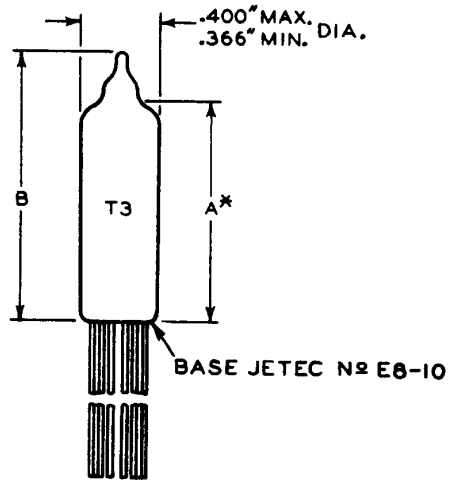




OUTLINES—Glass Tubes

SUBMINIATURE--Flexible-Lead Types



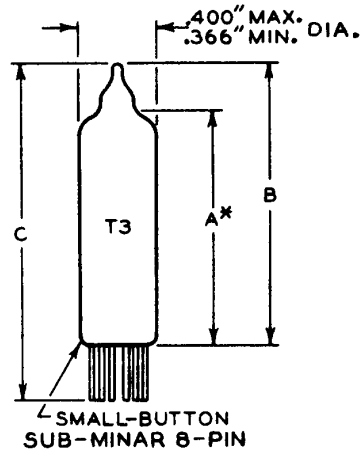
OUTLINE JETEC No.	DIMENSION	
	A ± 0.060 INCHES	B Max. INCHES
3-1	1.075	1.375
3-2	1.200	1.500
3-3	1.450	1.750
3-4	1.700	2.000
3-8	1.325	1.625
3-11	0.950	1.250

* Measured from base seat to bulb-top line as determined by a ring gauge of 0.210" ± 0.001" inside diameter.



OUTLINES—Glass Tubes

SUBMINIATURE--Small-Button Sub-Minar 8-Pin Base Types



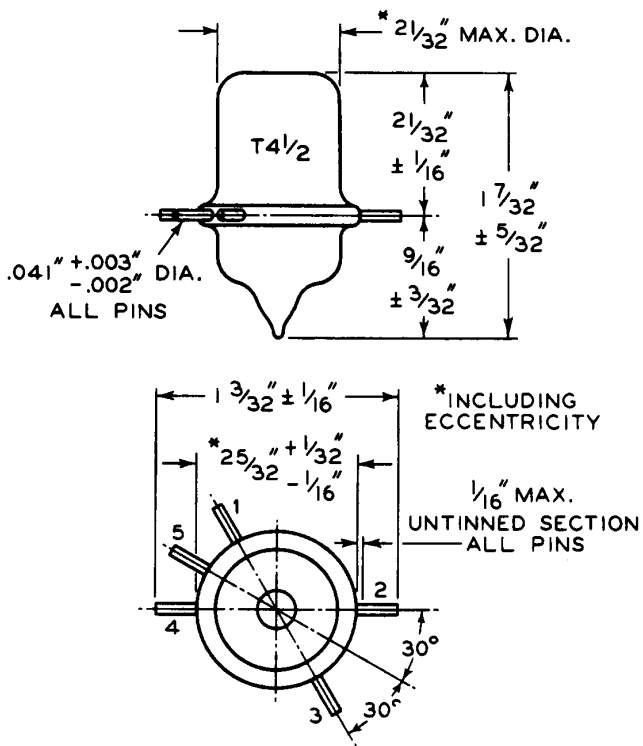
OUTLINE JETEC No.	DIMENSION		
	A ± 0.060 INCHES	B Max. INCHES	C Max. INCHES
3-5	1.200	1.500	1.750
3-9	1.075	1.375	1.625
3-10	1.450	1.750	2.000
3-12	0.950	1.125	1.500
3-13	1.325	1.625	1.875
3-14	1.575	1.875	2.125
3-15	1.700	2.000	2.250

* Measured from base seat to bulb-top line as determined by a ring gauge of 0.210" ± 0.001" inside diameter.



OUTLINES—Glass Tubes

ACORN--Radial 5-Pin Base Type

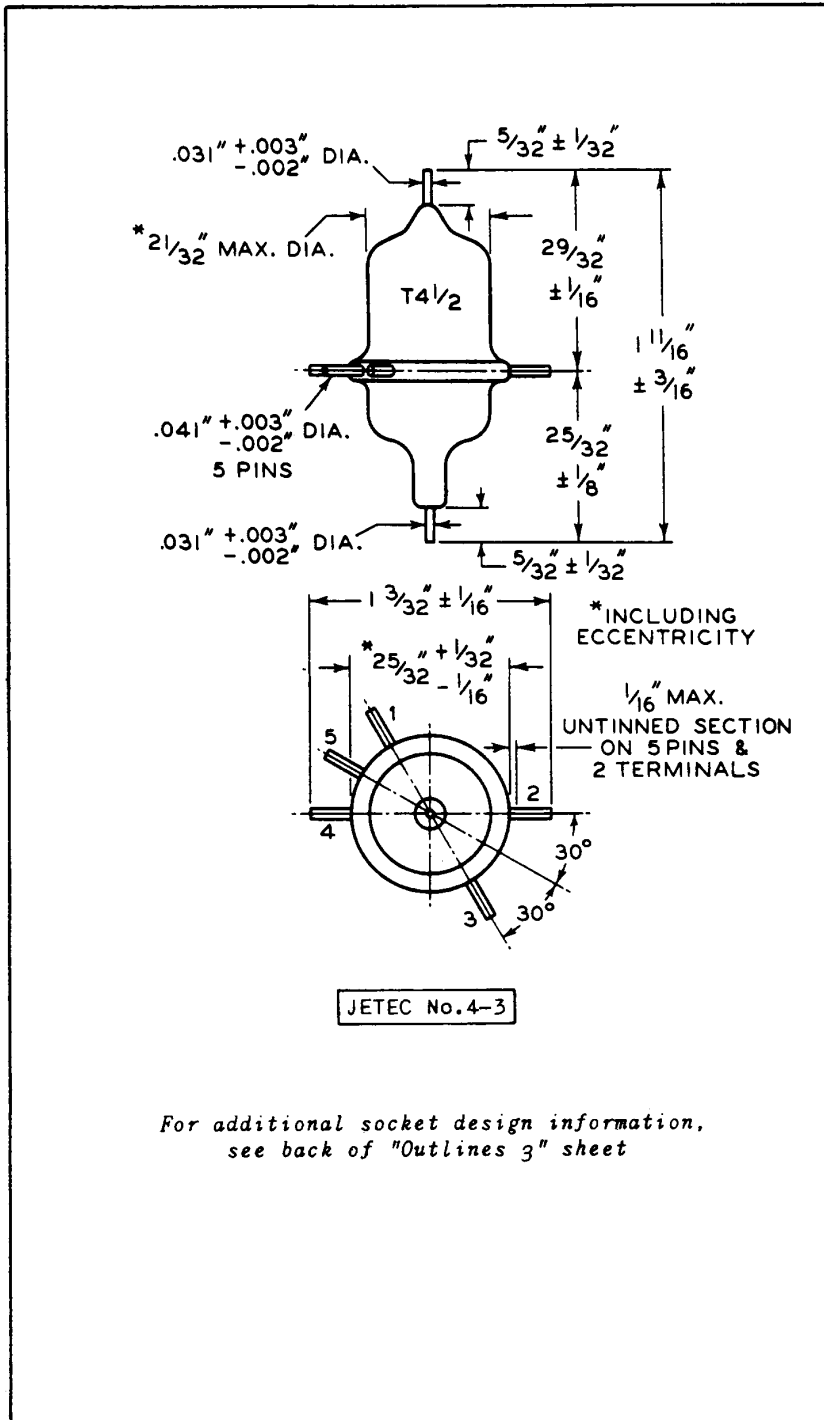


For additional socket design information,
see back of "Outlines 3" sheet



OUTLINES — Glass Tubes

ACORN--Radial 5-Pin Base Type
with End Terminals



For additional socket design information,
see back of "Outlines 3" sheet

MAY 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

OUTLINES 2

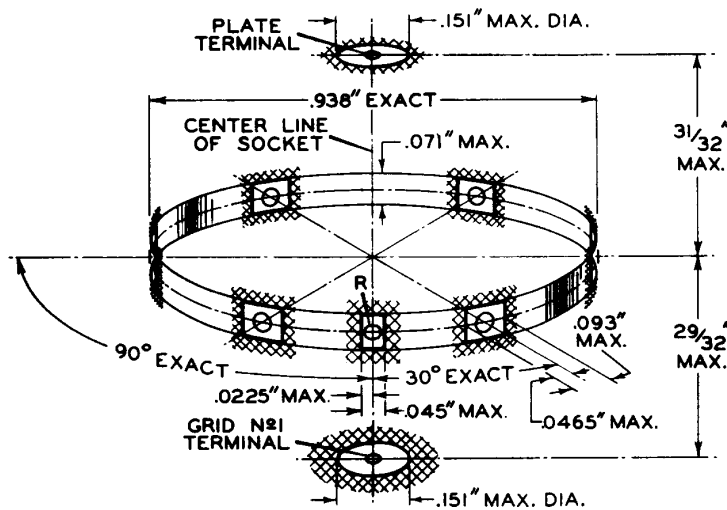


OUTLINES—Glass Tubes

ACORN TYPES

MAXIMUM PIN AND TERMINAL VARIATIONS AT SOCKET CLIPS AND TERMINAL CONNECTORS

ESSENTIAL DIMENSIONS FOR SOCKET DESIGN



Reference Pin (R)

Base Type	Pin No. *
Radial 5-Pin	5
Radial 5-Pin with End Terminals.	5
Radial 7-Pin	7

The above composite diagram shows the ideal positions of radial-pin cross-sections at socket clips located on a circle of 0.938" diameter, as well as end-terminal cross-sections at terminal ends.

The areas within the cross-hatching show actual variations of radial-pin and end-terminal cross-sections, and indicate the maximum variations which socket clips and terminal connectors should accommodate.

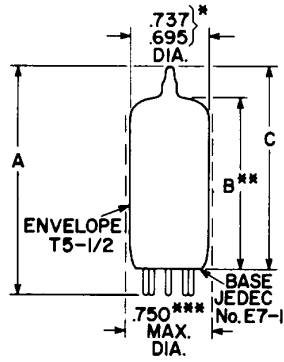
The clear area for pin position R is narrower than the others because pin position R is used as a reference for the other pins.

Sockets should be designed so that the maximum diametric clearance between socket clips is never less than 0.850".

* For pin numbering of each of these bases, see respective Dimensional Outline on preceding pages.

Outlines Glass Tubes

MINIATURE — Miniature 7-Pin Base Types with T5-1/2 Bulbs



92CS-14106

DIMENSIONS IN INCHES

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)			
	A	B		C
	Max	Min	Max	Max
-	1.625	.906	1.094	1.375
5-1	1.750	1.031	1.219	1.500
5-2	2.125	1.406	1.594	1.875
5-3	2.625	1.906	2.094	2.375

- * Major diameter as checked by ring gauges of 0.25 inch thickness. The maximum gauge should clear the bulb above 0.38 inch from the base seat and the minimum gauge should not.
- ** Measured from the base seat to the bulb-top line as determined by a ring gauge of 0.437 inch I.D.
- *** The diameter of the boundary cylinder as defined by the barriers of the pin alignment gauge (Gauge No. GE7-1, Sheet 24, Section 3 of EIA Standard RS-209A).

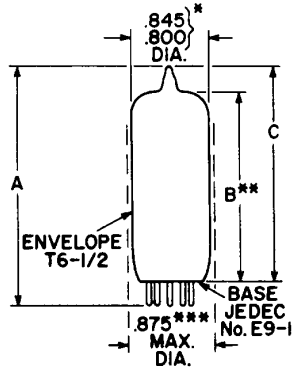


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Electronic Components and Devices Harrison, N. J.

OUTLINES 4
10-66

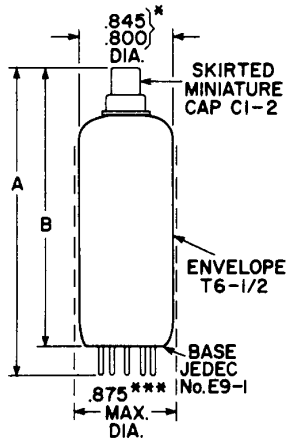
Outlines Glass Tubes

MINIATURE — Noval 9-Pin Base Types with T6-1/2 Bulbs



92CS-14107
DIMENSIONS IN INCHES

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)			
	A	B		C
	Max	Min	Max	Max
6-1	1.750	1.031	1.219	1.500
6-2	2.187	1.469	1.656	1.937
6-3	2.625	1.906	2.094	2.375
6-4	3.062	2.344	2.531	2.812



92CS-14108
DIMENSIONS IN INCHES

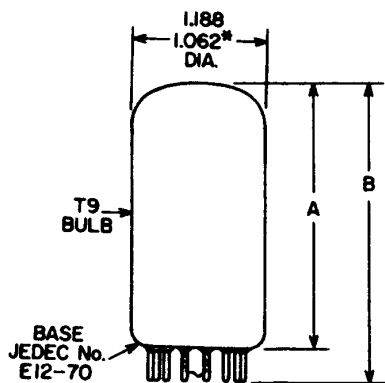
OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A	B	
	Max	Min	Max
6-5	1.969	1.437	1.687
6-6	2.406	1.875	2.125
6-7****	2.844	2.312	2.562
6-8	3.281	2.750	3.000

- * Major diameter as checked by ring gauges of 0.25 inch thickness. The maximum gauge should clear the bulb above 0.38 inch from the base seat and the minimum gauge should not.
- ** Measured from the base seat to the bulb-top line as determined by a ring gauge of 0.437 inch I.D.
- *** The diameter of the boundary cylinder as defined by the barriers of the pin alignment gauge (Gauge No. GE9-1, Sheet 30, Section 3 of EIA Standard RS-209A).
- **** Jedec Outline No. 6-7 may also use non-standard CI-33 cap.



Outlines Glass Tubes

DUODECAR—12-Pin Base Types with T9 Bulbs

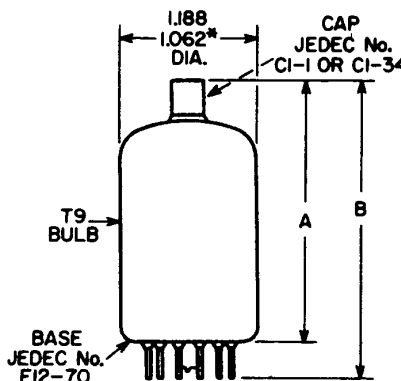
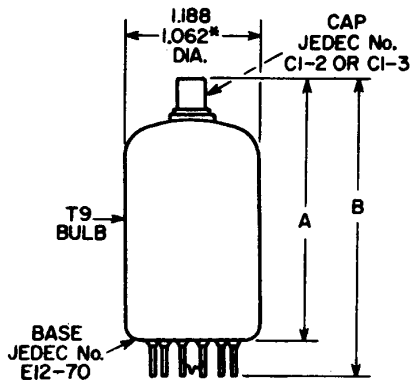


OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
9-55	1.000	1.250	1.625
9-56	1.250	1.500	1.875
9-57	1.500	1.750	2.125
9-58	1.750	2.000	2.375
9-59	2.000	2.250	2.625
9-60	2.250	2.500	2.875
9-61	2.500	2.750	3.125
9-62	2.750	3.000	3.375

DIMENSIONS IN INCHES

* Applies to minimum diameter except in area of seal.

Outlines with Top Cap



DIMENSIONS IN INCHES

92CS-12526

* Applies to minimum diameter except in area of seal.

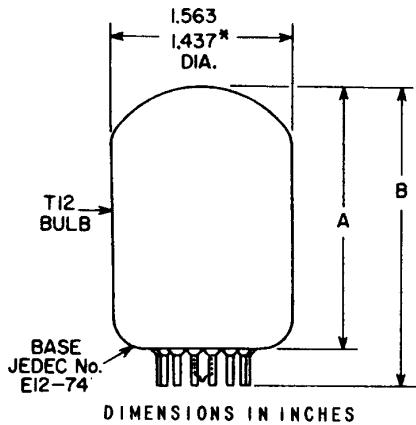
OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
9-88	2.000	2.250	2.625
9-89	2.250	2.500	2.875
9-90	2.500	2.750	3.125
9-91	2.750	3.000	3.375
9-92	3.000	3.250	3.625
9-93	3.250	3.500	3.875
9-94	3.500	3.750	4.125
9-95	3.750	4.000	4.375

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
9-96	2.000	2.250	2.625
9-97	2.250	2.500	2.875
9-98	2.500	2.750	3.125
9-99	2.750	3.000	3.375
9-100	3.000	3.250	3.625
9-101	3.250	3.500	3.875
9-102	3.500	3.750	4.125
9-103	3.750	4.000	4.375



Outlines Glass Tubes

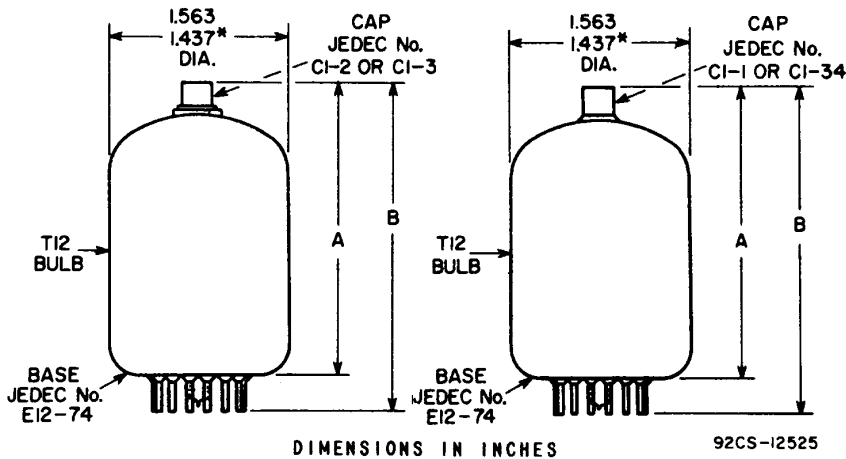
DUODECAR—12-Pin Base Types with T12 Bulbs



OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12 - 52	1.250	1.500	1.875
12 - 53	1.500	1.750	2.125
12 - 54	1.750	2.000	2.375
12 - 55	2.000	2.250	2.625
12 - 56	2.250	2.500	2.875
12 - 57	2.500	2.750	3.125
12 - 58	2.750	3.000	3.375
12 - 59	3.000	3.250	3.625
12 - 60	3.250	3.500	3.875
12 - 61	3.500	3.750	4.125
12 - 62	3.750	4.000	4.375

* Applies to minimum diameter except in area of seal.

Outlines with Top Cap



* Applies to minimum diameter except in area of seal.

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12 - 75	2.000	2.250	2.625
12 - 76	2.250	2.500	2.875
12 - 77	2.500	2.750	3.125
12 - 78	2.750	3.000	3.375
12 - 79	3.000	3.250	3.625
12 - 80	3.250	3.500	3.875
12 - 81	3.500	3.750	4.125
12 - 82	3.750	4.000	4.375

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12 - 83	2.000	2.250	2.625
12 - 84	2.250	2.500	2.875
12 - 85	2.500	2.750	3.125
12 - 86	2.750	3.000	3.375
12 - 87	3.000	3.250	3.625
12 - 88	3.250	3.500	3.875
12 - 89	3.500	3.750	4.125
12 - 90	3.750	4.000	4.375

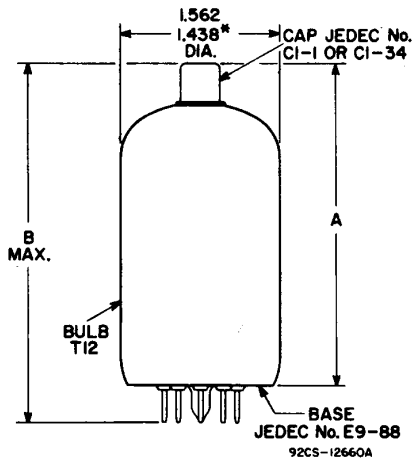
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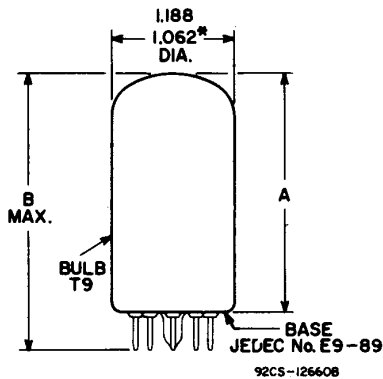
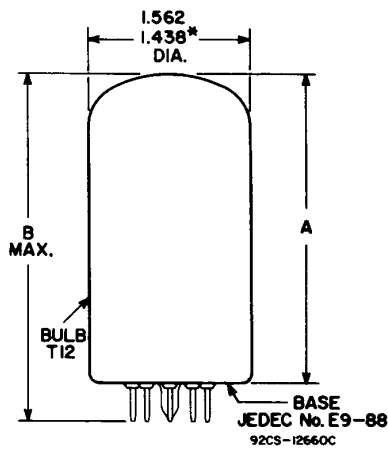
Outlines Glass Tubes

NOVAR-9-Pin Base Types



OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12-116	3.500	3.750	4.130

OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12-95	2.250	2.500	2.880
12-96	2.500	2.750	3.130
12-99	3.250	3.500	3.880



OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
9-107	1.750	2.000	2.380
-	2.375	2.625	3.005

* Applies to the minimum diameter except in the area of the seal.

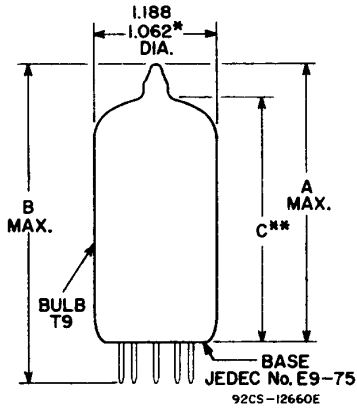


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OUTLINES 4C
10-64

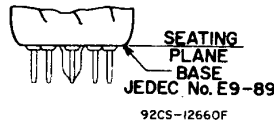
Outlines Glass Tubes

NOVAR—9-Pin Base Types



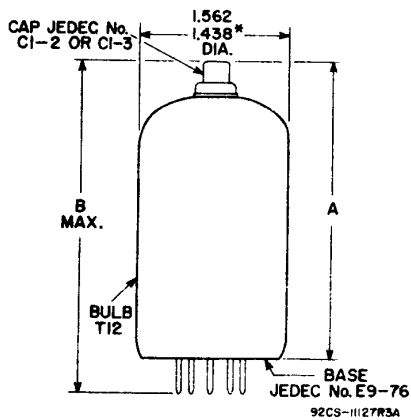
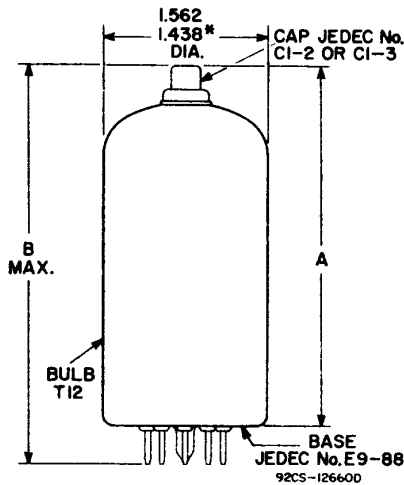
OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)			
	C		B	A
	Min.	Max.	Max.	Max.
—	2.050	2.230	3.080	2.700
—	2.405	2.585	3.110	2.730

Bottom-exhaust type has the same A & B dimensions as top-exhaust type shown



** Measured from the base seat to bulb top line as determined by a ring gauge of 0.600" I.D.

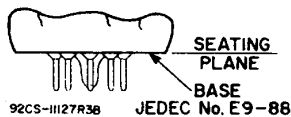
OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
—	2.875	3.125	3.505



OUTLINE DRAWING NUMBER (JEDEC)	DIMENSIONS (INCHES)		
	A		B
	Min.	Max.	Max.
12-70*	2.910	3.170	3.550

Bottom-exhaust type has the same dimensions as top-exhaust type shown

* For E9-76 base



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OUTLINES—Glass Tubes

GLASS OCTAL--Octal Base Types with T9 Bulbs

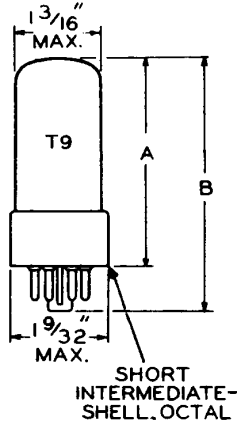


Fig. 1

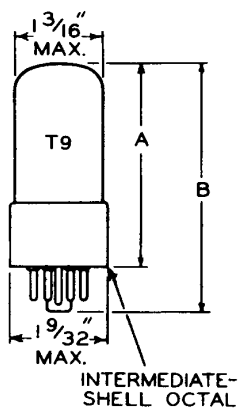


Fig. 2

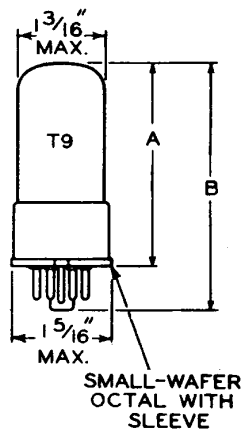
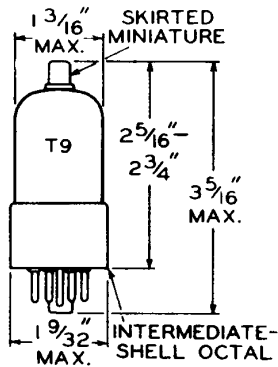
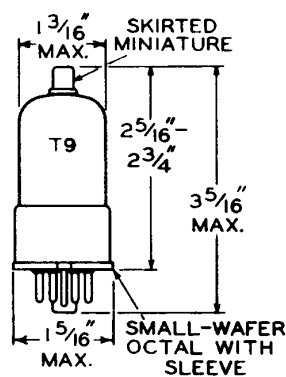


Fig. 3

OUTLINE			DIMENSION	
JETEC No.			A Max. INCHES	B Max. INCHES
Fig. 1	Fig. 2	Fig. 3		
-	9-1	-	1-3/4*	2-5/16
-	9-7	-	2-1/2	3-1/16
9-41	9-11	9-12	2-3/4	3-5/16
-	9-13	-	2-13/16	3-3/8
-	9-15	-	2-7/8	3-7/16
-	9-33	-	3-1/4	3-13/16



JETEC No. 9-17



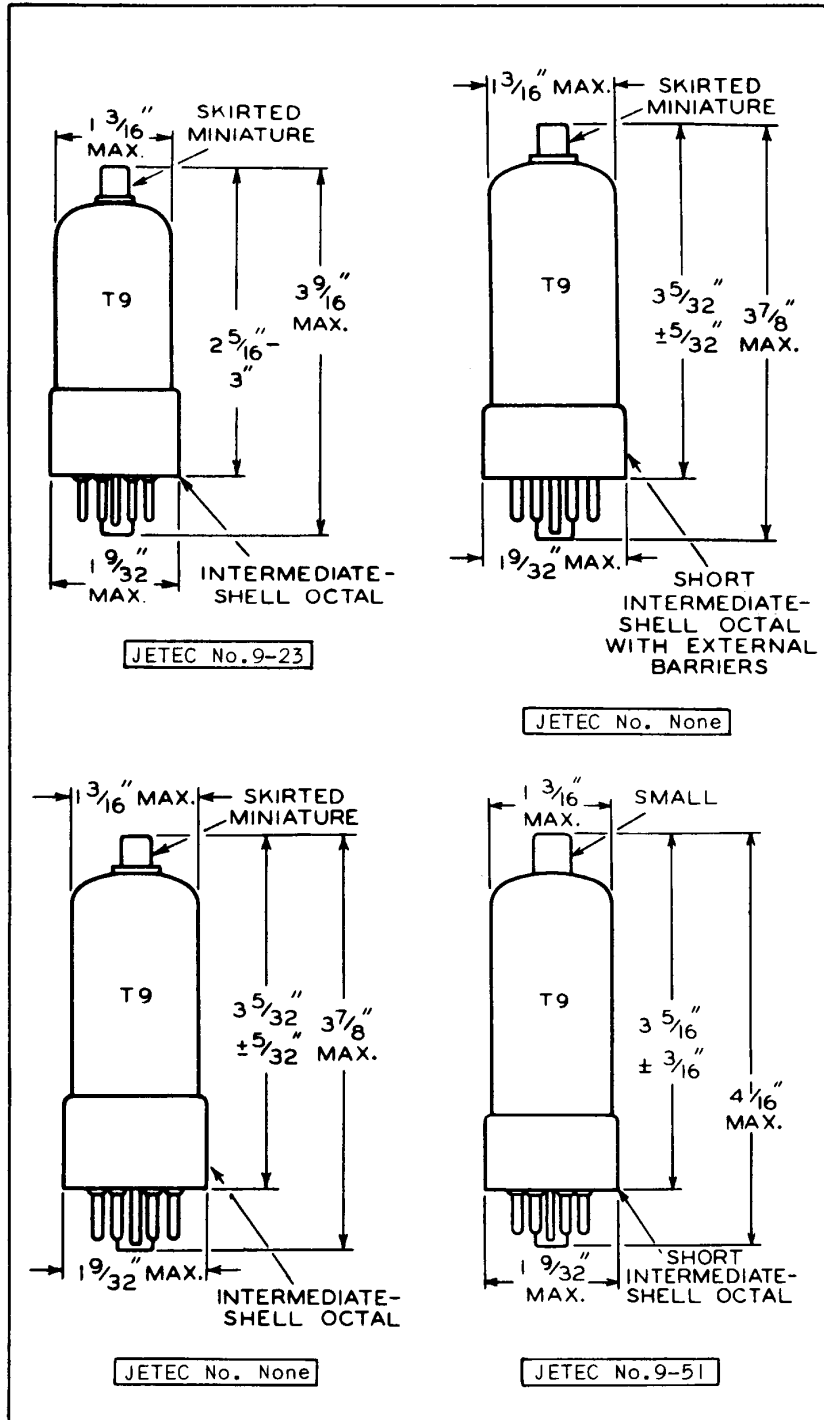
JETEC No. 9-18

* For electron-ray tubes, the seated height is $1-11/16" + 1/16" - 1/4"$.



OUTLINES—Glass Tubes

GLASS OCTAL--Octal Base Types
with T9 Bulbs



MAY 1, 1955

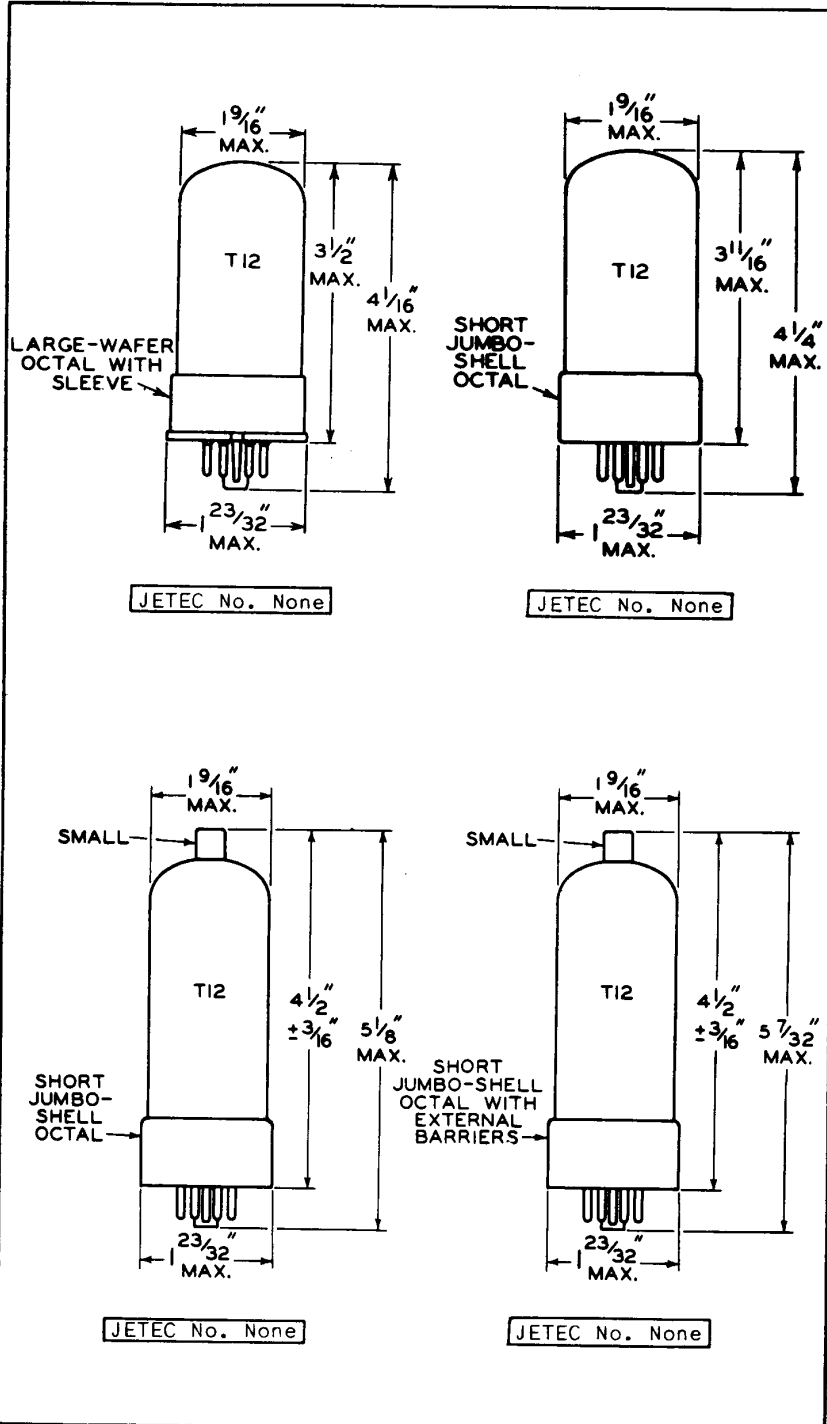
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OUTLINES 5



OUTLINES—Glass Tubes

GLASS OCTAL--Octal Base Types
with T12 Bulbs



MAY 1, 1955

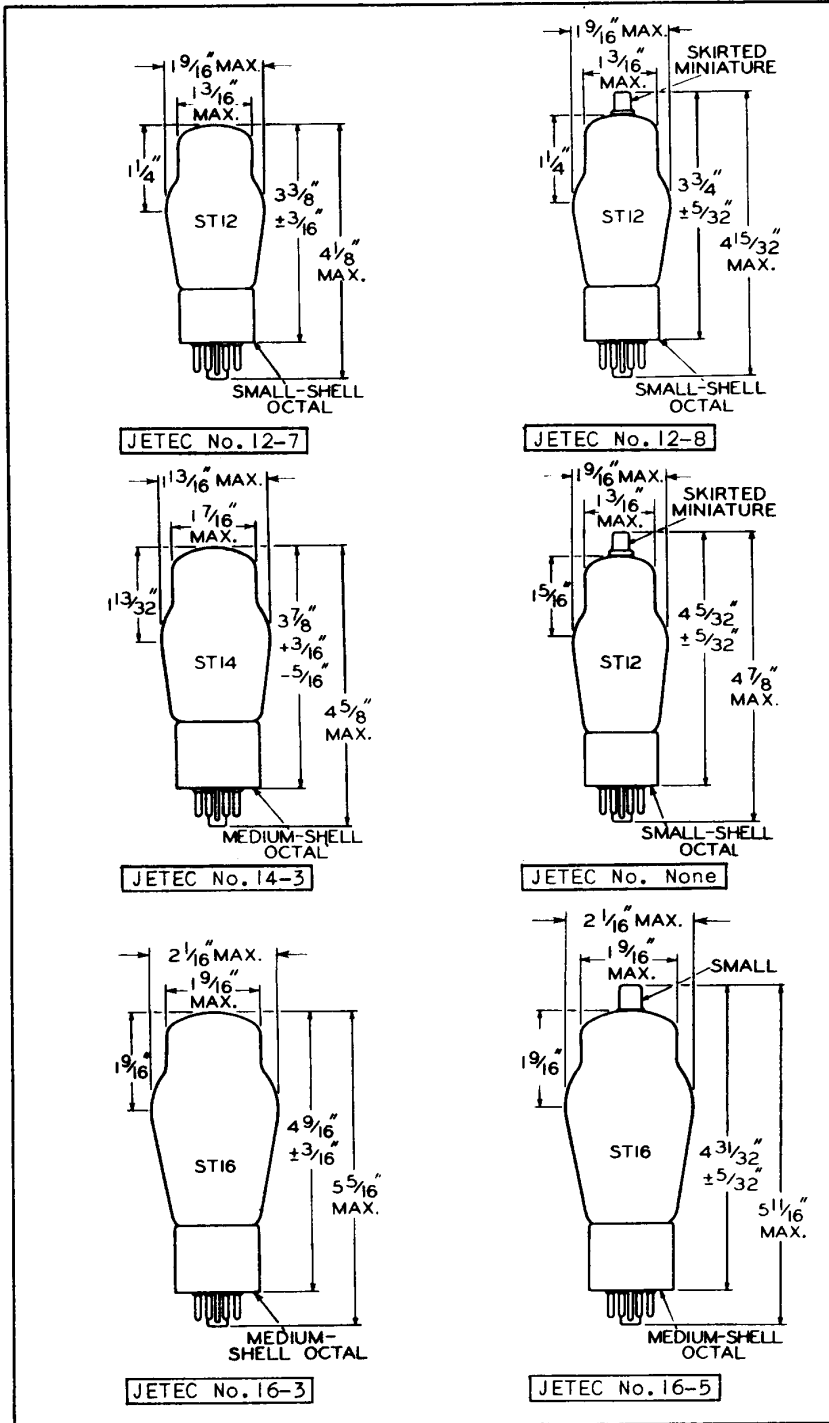
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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

OUTLINES 6



OUTLINES—Glass Tubes

GLASS OCTAL--Octal Base Types
with ST Bulbs



MAY 1, 1955

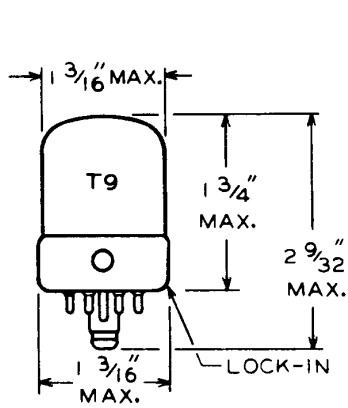
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OUTLINES 6

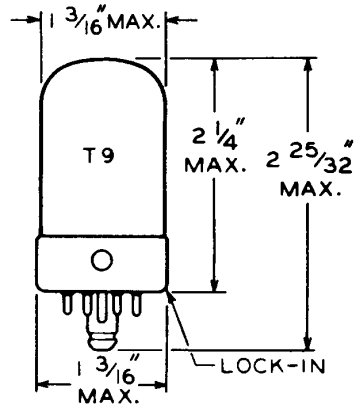


OUTLINES - Glass Tubes

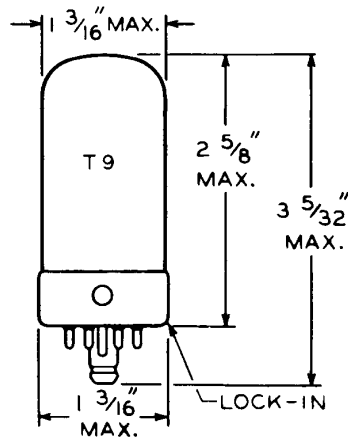
LOCK-IN--Lock-In 8-Pin Base Types



JETEC No. 9-32



JETEC No. 9-30

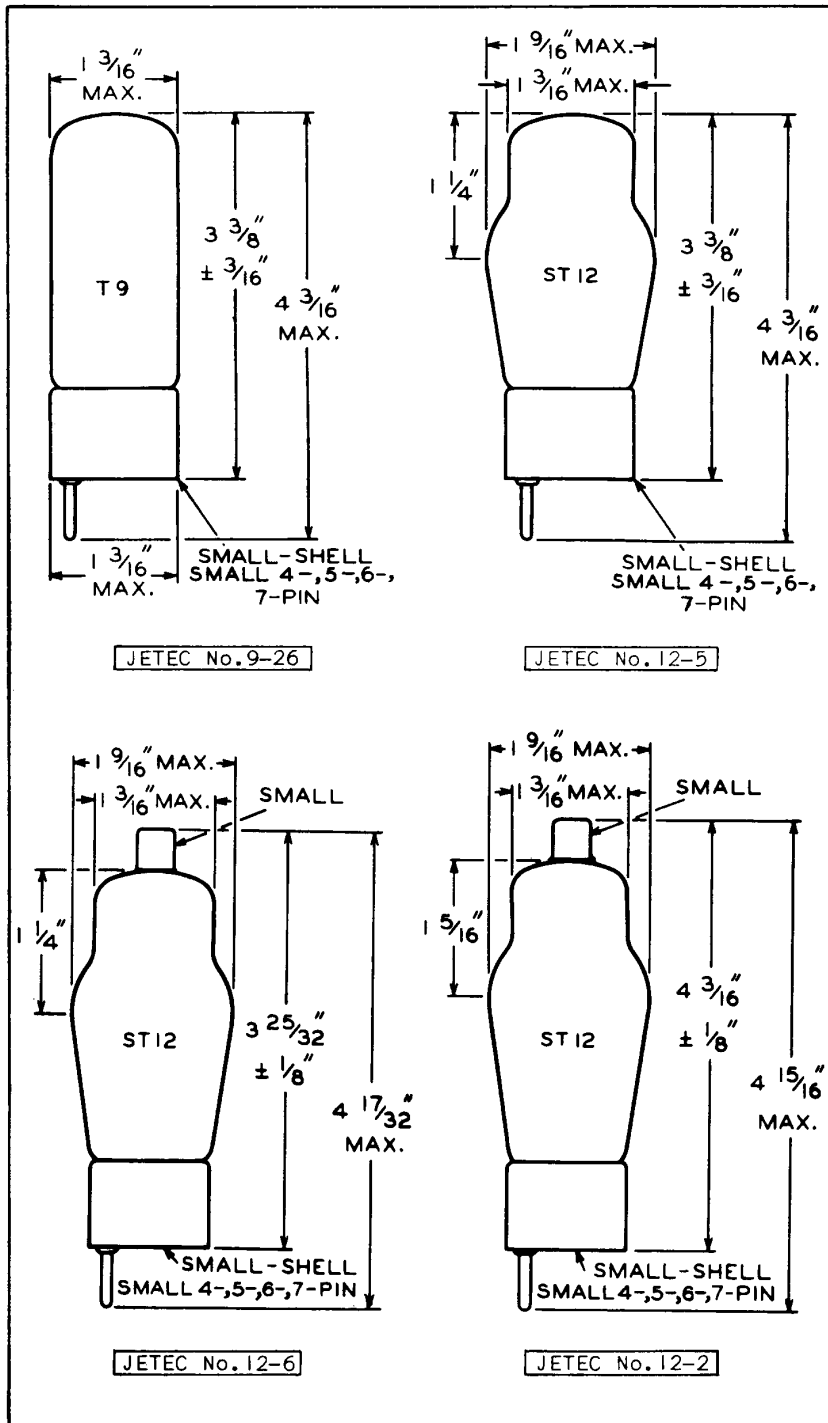


JETEC No. 9-31



OUTLINES—Glass Tubes

SMALL 4-PIN, SMALL 5-PIN,
SMALL 6-PIN, & SMALL 7-PIN BASE TYPES



MAY 1, 1955

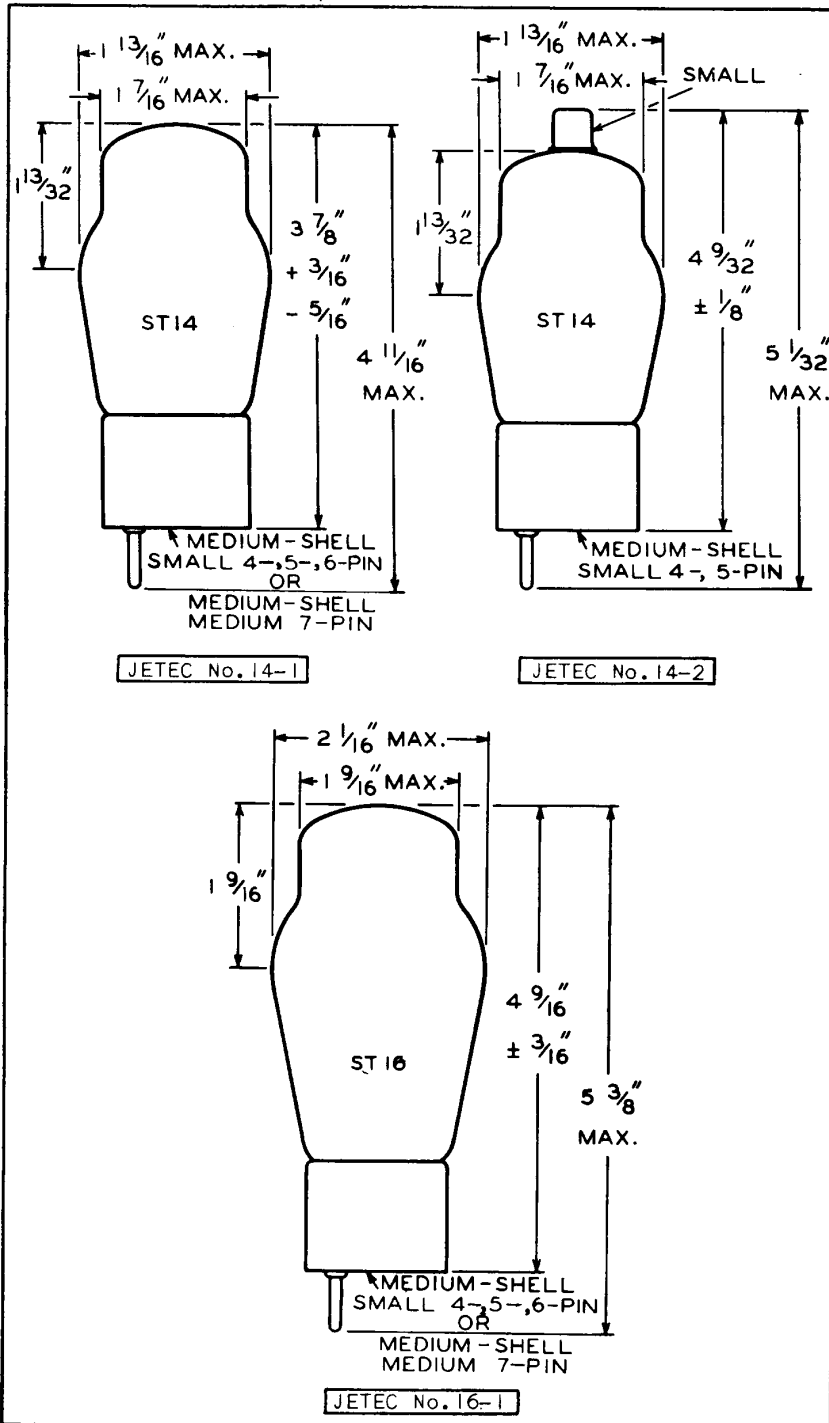
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OUTLINES 7



OUTLINES—Glass Tubes

SMALL 4-PIN, SMALL 5-PIN,
SMALL 6-PIN, & MEDIUM 7-PIN BASE TYPES



MAY 1, 1955

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

OUTLINES 8