin	1,2,3,4,5,6,7,8	88-218	80001
7-Pin■	1,2,3,4, 6,7,8	87-208	80001
7-Pin▲	2,3,4,5,6,7,8	87-219	80001

Base-pin positions are held to tolerances such that the base will fit a flat-plate gauge having a thickness of 3/8" and eight equally spaced holes of $0.0550" \pm 0.0005"$ diameter located on a $0.6000" \pm 0.0005"$ diameter circle. The gauge is also provided with a center hole to provide 0.010" diametric clearance for the lug and key. Pin fit in the gauge shall be such that the entire length of pins will, without undue force, enter into and disengage from the gauge.

* This dimension around the periphery of any individual pin may vary within the limits shown.

* This number applies to wafer only.

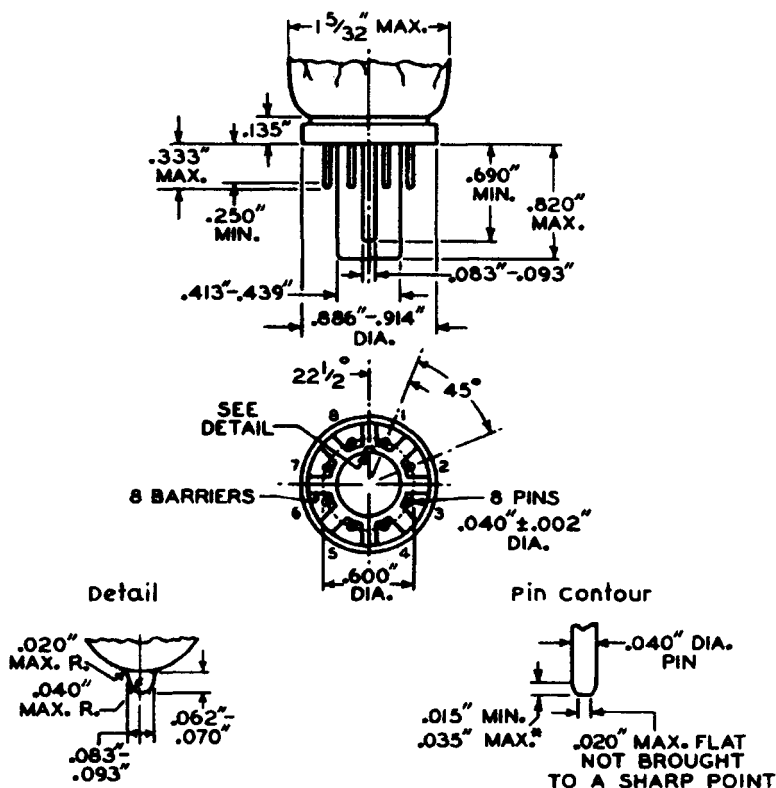
■ Arrangement 1.

▲ Arrangement 2.

BASES

8-PIN TYPES

SMALL-BUTTON EIGHTAR



No. of Pins	Pins	JEDEC No.	RCA No. #
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-181	80000
7-Pin ■	2, 3, 4, 5, 6, 7, 8	B7-182	80000
7-Pin ▲	1, 2, 3, 4, 6, 7, 8	B7-183	80000

Base-pin positions are held to tolerances such that the base will fit a flat-plate gauge having a thickness of $3/8$ " and eight equally spaced holes of $0.0550" \pm 0.0005$ " diameter located on a $0.6000" \pm 0.0005$ " diameter circle. The gauge is also provided with a center hole to provide 0.010 " diametric clearance for the lug and key. Pin fit in the gauge shall be such that the entire length of pins will, without undue force, enter into and disengage from the gauge.

* This dimension around the periphery of any individual pin may vary within the limits shown.

* This number applies to wafer only.

■ Arrangement 1.

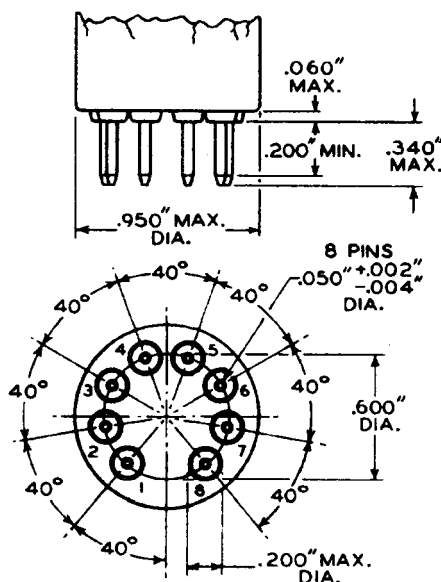
▲ Arrangement 2.



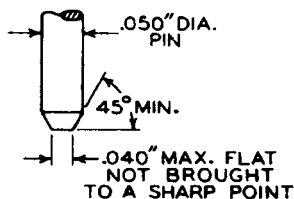
BASES

8-PIN TYPES

SMALL-BUTTON NEODITETRAR 8-PIN



Neoditetrar-Base Pin Contour



JEDEC No. E8-49
RCA No. FSB6006*

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 $1/4''$ and nine holes with diameters of $0.0700'' \pm 0.0005''$ so located on a $0.6000'' \pm 0.0005''$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2052'' \pm 0.0005''$.

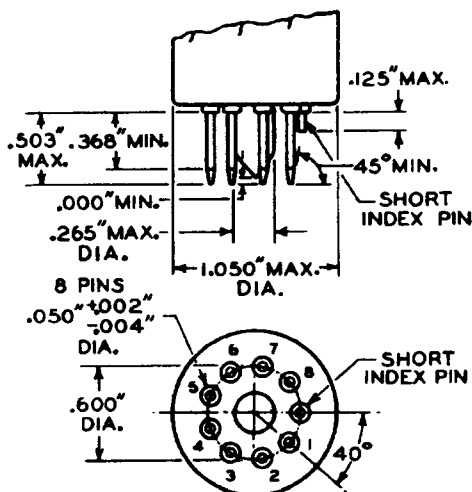
* This number applies to stem only.



BASES

8-PIN TYPES

SMALL-BUTTON DITETRAR 8-PIN

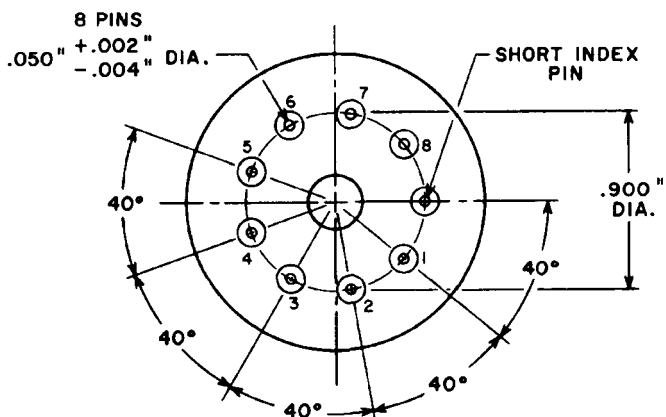
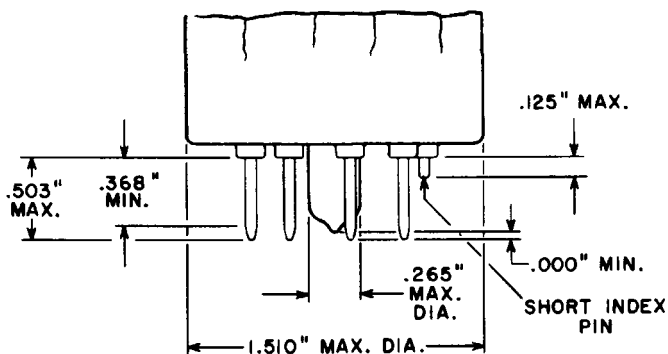


JEDEC No. E8-11
RCA No. { FSB675*
 { FSB6015*

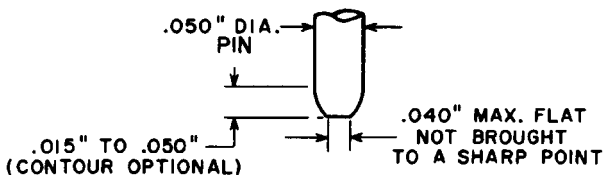
Base-pin positions are held to tolerances such that entire length of pins will, without undue force, pass into and disengage from flat-plate gauge having thickness of 1/4" and nine holes with diameters of $0.0700" \pm 0.0005"$ so located on a $0.6000" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2052" \pm 0.0005"$. Gauge is also provided with a hole having diameter of $0.300" \pm 0.001"$ concentric with the pin circle.

* This number applies to stem only.

SMALL-BUTTON SUPERDITETRAR Pin Dimensions and Orientation



Superditetrar-Base-Pin Contour



JEDEC No. E8-78
RCA No. FSB6055*

Base-pin positions are held to tolerances such that entire length of pins will, without undue force, pass into and disengage from a flat-plate gauge having a thickness of

* This number applies to stem only.



Bases

8-Pin Types

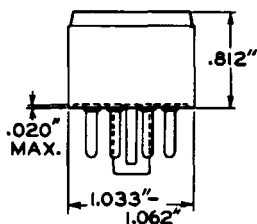
1/4" and nine holes with diameters of $0.0700" \pm 0.0005"$ so located on a $0.9000" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.3078" \pm 0.0005"$. Gauge is also provided with a hole having diameter of $0.300" \pm 0.001"$ concentric with the pin circle.



Bases

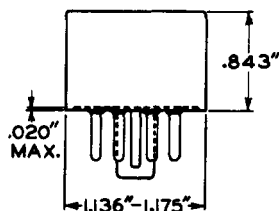
8-Pin Types

DWARF-SHELL OCTAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JEDEC No.</i>	<i>RCA No.</i>
5-Pin	1, 3, 5, 7, 8	B5-45	-

SMALL-SHELL OCTAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JEDEC No.</i>	<i>RCA No.</i>
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-1	8529
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-2	7529
6-Pin	1, 2, 3, 5, 7, 8	B6-3	6529
5-Pin	1, 2, 4, 6, 8	B5-5	5529

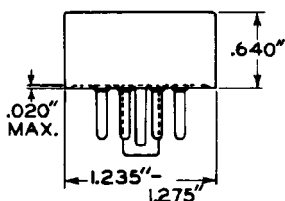
For other dimensions, see first
page of the "Octal" series



Bases

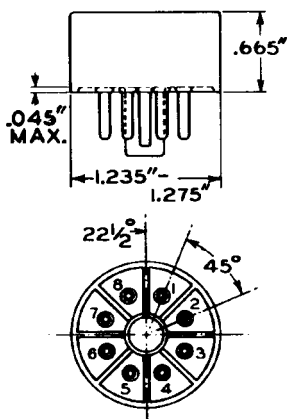
8-Pin Types

SHORT INTERMEDIATE-SHELL OCTAL



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-46	8555
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-47	7555
6-Pin	1, 2, 3, 5, 7, 8	B6-48	6555
5-Pin	1, 2, 4, 6, 8	B5-49	5555

SHORT INTERMEDIATE-SHELL OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-58	8565
7-Pin ^a	1, 2, 3, 4, 5, 7, 8	B7-59	7565
7-Pin ^b	1, 2, 3, 5, 6, 7, 8	B7-211	-
6-Pin ^a	1, 2, 3, 5, 7, 8	B6-60	6565
6-Pin ^b	2, 3, 4, 5, 7, 8	B6-84	6765
5-Pin ^a	1, 2, 4, 6, 8	B5-62	5565
5-Pin ^b	2, 3, 5, 7, 8	B5-85	5765
5-Pin ^c	2, 4, 5, 7, 8	B5-187	-

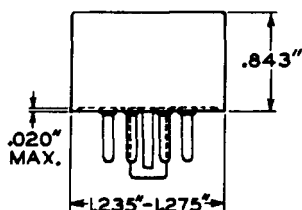
For other dimensions, see first
page of the "Octal" series

- ^a Arrangement 1.
^b Arrangement 2.
^c Arrangement 3.

Bases

8-Pin Types

INTERMEDIATE-SHELL OCTAL



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-6	8537
7-Pin ^a	1, 2, 3, 4, 5, 7, 8	B7-7	7537
7-Pin ^b	1, 2, 3, 5, 6, 7, 8	B7-166	39100
6-Pin ^a	1, 2, 3, 5, 7, 8	B6-8	6537
6-Pin ^b	2, 3, 4, 5, 7, 8	B6-81	6737
5-Pin ^a	1, 2, 4, 6, 8	B5-10	5537
5-Pin ^b	2, 3, 5, 7, 8	B5-82	5737

For other dimensions, see first page
of the "Octal" series

^a Arrangement 1.

^b Arrangement 2.



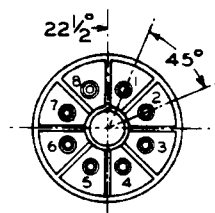
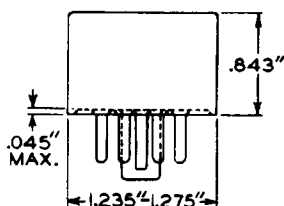
RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

BASES 14
3-61

Bases

8-Pin Types

INTERMEDIATE-SHELL OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-142	8566
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-143	7566
6-Pin ^a	1, 2, 3, 5, 7, 8	B6-144	6566
6-Pin ^b	2, 3, 4, 5, 7, 8	B6-145	6766
6-Pin ^c	2, 3, 5, 6, 7, 8	B6-229	39111
5-Pin ^a	1, 2, 4, 6, 8	B5-146	5566
5-Pin ^b	2, 3, 5, 7, 8	B5-147	5766

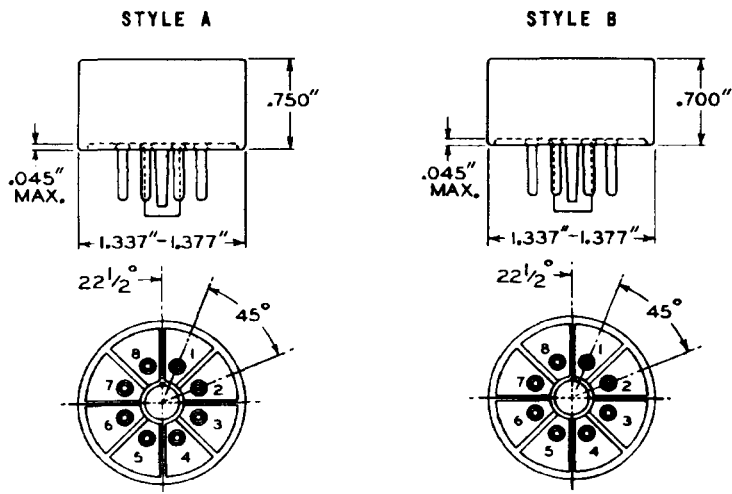
For other dimensions, see first page
of the "Octal" series

- ^a Arrangement 1.
- ^b Arrangement 2.
- ^c Arrangement 3.

Bases

8-Pin Types

SHORT MEDIUM-SHELL OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	Style	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	A	B8-110	39081
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B	B8-118	8564
7-Pin ^a	1, 2, 3, 4, 5, 7, 8	A	B7-111	-
7-Pin ^a	1, 2, 3, 4, 5, 7, 8	B	B7-119	7564
7-Pin ^b	1, 2, 3, 5, 6, 7, 8	B	B7-227	39113
7-Pin ^c	1, 2, 3, 4, 6, 7, 8	B	B7-235	-
6-Pin ^a	1, 2, 3, 5, 7, 8	A	B6-112	-
6-Pin ^a	1, 2, 3, 5, 7, 8	B	B6-120	6564
6-Pin ^b	2, 3, 4, 5, 7, 8	A	B6-148	-
6-Pin ^b	2, 3, 4, 5, 7, 8	B	B6-122	6764
5-Pin ^a	1, 2, 4, 6, 8	A	B5-113	-
5-Pin ^a	1, 2, 4, 6, 8	B	B5-121	5564
5-Pin ^b	2, 3, 5, 7, 8	A	B5-149	-
5-Pin ^b	2, 3, 5, 7, 8	B	B5-123	5764
5-Pin ^c	1, 2, 3, 5, 7	A	B5-234	-
5-Pin ^c	1, 2, 3, 5, 7	B	B5-239	39116
5-Pin ^d	2, 4, 5, 7, 8	B	B5-190	39110

For other dimensions, see first page
of the "Octal" series

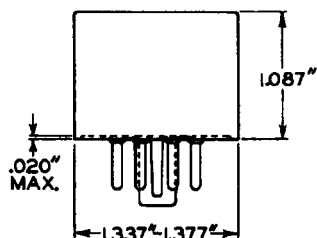
- ^a Arrangement 1.
^b Arrangement 2.
^c Arrangement 3.
^d Arrangement 4.



Bases

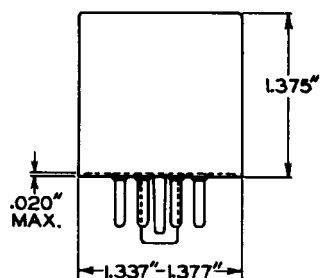
8-Pin Types

MEDIUM-SHELL OCTAL



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-11	8533
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-12	7533
6-Pin	1, 2, 3, 5, 7, 8	B6-13	6533
5-Pin ^a	1, 2, 4, 6, 8	B5-15	5533
5-Pin ^b	2, 3, 5, 7, 8	B5-224	5733

LONG MEDIUM-SHELL OCTAL



No. of Pins	Pins	JEDEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-65	8545
5-Pin	2, 3, 5, 7, 8	B5-80	5545

For other dimensions of above bases, see first page of the "Octal" series

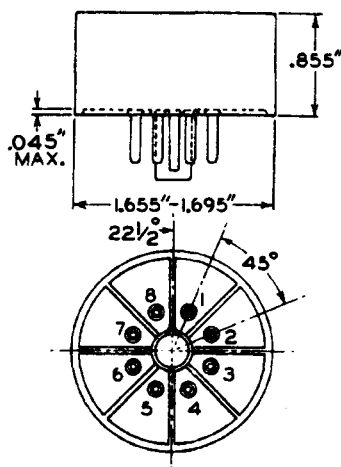
^a Arrangement 1.
^b Arrangement 2.



BASES

8-PIN TYPES

SHORT JUMBO-SHELL OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-71	8556
7-Pin	1, 2, 3, 4, 5, 7, 8	87-72	7556
6-Pin	1, 2, 3, 5, 7, 8	86-73	6556
5-Pin	1, 2, 4, 6, 8	85-74	5556

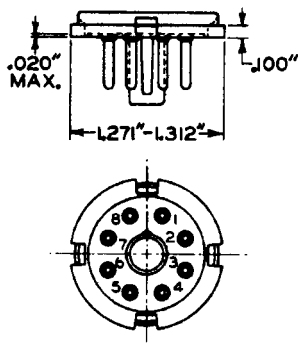
*For other dimensions, see first page
of the "Octal" series*



BASES

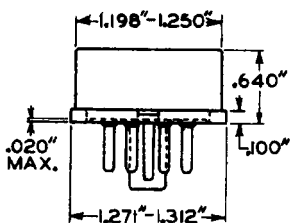
8-PIN TYPES

SMALL-WAFER OCTAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>	
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-21	8527	8540
7-Pin	1, 2, 3, 4, 5, 7, 8	87-22	7527	7540
6-Pin	1, 2, 3, 5, 7, 8	86-23	6527	6540
5-Pin	1, 2, 4, 6, 8	85-25	5527	5540

SMALL-WAFER OCTAL WITH SLEEVE



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>	
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-44	MB8527-602	

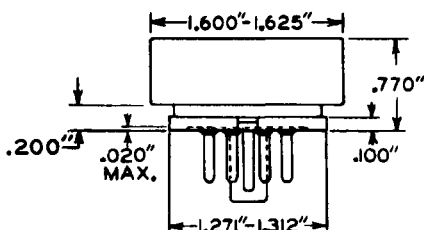
*For other dimensions of above bases, see first
page of the "Octal" series*



BASES

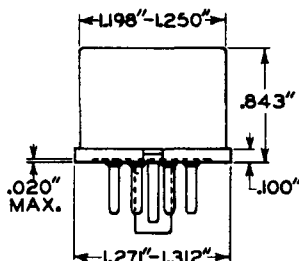
8-PIN TYPES

SMALL-WAFER OCTAL WITH ".770" SLEEVE



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-150	MB8540-7
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-151	MB7540-4
6-Pin ■	1, 2, 3, 5, 7, 8	B6-152	MB6540-5
6-Pin ▲	2, 3, 4, 5, 7, 8	B6-153	MB6740-1
5-Pin ■	1, 2, 4, 6, 8	B5-154	MB5540-1
5-Pin ▲	2, 3, 5, 7, 8	B5-155	MB5740-1

SMALL-WAFER OCTAL WITH ".843" SLEEVE



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-26	MB8527-1
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-27	MB7527-1
6-Pin	1, 2, 3, 5, 7, 8	B6-28	MB6527-1
5-Pin	1, 2, 4, 6, 8	B5-30	MB5527-1

For other dimensions of above bases, see first page of the "Octal" series

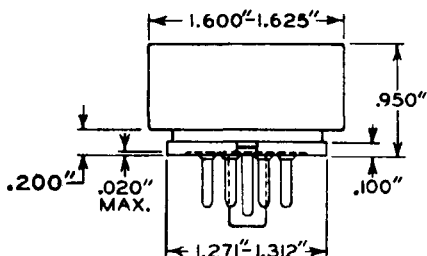
- Arrangement 1.
▲ Arrangement 2.



BASES

8-PIN TYPES

SMALL-WAFER OCTAL WITH ".950" SLEEVE



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-191	MB8540-8
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-192	MB7540-5
6-Pin ■	1, 2, 3, 5, 7, 8	B6-193	MB6540-6
6-Pin ▲	2, 3, 4, 5, 7, 8	B6-194	MB6740-2
5-Pin ■	1, 2, 4, 6, 8	B5-195	MB5540-3
5-Pin ▲	2, 3, 5, 7, 8	B5-196	MB5740-2

For other dimensions of above base, see first page of the "Octal" series

■ Arrangement 1.

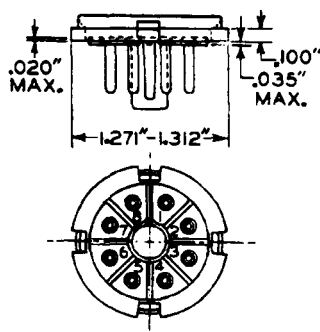
▲ Arrangement 2.



BASES

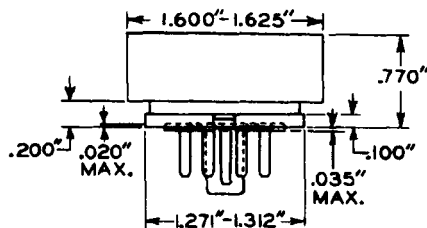
8-PIN TYPES

SMALL-WAFER OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-67	8559
7-Pin	1, 2, 3, 4, 5, 7, 8	87-68	7559
6-Pin■	1, 2, 3, 5, 7, 8	86-69	6559
6-Pin▲	2, 3, 4, 5, 7, 8	86-205	6759
5-Pin■	1, 2, 4, 6, 8	85-70	5559
5-Pin▲	2, 3, 5, 7, 8	85-206	5759

SMALL-WAFER OCTAL WITH EXTERNAL BARRIERS AND "770" SLEEVE



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-159	MB8559-2
7-Pin	1, 2, 3, 4, 5, 7, 8	87-160	MB7559-1
6-Pin■	1, 2, 3, 5, 7, 8	86-161	MB6559-1
6-Pin▲	2, 3, 4, 5, 7, 8	86-162	MB6759-1
5-Pin■	1, 2, 4, 6, 8	85-163	MB5559-1
5-Pin▲	2, 3, 5, 7, 8	85-164	MB5759-1

For other dimensions of above bases, see first page of the "Octal" series

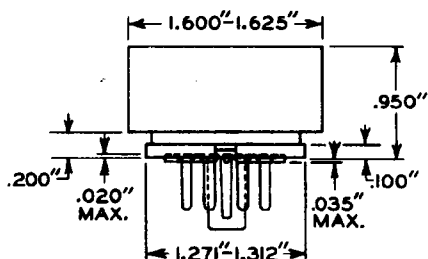
- Arrangement 1.
▲ Arrangement 2.



BASES

8-PIN TYPES

SMALL-WAFER OCTAL WITH EXTERNAL BARRIERS AND ".950" SLEEVE



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	88-197	MB8559-4
7-Pin	1, 2, 3, 4, 5, 7, 8	87-198	MB7559-2
6-Pin ■	1, 2, 3, 5, 7, 8	86-199	MB6559-2
6-Pin ▲	2, 3, 4, 5, 7, 8	86-200	MB6759-2
5-Pin ■	1, 2, 4, 6, 8	85-201	MB5559-2
5-Pin ▲	2, 3, 5, 7, 8	85-202	MB5759-2

*For other dimensions of above base, see first
page of the "Octal" series*

■ Arrangement 1.

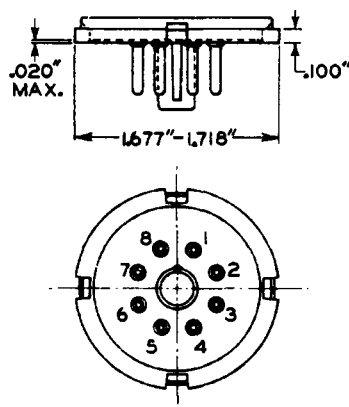
▲ Arrangement 2.



BASES

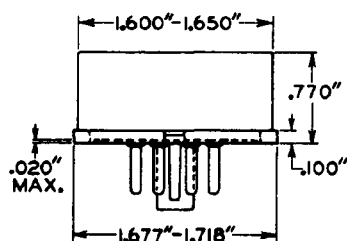
8-PIN TYPES

LARGE-WAFER OCTAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-32	8534

LARGE-WAFER OCTAL WITH SLEEVE



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-86	MB8534-601

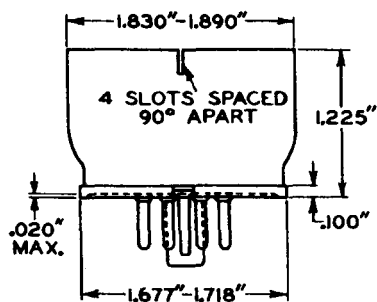
For other dimensions of above bases, see first page of the "Octal" series



BASES

8-PIN TYPES

LARGE-WAFER OCTAL WITH FLARED SLEEVE



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-188	MB8534-600

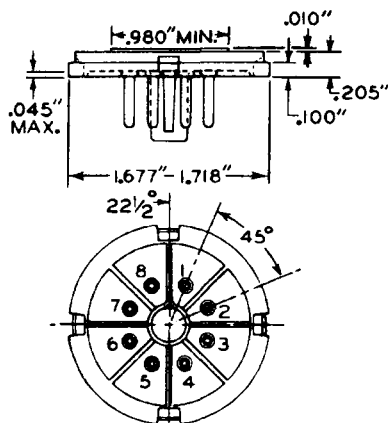
*For other dimensions, see first page
of the "Octal" series*



BASES

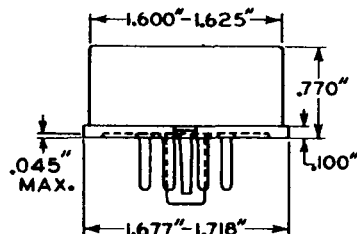
8-PIN TYPES

LARGE-WAFER OCTAL WITH EXTERNAL BARRIERS



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-94	8554
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-95	7554
6-Pin	1, 2, 3, 5, 7, 8	B6-96	6554
5-Pin	1, 2, 4, 6, 8	B5-97	5554

LARGE-WAFER OCTAL WITH EXTERNAL BARRIERS AND SLEEVE



No. of Pins	Pins	JETEC No.	RCA No.
8-Pin	1, 2, 3, 4, 5, 6, 7, 8	B8-98	MB8554-1
7-Pin	1, 2, 3, 4, 5, 7, 8	B7-99	MB7554-1
6-Pin	1, 2, 3, 5, 7, 8	B6-100	MB6554-1
5-Pin	1, 2, 4, 6, 8	B5-101	MB5554-2

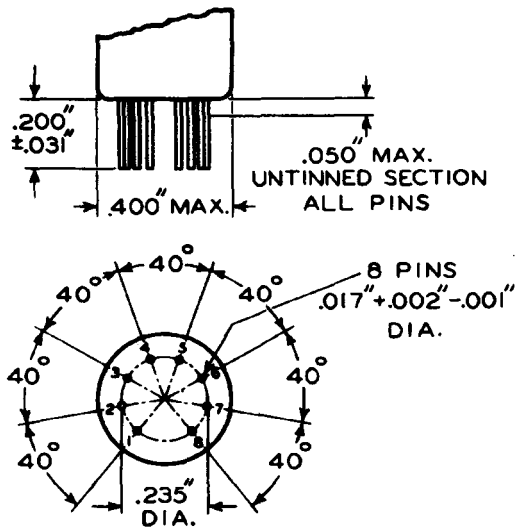
For other dimensions of above bases, see first page of the "Octal" series



BASES

8-PIN TYPES
With Bottom View

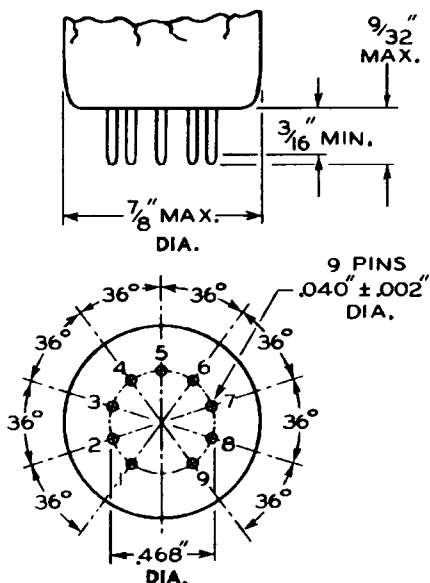
SMALL-BUTTON SUB-MINAR 8-PIN BASE



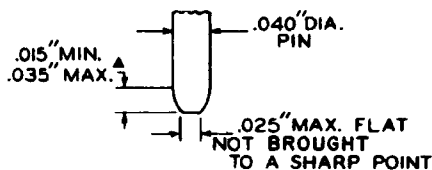
92CS-7158

The design of the socket should be such that the point of bearing of the contacts on the base pins should not be closer than 0.050" from the bottom of the seated tube.

SMALL-BUTTON NOVAL 9-PIN Pin Dimensions and Orientation



Noval-Base-Pin Contour



JEDEC No. E9-1
RCA No. FSD169

Base-pin positions are held to tolerances such that entire length of pins will, without undue force, pass into and disengage from gauge JEDEC No. GE9-1. This gauge contains a flat-plate section having thickness of $1/4$ " and ten holes with diameters of $0.0520" \pm 0.0005"$ so located on a $0.4680" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1446" \pm 0.0005"$.

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.

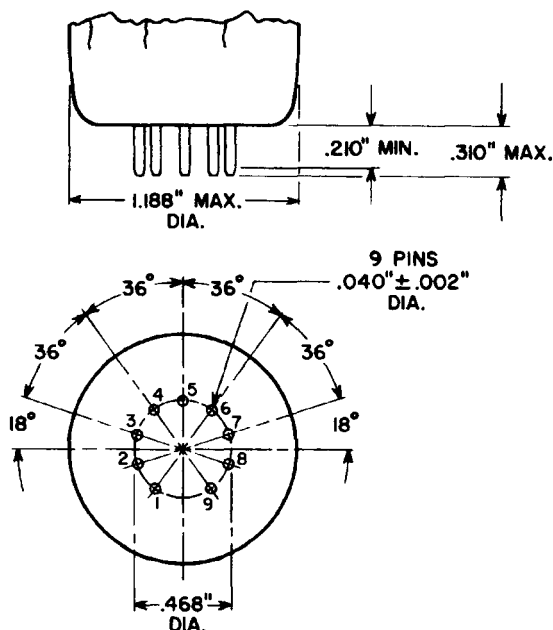
* This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.



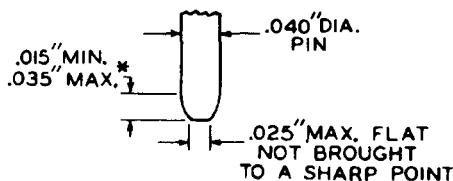
Bases

9-Pin Types

LARGE-BUTTON NEONOVAL 9-PIN Pin Dimensions and Orientation



Neonoval-Base-Pin Contour



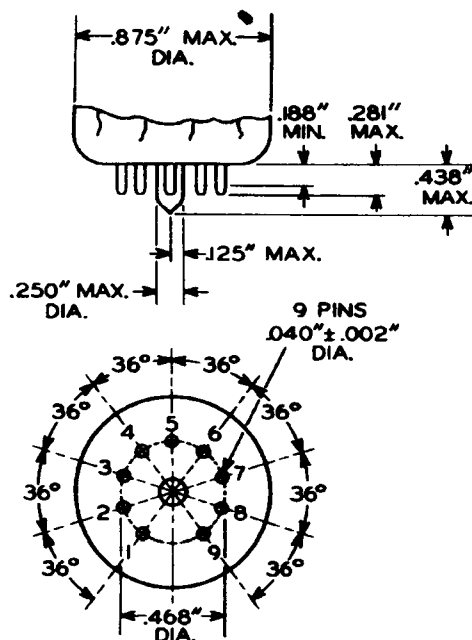
JEDEC No. E9-68
RCA No. FSD171

Base-pin positions are held to tolerances such that entire length of pins will, without undue force, pass into and disengage from gauge JEDEC No. GE9-4. This gauge contains a flat-plate section having thickness of 1/4" and ten holes with diameters of $0.0520" \pm 0.0005"$ so located on a $0.4680" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1446" \pm 0.0005"$.

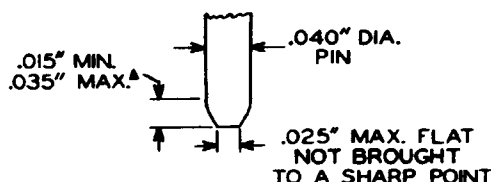
The design of the socket should be such that circuit wiring can not impress lateral strains through the socket contacts on the base pins. The point of bearing of the contacts on the base pins should not be closer than 1/8" from the bottom of the seated tube.

* This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.

SMALL-BUTTON NINAR 9-PIN Pin Dimensions and Orientation



Ninar-Base-Pin Contour



JEDEC No. E9-37
RCA No. FSB6047

Base-pin positions are held to tolerances such that entire length of pins will, without undue force, pass into and disengage from gauge JEDEC No. GE9-2. This gauge contains a flat-plate section having thickness of 0.250" and ten holes with diameters of $0.0520" \pm 0.0005"$ so located on a $0.4680" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1446" \pm 0.0005"$. Gauge is also provided with a hole $0.281"$ minimum diameter concentric with the pin circle.

▲ This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.



Bases

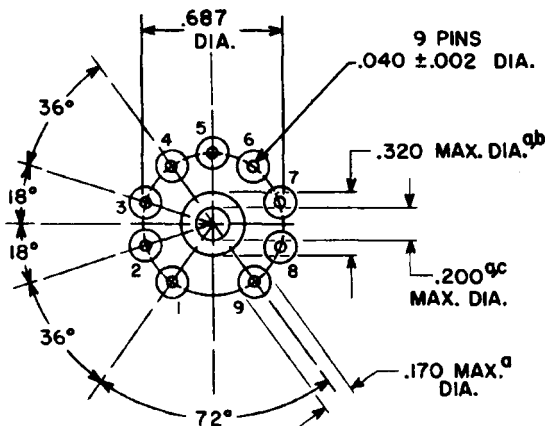
9-Pin Types

SMALL-BUTTON NINAR 9-PIN (CONT'D)

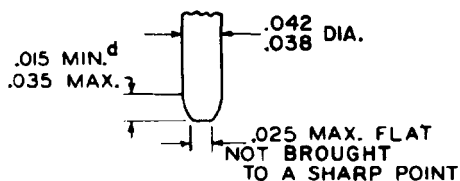
The design of the socket should be such that circuit wiring cannot impress lateral strains through the socket contacts on the base pins. The point of bearing of the contacts on the base pins should not be closer than 1/8" from the bottom of the seated tube.



NOVAR
Pin Dimensions and Orientation



Novar-Base-Pin Contour



92CS-11128RI

DIMENSIONS IN INCHES

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 a thickness of 0.350" and ten holes with diameters of $0.0520" \pm 0.0005"$ so located on a $0.6870" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2123" \pm 0.0005"$. Gauge is also provided with a hole $0.330" + 0.005" - 0.000"$ diameter concentric with the pin circle.

^a This dimension applies only to JEDEC Base Nos. E9-88 and E9-89.

^b Limit of exhaust tube fillet diameter.

^c Exhaust tube maximum diameter.

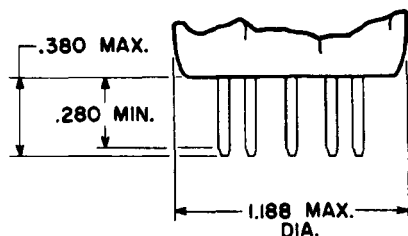
^d This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.



9-Pin Types

TOP EXHAUST NOVAR

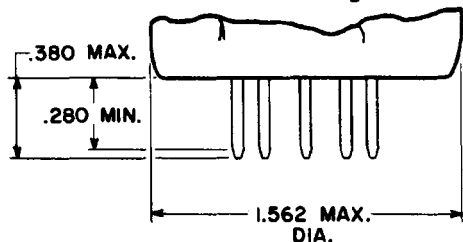
Small-Button Base



JEDEC No. E9-75
RCA No. FSE36

Fits Gauge
JEDEC No. GE9-5

Large-Button Base

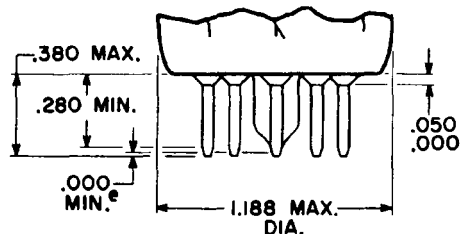


JEDEC No. E9-76
RCA No. FSE22A

Fits Gauge
JEDEC No. GE9-6

BOTTOM EXHAUST NOVAR

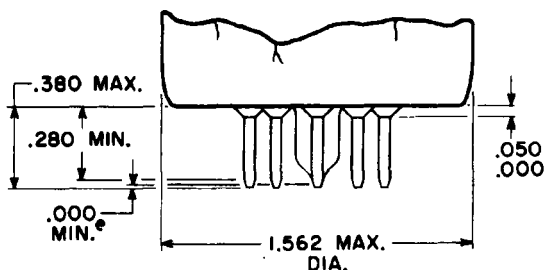
Small-Button Base



JEDEC No. E9-89
RCA No. FSE43G

Fits Gauge
JEDEC No. GE9-5

Large-Button Base



JEDEC No. E9-88
RCA No. FSE43C

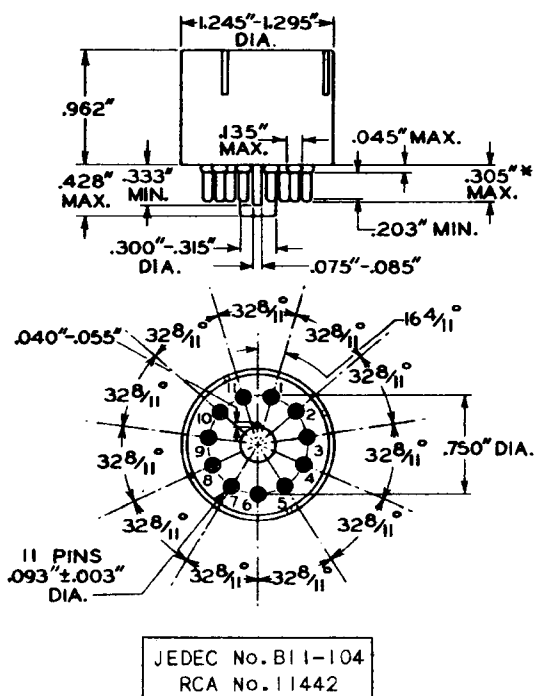
Fits Gauge
JEDEC No. GE9-6

92CM-11300RI

DIMENSIONS IN INCHES

^e The exhaust tip shall not extend beyond the plane of the base pin ends.

SMALL-SHELL NEOSUBMAGNAL 11-PIN Pin Dimensions and Orientation



Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JEDEC Group 2, No. GB11-2) having thickness of $1/4$ " and eleven holes with diameters of 0.1030 ± 0.0005 " so located on a 0.7500 ± 0.0005 " diameter circle that the distance along the chord between any two adjacent hole centers is 0.213 ± 0.0005 ".

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

* Add 0.030" for solder on finished tube.

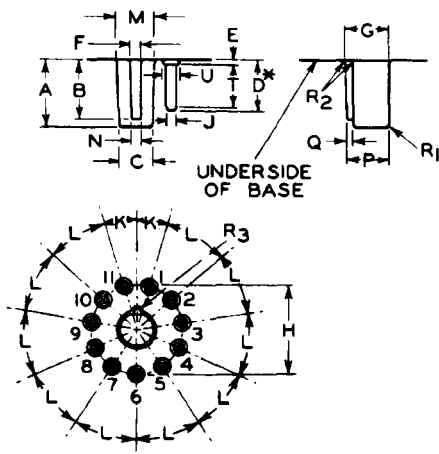




BASES

11-PIN TYPES

"SUBMAGNAL" PIN DIMENSIONS AND ORIENTATION AND INDEX GUIDE



	Min.	Center	Max.		Min.	Center	Max.
A	.550"	.560"	.570"	L	—	32-8/11°	—
B	.490"	.500"	.510"	M	.305"	.312"	.317"
C	.300"	.308"	.315"	N	.075"	.080"	.085"
D	.427"	.437"	.447"	P	.343"	.353"	.363"
E	—	—	.050"	Q	.040"	.047"	.055"
F	.085"	.090"	.095"	R ₁	—	.031"	—
G	.352"	.362"	.372"	R ₂	—	—	.050"
H	—	.750"	—	R ₃	—	.040"	—
J	.090"	.093"	.096"	T	.340"	—	—
K	—	16-4/11°	—	U	—	—	.135"

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB11-2) having thickness of 1/4" and eleven holes with diameters of $0.1030" \pm 0.0005"$ so located on a $0.7500" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2113" \pm 0.0005"$.

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

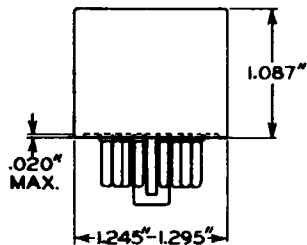
* Add 0.030" for solder on finished tube.



BASES

11-PIN TYPES

SMALL-SHELL SUBMAGNAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
11-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	B11-88	11344

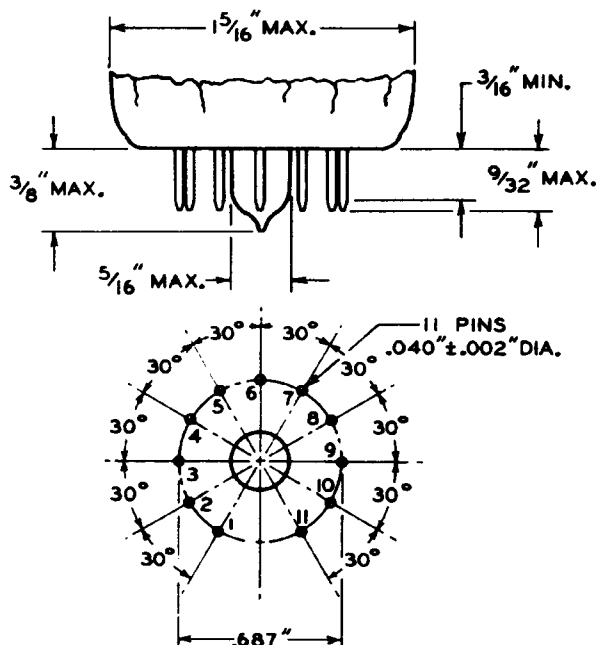
*For other dimensions, see first page
of the "Submagnal" series*



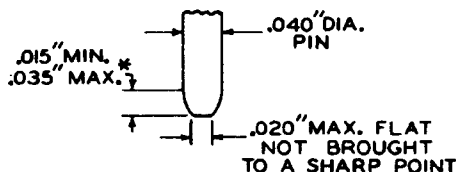
BASES

11-PIN TYPES

SMALL-BUTTON UNIDEKAR 11-PIN



Unidekar Base Pin Contour



JETEC No. E11-22
RCA No. FSB6019

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 1/4" and twelve holes with diameters of $0.0520" \pm 0.0005"$ so located on a $0.6870" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1778" \pm 0.0005"$. Gauge is also provided with a hole $0.3750" \pm 0.0100"$ concentric with the pin circle.

* This dimension around the periphery of any individual pin may vary within the limits shown.



BASES

11-PIN TYPES

SMALL-BUTTON UNIDEKAR 11-PIN (CONT'D)

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.

Technical drawing of a 12-pin connector, showing top and side views with dimensions.

Top View Dimensions:

- Pin Diameter: $.040'' \pm .002''$
- Pin Spacing (Angular): 30°
- Inner Circle Diameter (Pin Centers): $.120''$ MAX. DIA.
- Outer Circle Diameter (Pin Centers): $.687''$ DIA.
- Number of Pins: 12 PINS

Side View Dimensions:

- Total Height: $.105'' \pm .015''$
- Top Flange Diameter: $1.436''$ MAX. DIA.
- Pin Height: $.040''$ MAX.
- Pin Spacing (Linear): $.188''$ MIN.
- Distance from Pin Centers to Outer Edge: $.281''$ MAX.
- Distance between Pins: $1.200''$ MAX. DIA.

JEDEC No. E11-81

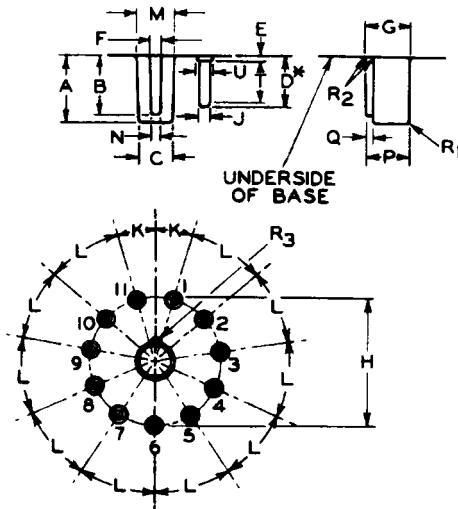
▲ This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.



BASES

11-PIN TYPES

"MAGNAL" PIN DIMENSIONS AND ORIENTATION AND INDEX GUIDE



	Min.	Center	Max.		Min.	Center	Max.
A	.550"	.560"	.570"	L	-	32-8/11°	-
B	.490"	.500"	.510"	M	.305"	.312"	.317"
C	.300"	.308"	.315"	N	.075"	.080"	.085"
D	.427"	.437"	.447"	P	.343"	.353"	.363"
E	-	-	.050"	Q	.040"	.047"	.055"
F	.085"	.090"	.095"	R ₁	-	.031"	-
G	.352"	.362"	.372"	R ₂	-	-	.050"
H	-	1.063"	-	R ₃	-	.040"	-
J	.090"	.093"	.096"	T	.340"	-	-
K	-	16-4/11°	-	U	-	-	.135"

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB11-1) having thickness of 1/4" and eleven holes with diameters of $0.1030" \pm 0.0005"$ so located on a $1.0630" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2995" \pm 0.0005"$.

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

* Add 0.030" for solder on finished tube.

JULY 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

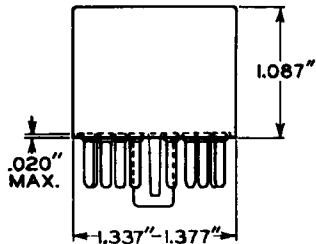
BASES 20



BASES

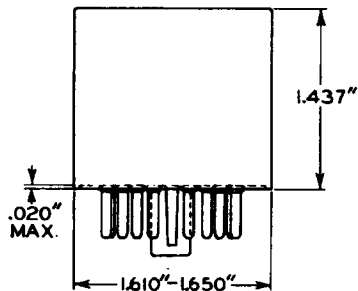
11-PIN TYPES

SMALL-SHELL MAGNAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
11-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	B11-33	11247

MEDIUM-SHELL MAGNAL



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
11-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	B11-66	11248

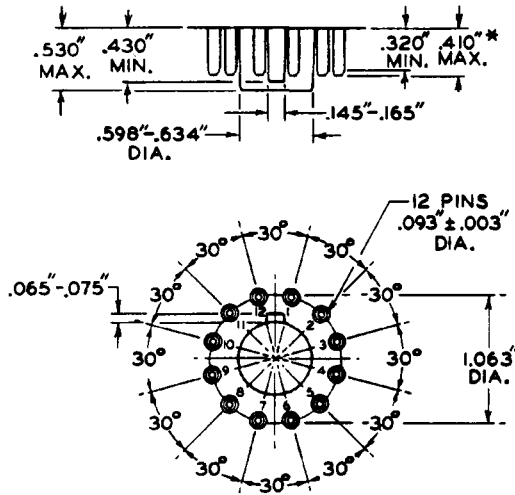
For other dimensions of above bases, see first page of the "Magnal" series



BASES

12-PIN TYPES

"DUODECAL" PIN DIMENSIONS AND ORIENTATION AND INDEX GUIDE



Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB12-1) having thickness of 1/4" and twelve holes with diameters of $0.1030" \pm 0.0005"$ so located on a $1.0630" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2751" \pm 0.0005"$.

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

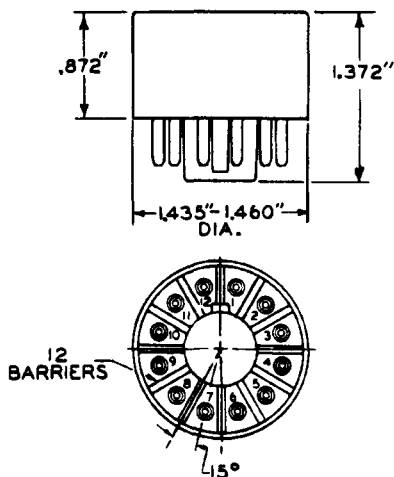
* Add 0.030* for solder on finished tube.



BASES

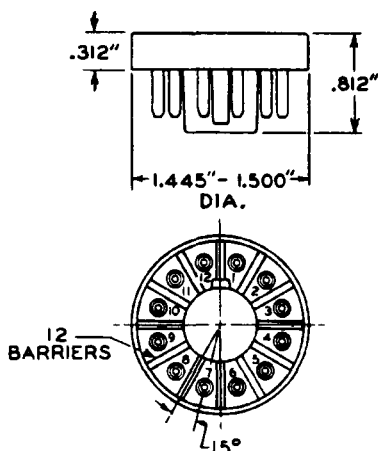
12-PIN TYPES

DWARF-SHELL DUODECAL



No. of Pins	Pins	JETEC No.	RCA No.
12-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	B12-157	12263
6-Pin	1, 2, 3, 10, 11, 12	B6-158	6263

ULTRASHORT SMALL-SHELL DUODECAL



No. of Pins	Pins	JETEC No.	RCA No.
12-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	B12-186	12261

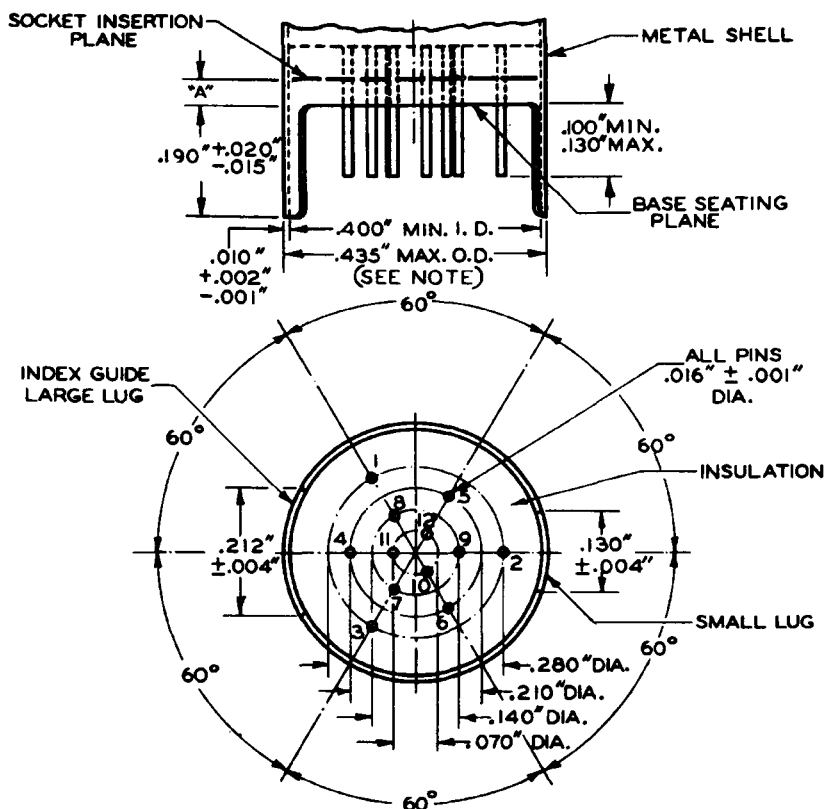
For other dimensions of above bases, see first page of the "Duodecal" series

Bases

12-Pin Types

MEDIUM CERAMIC-WAFER TWELVAR BASE

Pin Dimensions and Orientation and Index Guide



NOTE: MAXIMUM OUTSIDE DIAMETER OF 0.440" IS PERMITTED ALONG THE 0.190" LUG LENGTH.

No. of Pins	Pins	Dimension "A" Max.	JEDEC No.	RCA No.
12 - Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	0.040"	E12-64	-
7 - Pin ^a	1, 2, 4, 6, 7, 10, 12	0.040"	E7-83	-
7 - Pin ^b	1, 3, 5, 6, 7, 10, 12	0.020"	E7-77	-
5 - Pin ^c	2, 4, 8, 10, 12	0.040"	E5-79	-
5 - Pin ^d	2, 4, 8, 10, 12	0.040"	E5-65	-

^a Pins 3, 5, 8, 9 are of a length such that their ends do not touch the socket insertion plane. Pin 11 is omitted.

^b Pins 2, 4, 8, 9 are of a length such that their ends do not touch the socket insertion plane. Pin 11 is omitted.

^c Pin 7 is of a length such that its end does not touch the socket insertion plane. Pins 1, 3, 5, 6, 9, 11 are omitted.

^d Pins 1, 3, 5, 6, 7, 9 are of a length such that their ends do not touch the socket insertion plane. Pin 11 is omitted.



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BASES 20pA
1-63

Bases

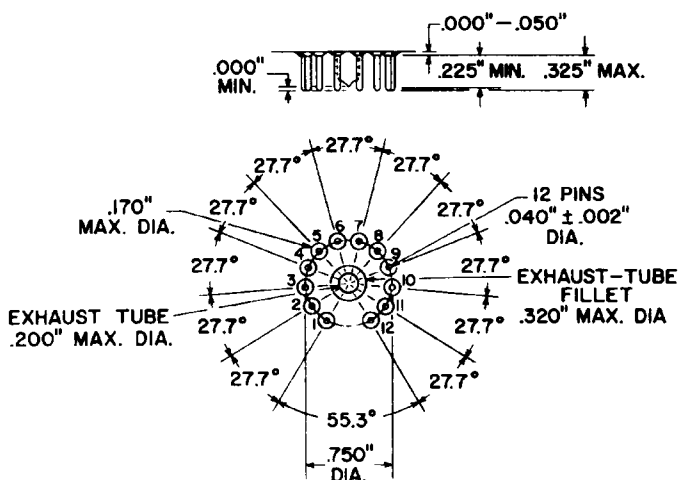
12-Pin Types

Base-pin positions and lug positions shall be held to tolerances such that entire length of pins and lugs will without undue force pass into and disengage from flat-plate gauge (JEDEC No. GE12-5) having thickness of 0.250" and twelve holes of $0.0350" \pm 0.0005"$ diameter located on four concentric circles as follows: Three holes located on $0.2800" \pm 0.0005"$, three holes located on $0.2100" \pm 0.0005"$, three holes located on $0.1400" \pm 0.0005"$, three holes located on $0.0700" \pm 0.0005"$ diameter circles at specified angles with a tolerance of $\pm 0.08^\circ$ for each angle. In addition, gauge provides for two curved slots with chordal lengths of $0.2270" \pm 0.0005"$ and $0.1450" \pm 0.0005"$ located on $0.4200" \pm 0.0005"$ diameter circle concentric with pin circles at $180^\circ \pm 0.08^\circ$ and having a width of $0.0230" \pm 0.0005"$.

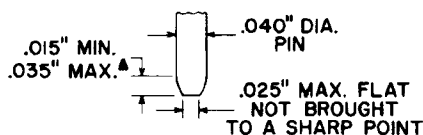


DUODECAR 12-PIN

Pin Dimensions and Orientation



Duodecar-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 a thickness of $0.250''$ and thirteen holes with diameters of $0.0520'' \pm 0.0005''$ so located on a $0.7500'' \pm 0.0005''$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.1795'' \pm 0.0005''$. Gauge is also provided with a hole $0.375'' + 0.005'' - 0.000''$ diameter concentric with the pin circle.

▲ This dimension around the periphery of any individual pin may vary within the limits shown. The surface of the pin is convex or conical in shape and not brought to a sharp point.



Bases

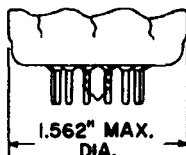
12-Pin Types

SMALL-BUTTON DUODECAR 12-PIN

LARGE-BUTTON DUODECAR 12-PIN



JEDEC No. E12-70



JEDEC No. E12-74

Fits Gauge JEDEC No. GE12-3

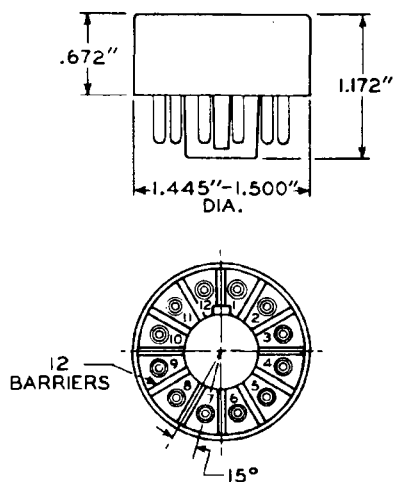
Fits Gauge JEDEC No. GE12-4



BASES

12-PIN TYPES

SHORT SMALL-SHELL DUODECAL



No. of Pins	Pins	JETEC No.	RCA No.
12-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	B12-207	12267
6-Pin	1, 2, 6, 10, 11, 12	B6-203	6267

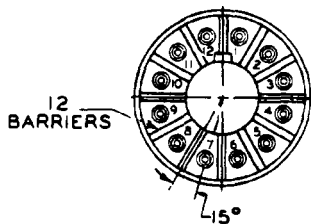
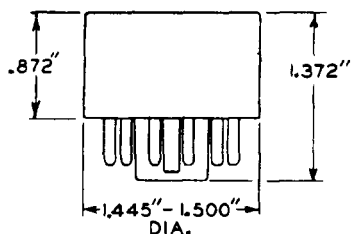
*For other dimensions, see first page
of the "Duodecal" series*



BASES

12-PIN TYPES

SMALL-SHELL DUODECAL



No. of Pins	Pins	JETEC No.	RCA No.
12-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	B12-43	12253
10-Pin	1, 2, 3, 4, 6, 7, 8, 9, 10, 12	B10-75	10253
7-Pin ■	1, 2, 6, 7, 10, 11, 12	B7-51	7253
7-Pin ▲	1, 2, 3, 6, 10, 11, 12	B7-179	-
6-Pin ■	1, 2, 6, 10, 11, 12	B6-63	6253
6-Pin ▲	1, 2, 4, 5, 6, 7, 8, 12	B6-180	-
5-Pin	1, 2, 10, 11, 12	B5-57	5253

For other dimensions, see first page
of the "Duodecal" series

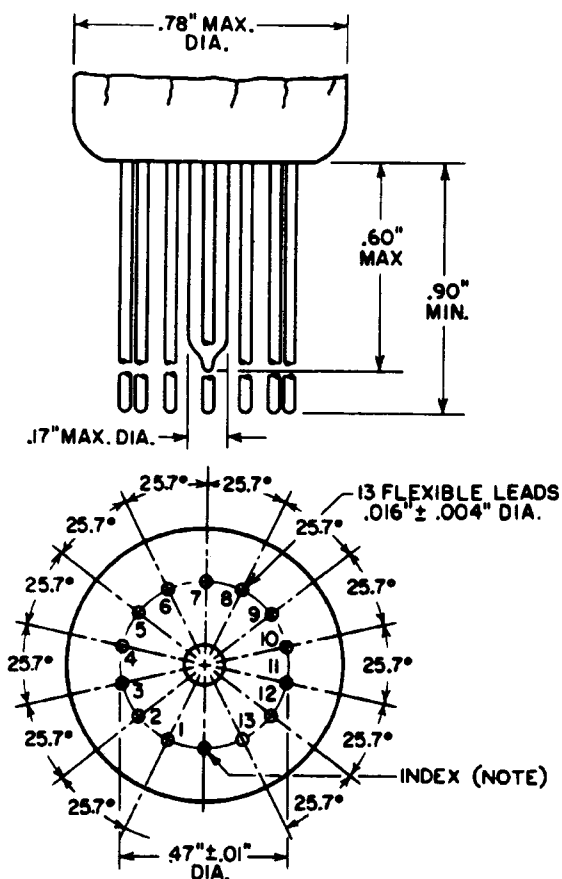
■ Arrangement 1.

▲ Arrangement 2.

Bases

13-Lead Types

SMALL-BUTTON THIRTEENAR



NOTE: LEAD IS CUT OFF WITHIN 0.04 INCH FROM THE GLASS BUTTON.

No. of Leads	Leads	JEDEC No.	RCA No.
13-Lead	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	E13-71	-
12-Lead [▲]	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,	E12-72	-

[▲] Lead 13 is cut off within 0.04 inch from the glass button.



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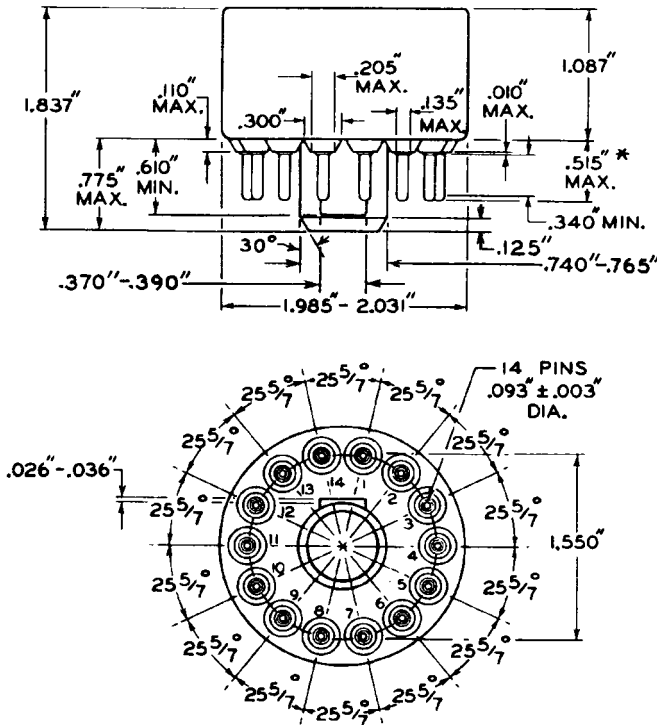
BASES 21pa
10-60



BASES

14-PIN TYPES

SMALL-SHELL NEODIHEPTAL



No. of Pins	Pins	JETEC No.	RCA No.
14-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	B14-130	14560
12-Pin	1, 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14	B12-131	12560

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB14-2) having thickness of 1/4" and fourteen holes with diameters of $0.1030" \pm 0.0005"$ so located on a $1.5500" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.3449" \pm 0.0005"$.

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

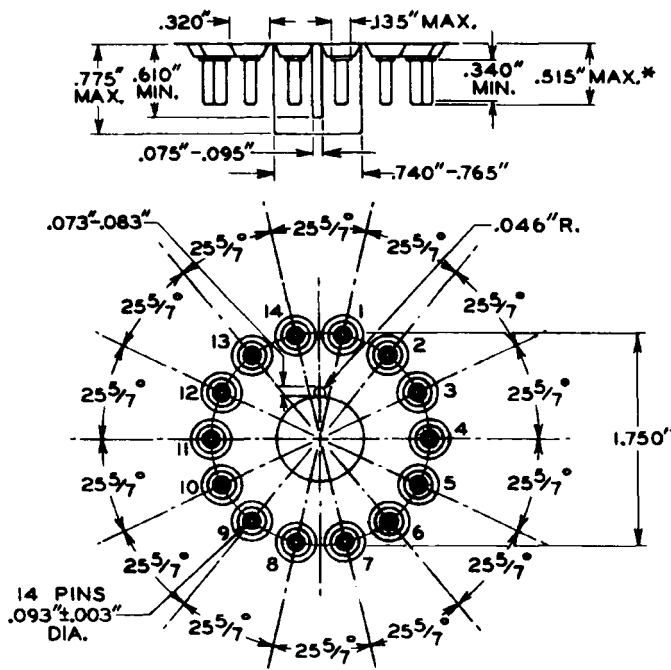
* Add 0.030" for solder on finished tube.



BASES

14-PIN TYPES

"DIHEPTAL" PIN DIMENSIONS AND ORIENTATION AND INDEX GUIDE



Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB14-1) having thickness of 1/4" and fourteen holes with diameters of $0.1030" \pm 0.0005"$ so located on a $1.750" \pm 0.0005"$ diameter circle that the distance along the chord between any two hole centers is $0.3895" \pm 0.0005"$.

Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

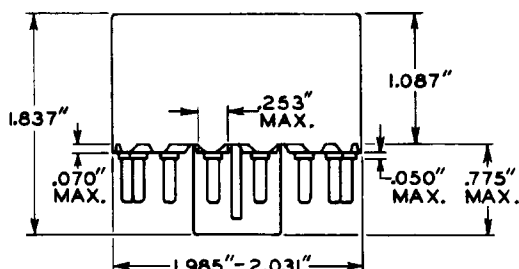
* Add 0.030" for solder on finished tube.



BASES

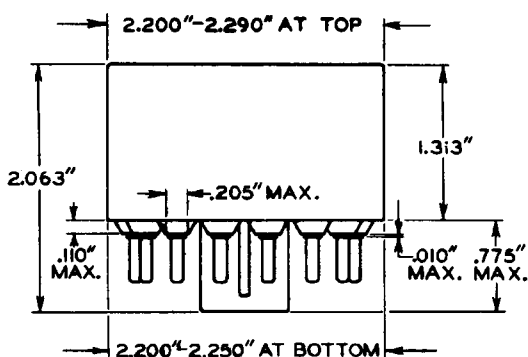
14-PIN TYPES

SMALL-SHELL DIHEPTAL



No. of Pins	Pins	JETEC No.	RCA No.
14-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	B14-45	14151
12-Pin	1, 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14	B12-105	12151

MEDIUM-SHELL DIHEPTAL



No. of Pins	Pins	JETEC No.	RCA No.
14-Pin	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	B14-38	14146
12-Pin	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14	B12-37	12146

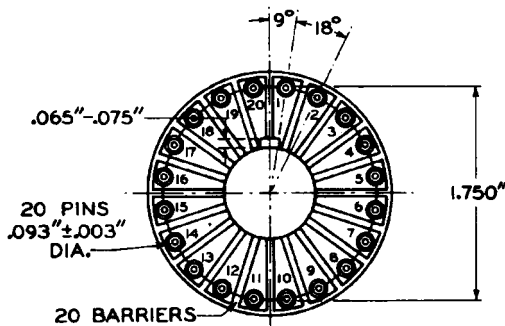
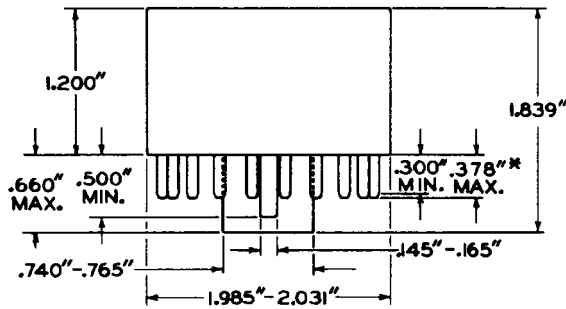
For other dimensions of above bases, see first page of the "Diheptal" series



BASES

20-PIN TYPES

SMALL-SHELL BIDEAL



No. of Pins	Pins	JETEC No.	RCA No.
20-Pin	1 through 20	B20-102	20158

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge (JETEC No. GB20-1) having thickness of 1/4" and twenty holes with diameters of $0.1030" \pm 0.0005"$ so located on a $1.7500" \pm 0.0005"$ diameter circle that the distance along the chord between any two adjacent hole centers is $0.2738" \pm 0.0005"$.

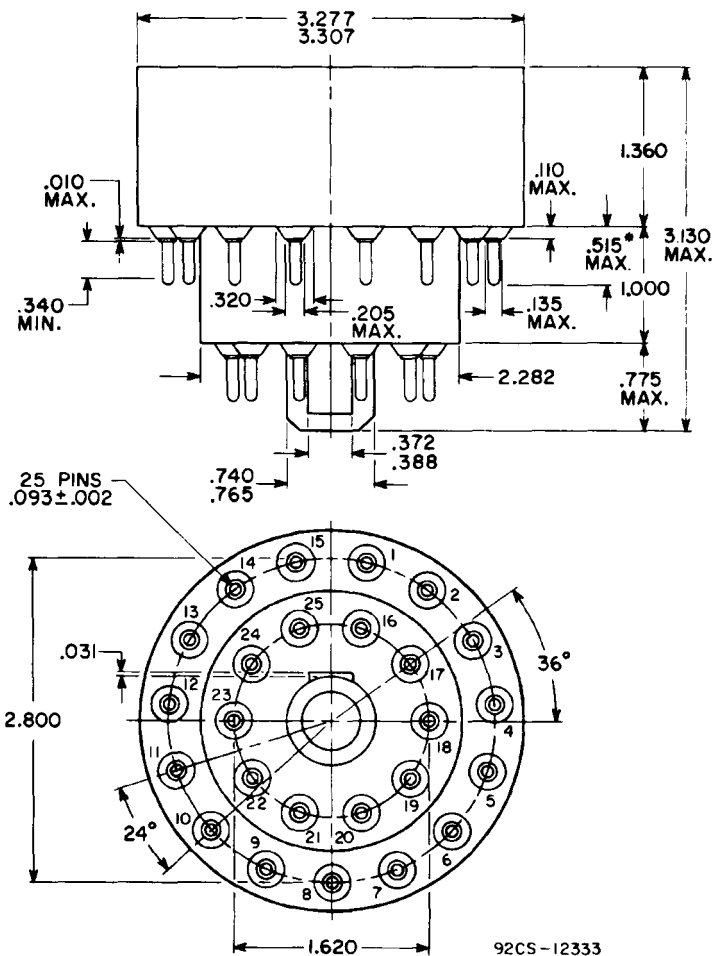
Pin fit in gauge is such that gauge together with supplementary weight totaling 3 pounds will not be lifted when pins are withdrawn.

* Add 0.030" for solder on finished tube.

Bases

25-Pin Types

JEDEC No. B25-216



DIMENSIONS IN INCHES

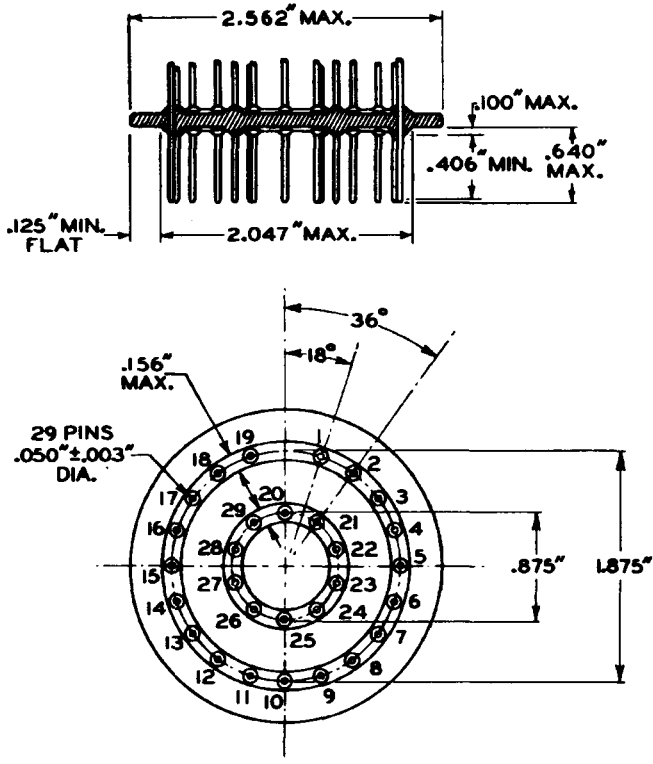
* Add 0.030 inch for solder.



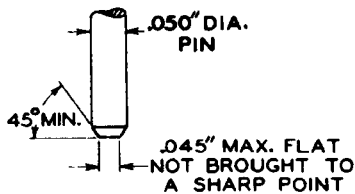
BASES

29-PIN TYPES

SMALL-BUTTON TWENTYNINAR



Twentyninar Base Pin Contour



No. of Pins	Pins	JETEC No.	RCA No.
29-Pin	1 through 29	E29-17	-
22-Pin	1 through 19, 21, 25, 28	E22-16	FSB693
8-Pin	2, 6, 10, 14, 18, 21, 25, 28	E8-19	FSB693A



BASES

29-PIN TYPES

SMALL-BUTTON TWENTYNINAR (CONT'D)

Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge having thickness of $3/8$ " and twenty-nine holes with diameters of $0.0700" \pm 0.0005"$, nineteen of which are located with hole centers corresponding to the specified location of pin centers on a $1.8750" \pm 0.0005"$ diameter circle, and ten of which are located with hole centers corresponding to the specified location of pin centers on a $0.8750" \pm 0.0005"$ diameter circle concentric with the $1.8750"$ circle.

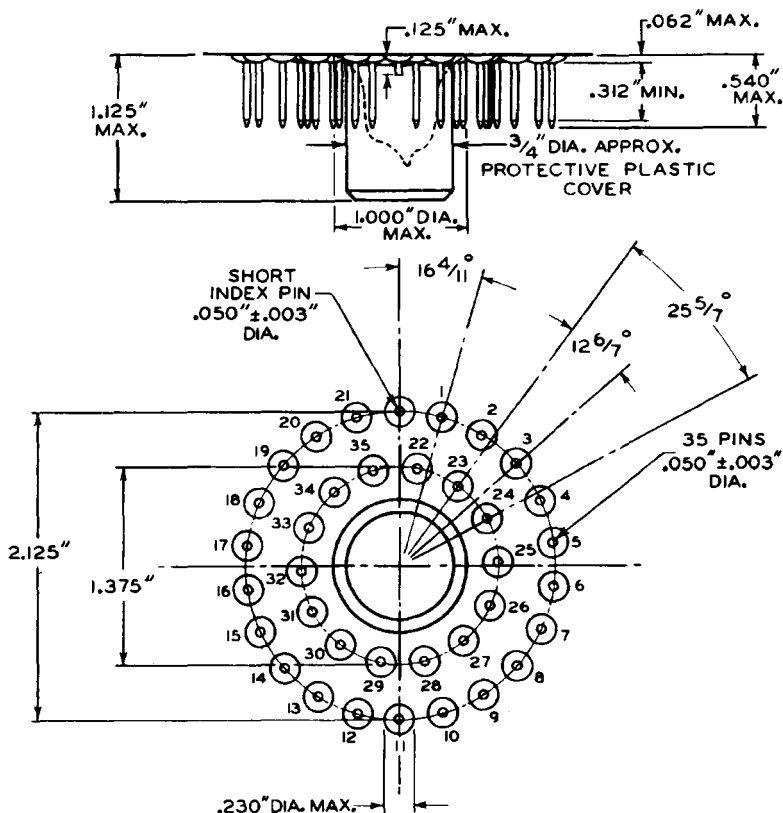
Pin fit in gauge is such that entire length of pins will, without undue force, enter into and disengage from the gauge.



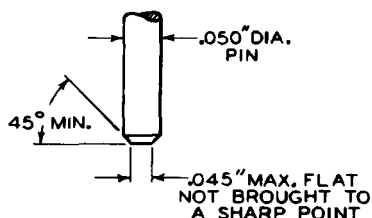
BASES

35-PIN TYPES

"THIRTYFIVAR" PIN DIMENSIONS AND ORIENTATION



Thirtyfivar-Base Pin Contour



Base-pin positions are held to tolerances such that entire length of pins will enter flat-plate gauge having thickness of $\frac{3}{8}$ " and thirty-six holes with diameters of $0.0700" \pm 0.0005"$, twenty-two of which are located with hole centers corresponding to the specified location of



BASES

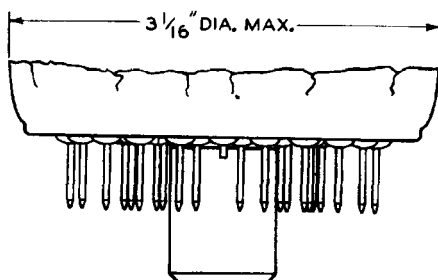
35-PIN TYPES

THIRTYFIVAR (CONT'D)

pin centers on a $2.1250'' \pm 0.0005''$ diameter circle, and fourteen of which are located with hole centers corresponding to the specified location of pin centers on a $1.3750'' \pm 0.0005''$ diameter circle concentric with the $2.1250''$ circle.

Pin fit in gauge is such that entire length of pins will, without undue force, enter into and disengage from the gauge. Gauge is also provided with a hole $1.000''$ diameter minimum concentric with pin circles.

SMALL-BUTTON THIRTYFIVAR



<i>No. of Pins</i>	<i>Pins</i>	<i>JETEC No.</i>	<i>RCA No.</i>
35-Pin	1 through 35	E35-28	-
33-Pin	Omit pins 24 and 30	E33-29	-
31-Pin	Omit pins 24 and 30; pins 23 and 31 are trimmed to same di- mension as index pin.	E31-36	-
21-Pin	1 through 21	E21-40	-

*For other dimensions of above base, see first
page of the "Thirtyfivar" series*