

Western Electric

Vacuum Tubes

GENERAL BULLETIN

WESTERN ELECTRIC ELECTRON TUBES—GENERAL BULLETIN

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General Purpose Tubes

Code	Type	Cathode			Absolute Maximum Ratings					Average Characteristics — Class A						Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
		Type	Volts	Amps.	Plate Volts	Scr. Volts	Plate Diss. Watts	Scr. Diss. Watts	Htr.-Cath. Volts	Plate Volts	Plate Cur. Ma.	Ampl. Fact.	Trans. cond. μ mhos	Plate Res. Ohms	Power Output Watts	Height	Diam.			
2C51	Miniature Double Triode	H	6.3	0.300	330	—	1.6	—	100	150	8.2	35	5500	6400	—	1 3/4	7/8	Small Button 9-pin	70	2C51
6AJ5	Miniature Pentode	H	6.3	0.175	200	155	1.85	0.55	100	28	3.0	250	2750	90000	—	1 3/4	3/4	Min. Button 7-pin	74	6AJ5
6AK5	Miniature Pentode	H	6.3	0.175	200	155	1.85	0.55	100	120	7.5	1700	5000	340000	—	1 3/4	3/4	Min. Button 7-pin	74	6AK5
6AS6	Miniature Pentode	H	6.3	0.175	200	155	1.85	0.85	100	120	5.2	480	3200	150000	—	1 3/4	3/4	Min. Button 7-pin	75	6AS6
101D	Triode	O-F	4.2	1.0	200	—	2.0	—	—	130	7.7	6.2	1070	5800	.065	4 1/2	1 13/16	100L or 100R	1	101D
101F	Triode	O-F	4.0	0.5	200	—	2.0	—	—	130	6.8	6.5	1120	5800	.060	4 1/2	1 13/16	100L or 100R	1	101F
102D	Triode	O-F	2.1	1.0	200	—	—	—	—	130	0.8	29.6	510	58000	—	4 1/2	1 13/16	100L or 100R	1	102D
102F	Triode	O-F	2.1	0.5	200	—	—	—	—	130	0.85	31.0	620	50000	—	4 1/2	1 13/16	100L or 100R	1	102F
104D	Triode	O-F	4.2	1.0	200	—	—	—	—	130	25	2.5	1180	2100	.160	4 1/2	1 13/16	100L or 100R	1	104D
205F	Triode	O-F	4.5	1.6	400	—	14	—	—	350	35	7.3	1870	3900	—	4 1/2	1 13/16	100M or 115B	6	205F
215A	Triode	O-F	1.0	0.25	110	—	—	—	—	60	2.0	5.7	420	13500	.0029	2 11/16	11/16	125B	1	215A
231D	Triode	O-F	3.1	0.06	150	—	—	—	—	90	2.1	8.4	510	16300	.0045	4	1 3/32	Small 4-pin	2A	231D
244A	Triode	H	2.0	1.6	200	—	1.2	—	100	135	5.5	10.1	1010	10000	.049	4 7/8	1 13/16	Med. 5-pin Bay.	22	244A
245A	Tetrode	H	2.0	1.6	200	75	—	—	100	135	4.8	135	750	180000	—	5 1/4	1 13/16	Med. 5-pin Bay.	23	245A
246A	Tetrode	O-F	3.3	0.1	200	75	—	—	—	135	1.5	285	390	725000	—	5 1/4	1 13/16	Med. 4-pin Bay.	8	246A
247A	Triode	H	2.0	1.6	200	—	1.2	—	100	135	3.2	15.2	940	16000	.037	4 7/8	1 13/16	Med. 5-pin	22A	247A
252A	Triode	O-F	5.0	2.0	550	—	35	—	—	450	60	5.1	3450	1500	7.0	6 3/4	2 7/16	Med. 4-pin Bay.	2	252A
257A	Triode	O-F	3.1	0.06	150	—	—	—	—	90	2.1	8.4	510	16300	.0045	4 9/16	1 3/32	Small 4-pin	11	257A
259A	Tetrode	H	2.0	1.6	275	100	—	—	100	180	5.5	550	1380	400000	—	5 1/4	1 13/16	Med. 5-pin Bay.	23	259A
262B	Triode	H	10.0	0.32	200	—	—	—	30	135	2.8	15.7	900	17500	.035	4 3/4	1 9/16	Small 4-pin	12	262B
264C	Triode	O-F	1.5	0.30	110	—	—	—	—	100	2.1	7.2	580	12400	.033	4	1 3/16	Small 4-pin	2A	264C
271A	Triode	H	5.0	2.0	500	—	—	—	100	400	37.5	8.3	2920	2830	2.8	6 3/4	2 7/16	Med. 5-pin	22A	271A
272A	Triode	H	10.0	0.32	200	—	1.4	—	100	140	5.4	5.6	760	7400	.120	4 7/8	1 13/16	Med. 5-pin Bay.	22	272A
275A	Triode	O-F	5.0	1.2	330	—	17	—	—	200	47	2.8	2770	1030	1.9	5 5/8	2 3/16	Med. 4-pin Bay.	2	275A
281A	Tetrode	O-F	5.0	1.6	250	75	—	—	—	130	35	5.0	1470	3400	2.2	6 3/4	2 11/16	Med. 5-pin	21	281A
283A	Tetrode (Var. Mu)	H	2.0	1.6	275	100	—	—	100	180	5.9	585	1360	430000	—	5 1/4	1 13/16	Med. 5-pin Bay.	23	283A
285A	Pentode	H	2.0	1.6	275	220	—	—	100	180	8.8	135	880	153000	.65	5 1/4	1 13/16	Med. 5-pin Bay.	24	285A

General Purpose Tubes (Continued)

Code	Type	Cathode			Absolute Maximum Ratings					Average Characteristics — Class A						Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
		Type	Volts	Amps.	Plate Volts	Scr. Volts	Plate Diss. Watts	Scr. Diss. Watts	Htr.-Cath. Volts	Plate Volts	Plate Cur. Ma.	Ampl. Fact.	Transcond. μ mhos	Plate Res. Ohms	Power Output Watts	Height	Diam.			
300B	Triode	O-F	5.0	1.2	480	—	40	—	—	300	60	3.8	5400	700	6.0	6 1/2	2 7/16	Med. 4-pin Bay.	50	300B
309A	Pentode (Var. Mu)	H	10.0	0.32	275	100	—	—	150	180	4.8	1100	1100	1000000	—	4 29/32	1 9/16	Small 5-pin	24A	309A
310A	Pentode	H	10.0	0.32	275	180	2.5	0.4	150	135	5.5	1200	1800	650000	.250	4 29/32	1 9/16	Small 6-pin	32	310A
310B	Pentode	H	10.0	0.32	275	180	2.5	0.4	30	135	5.5	1200	1800	650000	.250	4 29/32	1 9/16	Small 6-pin	32	310B
311A	Pentode	H	10.0	0.64	200	160	—	—	150	135	30	122	2800	43000	2.0	4 29/32	1 9/16	Small 5-pin	24A	311A
328A	Pentode	H	7.5	0.425	275	180	2.5	0.4	150	135	5.5	1350	1800	750000	.250	4 29/32	1 9/16	Small 6-pin	32	328A
329A	Pentode	H	7.5	0.85	200	160	—	—	150	135	30	122	2800	43000	2.0	4 29/32	1 9/16	Small 5-pin	24A	329A
336A	Pentode	H	10.0	0.64	275	275	9.4	3.1	60	250	30	336	4200	80000	3.5	4 7/16	1 9/16	Small 6-pin	29	336A
337A	Pentode (Var. Mu)	H	10.0	0.32	275	180	2.5	0.4	150	135	6.0	1070	1650	650000	—	4 29/32	1 9/16	Small 6-pin	32	337A
347A	Triode	H	6.3	0.50	200	—	—	—	30	135	2.8	15.7	900	17500	.035	4 3/4	1 9/16	Octal	37	347A
348A	Pentode	H	6.3	0.50	275	180	2.5	0.4	30	135	5.5	1200	1800	650000	.250	4 29/32	1 9/16	Octal	38	348A
349A	Pentode	H	6.3	1.0	275	275	9.4	3.1	60	250	30	336	4200	80000	3.5	4 7/16	1 9/16	Octal	39	349A
350B	Beam Tetrode	H	6.3	1.6	400	300	30	4	150	400	53	400	6250	64000	15	5 13/32	2 1/16	Octal	31	350B
352A	Duodiode - Triode	H	10.0	0.32	200	—	—	—	100	135	2.1	13.3	650	20500	.042	4 3/4	1 9/16	Small 6-pin	27	352A
373A	Pentode	O-F	2.0	0.25	250	150	—	—	—	150	2.0	1900	1320	1400000	—	3 1/4	1 7/16	Octal	67	373A
374A	Pentode	O-F	3.0	0.53	150	150	4.8	1.0	—	135	18	210	3000	70000	1.3	3 1/4	1 7/16	Octal	68	374A
375A	Beam Tetrode	H	20	0.32	130	130	6.0	1.3	—	45	12.5	72	4700	15300	0.23	4 7/8	1 7/16	Octal	64	375A
382A	Triode	H	6.3	0.15	200	—	1.6	—	100	120	4.5	25	2800	9000	—	1 17/32*	1 3/8	None	58	382A
383A	Triode	H	6.3	0.15	200	—	1.6	—	100	120	4.5	25	2800	9000	—	1 7/8	1 3/8	Octal	57	383A
384A	Pentode	H	6.3	0.15	275	130	1.85	0.55	100	120	5.6	1230	2560	480000	23dbm	1 25/32*	1 3/8	None	66	384A
385A	Pentode	H	6.3	0.15	275	130	1.85	0.55	100	120	5.6	1230	2560	480000	23dbm	2 5/16	1 3/8	Octal	65	385A
386A	Pentode	H	6.3	0.15	180	120	1.85	0.55	100	120	7.5	1550	4000	390000	—	1 25/32*	1 3/8	None	66	386A
387A	Pentode	H	6.3	0.15	180	120	1.85	0.55	100	120	7.5	1550	4000	390000	—	2 5/16	1 3/8	Octal	65	387A
5590	Miniature Pentode	H	6.3	0.15	200	155	1.85	0.55	100	90	3.9	600	2000	300000	—	1 3/4	3/4	Min. Button 7-pin	74	5590
5591	Miniature Pentode	H	6.3	0.15	200	155	1.85	0.55	100	120	7.5	1700	5000	340000	—	1 3/4	3/4	Min. Button 7-pin	74	5591
5603	Pentode	O-F	6.3	0.50	165	165	8	2.5	—	135	50	92	5400	17000	2.2	3	1 7/16	Octal	81	5603

Key to Symbols and Abbreviations:

Ampl. Fact. — Amplification Factor
Amps. — Amperes
Bay. — Bayonet
Cath. — Cathode
Cur. — Current

dbm — Decibels Above One Milliwatt
Diam. — Diameter
Diss. — Dissipation
F — Filament-Type Cathode
H — Heater-Type Cathode

Htr. — Heater
Ma. — Milliampere
Med. — Medium
Min. — Miniature
O — Oxide-Coated

Res. — Resistance
Scr. — Screen
Transcond. — Transconductance
Var. Mu — Variable Amplification Factor
 μ mhos — Micromhos

* — Excluding Flexible Leads

Transmitting Tubes

Code	Type	Cooling	Cathode			Absolute Maximum Ratings				Average Static Characteristics				Typical Power Output		Maximum Dimensions		Western Electric Socket or Base Type	Basing Diagram Number	Code		
						Plate Volts	Plate Cur. Amps.	Plate Diss. Watts	Freq. FL Mc	Plate Volts	Cur. Amps.	Ampl. Fact.	Trans. cond. μ mhos	Class	Watts	Height	Diam.					
			Type	Volts	Amps.																	
5D2I	Tetrode (Pulse Ampl.)	Air	H	26.0	2.1	20000	.030	60	—	(Non-Inductive Load. Peak Anode Current = 15 amperes)				5	7/8	2	9/16	152A	76	5D2I		
212E	Triode	Air	T-F	14.0	6.0	3000	.300	275	1.5	2000	.165	16	8500	B-RF	200	13	5/8	3	5/8	147A	4	212E
220C	Triode	Water	W-F	21.5	41.0	15000	1.5	10000	4	10000	.64	40	5000	B-RF	2750	20	7/8	6	1/16	132A or 133A	44	220C
220CA	Triode	F Air	W-F	21.5	41.0	15000	1.5	5000	4	10000	.50	40	4400	B-RF	2200	21	3/16	7	7/32	154A	44	220CA
228A	Triode	Water	W-F	21.5	41.0	6000	1.5	5000	3	5000	.90	16	6500	B-RF	1100	18		3	1/2	126A	41	228A
232B	Triode	Water	W-F	20.0	60.0	20000	3.0	25000	3	15000	1.35	40	6500	B-RF	9000	21	15/16	6	1/16	132A or 133A	44	232B
236A	Triode	Water	W-F	21.5	41.0	20000	2.0	20000	3	15000	1.0	40	6450	B-RF	5000	30		3	3/4	132A or 133A	44	236A
240B	Triode	Water	W-F	21.5	41.0	12000	1.7	10000	20	10000	.64	40	5000	B-RF	5000	25	17/32	6	7/32	Spl. Mtg.	44	240B
241B	Triode	Air	T-F	14.0	6.0	3000	.350	275	7.5	2000	.165	16	8500	B-RF	150	14	1/2	3	5/8	119A	5	241B
242C	Triode	Air	T-F	10.0	3.25	1250	.150	100	6	1250	.068	12.5	3600	B-RF	50	7	15/16	2	5/16	145A	3	242C
251A	Triode	Air	T-F	10.0	16.0	3000	.600	1000	30	2500	.240	10.5	3800	B-RF	400	21	11/16	6	1/8	142A	44	251A
254A	Tetrode	Air	T-F	5.0	3.25	750	.060	20	15	750	.027	80	1000	B-RF	10	6	15/16	2	7/16	Med. 4-pin Bay	10	254A
254B	Tetrode	Air	T-F	7.5	3.25	750	.075	25	15	750	.033	100	1160	B-RF	12.5	6	15/16	2	7/16	Med. 4-pin Bay.	10	254B
268A	Triode	Air	T-F	5.0	3.25	750	.060	25	30	750	.025	5	800	B-RF	12.5	6	15/16	2	7/16	Med. 4-pin	15	268A
270A	Triode	Air	T-F	10.0	9.75	3000	.375	350	7.5	2500	.120	16	5700	B-RF	175	17		4		Spl. Mtg.	41	270A
276A	Triode	Air	T-F	10.0	3.0	1250	.125	100	30	1250	.068	12	4000	B-RF	50	7	15/16	2	5/16	145A	3	276A
279A	Triode	Air	T-F	10.0	21.0	3000	.800	1200	20	2500	.300	10	5000	B-RF	500	21	11/16	6	1/8	142A	44	279A
282A	Tetrode	Air	T-F	10.0	3.0	1000	.100	70	30	1000	.070	100	1430	B-RF	33	6	15/16	2	7/16	Med. 4-pin Bay.	10	282A
284D	Triode	Air	T-F	10.0	3.25	1250	.150	85	6	1250	.064	4.8	2500	A-Audio	40	7	15/16	2	5/16	145A	3	284D
295A	Triode	Air	T-F	10.0	3.25	1250	.175	100	6	1250	.080	25	4200	B-RF	42.5	7	15/16	2	5/16	145A	3	295A
298A	Triode	Water	W-F	27.0	225	20000	11.0	100000	4	18000	4.2	32	22000	B-RF	25000	52	1/16	9	9/16	Spl. Mtg.	44	298A
298B	Triode	Water	W-F	27.0	225	20000	11.0	100000	4	18000	3.0	57.5	20000	C-RF (UM)	100000	52	1/16	9	9/16	Spl. Mtg.	44	298B
305A	Tetrode	Air	T-F	10.0	3.1	1000	.125	60	50	1000	.060	56	1400	B-RF	30	7	3/16	2	7/16	Med. 4-pin Bay.	16	305A
306A	Pentode	Air	O-F	2.75	2.0	300	.060	15	50	250	.043	250	4050	C-RF (PM)	7	6	1/8	2	1/16	Med. 5-pin Bay.	26	306A
307A	Pentode	Air	O-F	5.5	1.0	500	.060	15	40	250	.050	120	4000	C-RF (SM)	6	6	1/8	2	1/16	Med. 5-pin Bay.	30	307A
308B	Triode	Air	T-F	14.0	6.0	2250	.325	250	1.5	1500	.167	8	7500	A-Audio	50	13	5/8	3	5/8	147A	4	308B
312A	Pentode	Air	T-F	10.0	2.8	1250	.100	50	20	1000	.050	1100	3800	C-RF (SM)	23	7	3/4	2	5/16	Med. 6-pin	33	312A

Transmitting Tubes (Continued)

Code	Type	Cooling	Cathode				Absolute Maximum Ratings				Average Static Characteristics				Typical Power Output		Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
			Type	Volts	Amps.	Freq. F1	Plate Volts	Plate Cur. Amps.	Plate Diss. Watts	Freq. Mc	Plate		Trans-		Class	Watts	Height	Diam.			
											Volts	Amps.	Amps.	μmhos							
316A	Triode	Air	T-F	2.0	3.65	450	.080	30	500	450	.067	6.5	2400	OSC. (PM)	6.5	2 25/32	2 11/16	Spl. Mtg.	46	316A	
320A	Triode	Water	W-F	35.0	435	18000	15.0	150000	2	18000	8.0	30	31100	B-RF	75000	94	12	Spl. Mtg.	45	320A	
322A	Pentode	Air	T-F	10.0	5.0	2000	.175	125	20	2000	.0625	1400	4000	C-RF (SM)	53	9 3/8	2 9/16	Giant 5-pin Bay	47	322A	
331A	Triode	Air	T-F	10.0	3.25	1500	.200	125	30	1500	.085	40	4500	B-Audio (2)	370	8 1/2	2 5/16	145A	48	331A	
332A	Pentode	Air	T-F	10.0	5.0	2000	.175	125	20	2000	.0625	1400	4000	C-RF (PM)	135	9 3/8	2 9/16	Giant 5-pin Bay	34	332A	
339A	Pentode	Air	O-F	5.0	1.2	575	.125	45	—	400	.073	96	4800	B-RF	30	7 1/16	2 7/16	Med. 5-pin	30A	339A	
340A	Triode	Water	W-F	20.0	72.0	20000	2.5	25000	10	15000	1.3	40	6820	B-RF	9000	21 15/16	6 1/16	132A or 133A	44	340A	
341AA	Triode	F Air	W-F	21.5	57.5	10000	1.5	5000	—	7000	0.7	9	3750	B-Audio	8000	21 3/16	7 7/32	154A	44	341AA	
342A	Triode	Water	W-F	20.0	67.0	20000	2.5	25000	4	15000	1.3	40	6820	B-RF	8500	21 15/16	6 1/16	132A or 133A	44	342A	
343A	Triode	Water	W-F	21.5	57.5	18000	2.0	10000	4	10000	.64	40	6750	B-RF	3500	20 7/8	6 1/16	132A or 133A	44	343A	
343AA	Triode	F Air	W-F	21.5	57.5	18000	1.5	5000	4	10000	0.50	40	5900	B-RF	3500	21 3/16	7 7/32	154A	44	343AA	
350A	Beam Tetrode	Air	H	6.3	1.6	600	.125	30	—	500	.055	430	6400	B-RF	20	5 31/32	2 1/16	Med. 5-pin	36	350A	
356B	Triode	Air	T-F	5.0	5.0	1500	.120	60	100	600	.100	50	3800	C-RF (PM)	85	4 7/8	2 5/16	152A	20	356B	
357B	Triode	Air	T-F	10.0	10.0	4000	.500	400	100	700	.500	30	9000	C-RF (PM)	780	8	5 1/8	KS-10299-1	42	357B	
363A	Pentode	Air	T-F	10.0	10.0	4000	.500	350	85	700	.500	350	12000	C-RF (UM)	1000	8	5 1/8	KS-10299-2	52	363A	
364A	Triode	Air	T-F	5.0	5.0	1500	.120	50	150	1000	.100	50	4500	C-RF (PM)	85	3 3/8	2 5/8	A5A or A5B	53	364A	
368A	Triode	Air	T-F	1.15	4.5	350	.075	20	1250	300	.060	8	2500	OSC.	3.0	2	2 7/64	Spl. Mtg.	55	368A	
368AS	Triode	Air	T-F	1.15	4.5	350	.075	20	1000	300	.060	8	2500	OSC.	2.5	2	2 7/64	Spl. Mtg.	46	368AS	
379A	Triode	Air	T-F	10.0	21.0	3000	.800	1200	20	2500	.300	10	5000	B-RF	600	21 11/16	6 1/8	142A	44	379A	
389AA	Triode	F Air	W-F	11.0	150	8500	2.5	7500	50	5000	1.5	22	16000	C-RF (UM)	13500	11 11/16	8 19/32	Spl. Mtg.	77	389AA	
715C	Tetrode (Pulse Ampl.)	Air	H	26.0	2.1	15000	.030	60	—	(Inductive Load. Peak Anode Current = 15 amperes)						5 7/8	2 9/16	152A	76	715C	
5530	Triode	F Air	T-F	5.0	55	5000	1.75	3000	110	1700	1.75	26	12000	C-RF (FM)	3000	7 53/64	5 9/64	Spl. Mtg.	83	5530	
5541	Triode	F Air	T-F	7-5	55	8500	2.75	10000	110	3600	2.75	26	22000	C-RF (FM)	10000	10 3/16	8 1/64	Spl. Mtg.	83	5541	

Key to Symbols and Abbreviations:

A-Audio — Class A Audio Frequency
Ampl. — Amplifier
Ampl. Fact. — Amplification Factor
Amps. — Amperes
B-Audio (2) — Class B Audio Frequency
 Two Tubes
Bay. — Bayonet

B-RF — Class B Radio Frequency
C-RF — Class C Radio Frequency
Cur. — Current
Diam. — Diameter
Diss. — Dissipation
FM — Frequency Modulated

F — Filament-Type Cathode
F Air — Forced Air
Freq. F1 — Maximum Frequency for Operation
 at Full Plate Voltage
H — Heater-Type Cathode
Mc — Megacycles
Med. — Medium

O — Oxide-Coated
Osc — Oscillator
PM — Plate Modulated
SM — Suppressor Grid
 Modulated
Spl. Mtg. — Special Mounting

T — Thoriated Tungsten
Transcond. — Transconductance
UM — Unmodulated
W — Tungsten
μmhos — Micromhos

Rectifiers

Code	Type	Cooling	Cathode			Maximum Peak Inverse Anode Volts	Maximum Peak Anode Amps.		Maximum Average Anode Amps.		Max. Time of Averaging Anode Amps. Seconds	Condensed Mercury Temp. Range °C	Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
			Type	Volts	Amps.		In Phase	Quad.	In Phase	Quad.			Height	Diam.			
3B24W	Rh-V	Air	T-F	5.0	3.0	20000	.300	—	.060	—	—	—	4 13/16	1 9/16	Med. 4-pin Bay.	71	3B24W
222A	Rh-V	Water	W-F	21.5	41	25000	5.0	—	1.5	—	—	—	18	3 9/16	132A or 133A	7	222A
233A	Rh-V	Water	W-F	21.5	41	50000	5.0	—	1.5	—	—	—	23 1/4	4 3/16	132A or 133A	7	233A
249B	Rh-Hg	Air	O-F	2.5	7.5	7500	2.5	—	0.64	—	5	20-70	7 5/8	2 11/16	Med. 4-pin Bay.	13	249B
253A	Rh-Hg	Air	O-F	2.5	3.0	3500	1.0	—	0.25	—	5	20-60	6 13/16	2 3/16	138B or 139A	7A	253A
255B	Rh-Hg	Air	O-F	5.0	19	20000	10.0	20.0	2.5	5.0	30	20-40	17 1/2	5 3/16	Spl. Mtg.	7A	255B
258B	Rh-Hg	Air	O-F	2.5	7.5	7500	2.5	—	0.64	—	5	20-70	7 15/16	2 11/16	138B or 139A	7A	258B
266B	Rh-Hg	Air	O-F	5.0	42	22000	20.0	40.0	5.0	10.0	60	20-40	21 3/4	7 1/8	Spl. Mtg.	49	266B
266C	Rh-Hg	Air	O-F	5.0	42	22000	20.0	40.0	5.0	10.0	60	20-40	19 7/8*	7 1/8	Spl. Mtg.	49	266C
267B	Rh-Hg	Air	O-F	5.0	6.75	7500	4.0	8.0	1.0	2.0	15	35-75	8 13/16	2 5/16	138B or 139A	7A	267B
274A	Rf-V	Air	O-F	5.0	2.0	1650	.525	—	.175†	—	—	—	5 5/8	2 3/16	Med. 4-pin Bay.	9	274A
274B	Rf-V	Air	O-F	5.0	2.0	1650	.525	—	.175†	—	—	—	5 7/16	2 1/16	Octal	28	274B
301A	Rf-Hg	Air	O-F	5.0	3.0	1800	2	—	1.0†	—	5	20-80	6 1/2	2 7/16	Med. 4-pin Bay.	9A	301A
314A	Rf-Hg	Air	O-F	5.0	5.0	300	5	—	2.5†	—	5	20-80	6 1/2	2 7/16	Med 4-pin	82	314A
315A	Rh-Hg	Air	O-F	5.0	10.0	12500	4.0	8.0	1.0	2.0	15	20-55	12 1/4	3 7/8	138B or 139A	7A	315A
319A	Rh-Hg	Air	O-F	5.0	6.75	7500	4.0	8.0	1.0	2.0	15	35-75	8 1/2	2 5/16	148A	17	319A
321A	Rh-Hg	Air	O-F	5.0	10.0	12500	4.0	8.0	1.0	2.0	15	20-55	11 7/8	3 7/8	148A	17	321A
345A	Rf-V	Air	H	6.3	1.0	1375	.330	—	.110†	—	—	—	4 1/4	1 9/16	Small 5-pin	35	345A
351A	Rf-V	Air	H	6.3	1.0	1375	.330	—	.110†	—	—	—	4 1/4	1 9/16	Octal	40	351A
705A	Rh-V	Air	T-F	5.0	5.0	30000	.400	—	.100	—	—	—	5 1/16	2 5/16	152A	69	705A

Key to Symbols and Abbreviations:

Amps. -- Amperes
 Bay. -- Bayonet
 Diam. — Diameter
 Diss. -- Dissipation
 F — Filament-Type Cathode

H — Heater-Type Cathode
 Hg — Mercury
 Max. — Maximum
 Med. — Medium
 O — Oxide-Coated

Quad. — Quadrature
 Rf — Full-Wave
 Rh — Half-Wave
 Spl. Mtg. — Special Mounting
 T — Thoriated Tungsten

Temp. — Temperature
 V — High Vacuum
 W — Tungsten
 * — Excluding Flexible Leads
 † — Total Output Current for Full-Wave Rectifier

Special-Purpose Diodes

Code	Cooling	Cathode			Maximum Peak Inverse Anode Volts	Maximum Anode Amps.		Maximum Anode Dissipation Watts	Anode-Cathode Capacitance $\mu\text{f.}$	Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
		Type	Volts	Amps.		Peak	Average			Height	Diam.			
380A	Air	H	6.3	.15	500	.0285	.005	—	1.1	1 17/32*	1 3/8	None	62	380A
381A	Air	H	6.3	.15	500	.0285	.005	—	1.4	1 7/8	1 3/8	Octal	61	381A
704A	Air	H	4.5	.50	1500	.050	.010	—	.75	1 5/16*	9/16*	None	63	704A
719A	Air	H	7.0	7.0	25000	10.0	.500	75	7.2	5 7/8	2 9/16	152A	56	719A

Key to Symbols and Abbreviations:

Amps. — Amperes H — Heater-Type Cathode $\mu\text{f.}$ — Micromicrofarads * — Excluding Flexible Leads

Thyratrons

Code	Gas	Cathode			Max. Inst. Anode Amps.	Aver. Anode Amps.	Max. Time of Averaging Anode Cur. Seconds	Max. Peak Volts Anode to Grid	Operating Ambient Temp. Range °C	Operating Condensed Mercury Temp. Range °C	Nominal Deionization Time $\mu\text{sec.}$	Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
		Type	Volts	Amps.								Height	Diam.			
256A	A	H	2.3	1.7	0.075	0.075	—	325	—20 to +50	—	1000	4 7/8	1 13/16	Med. 5-pin	22B	256A
269A	A	O-F	2.2	0.55	0.120	0.020	0.5	275	—20 to +50	—	100	4 9/16	1 13/16	Med. 4-pin	2B	269A
287A	Hg	O-F	2.5	7.0	{ 2.5 6.0	0.64 1.5	5 5	2500 1250	— —	+30 to +80 +30 to +80	1000 1000	6 5/8	2 1/16	Med. 5-pin	25	287A
297A	A	O-F	1.75	0.350	0.060	0.010	0.5	250	—20 to +50	—	100	4	1 3/16	Small 4-pin	2B	297A
323B	A & Hg	O-F	2.5	7.0	6.0	1.5	5	1250	—	—40 to +80	1000	6 5/8	2 1/16	Med. 5-pin	25	323B
338A	A	H	10.0	0.5	0.600	0.100	5	325	—20 to +50	—	1000	4 7/16	1 9/16	Small 5-pin	22B	338A
354A	Hg	O-F	2.5	16.0	16.0	4.0	15	1500	—	+30 to +70	1000	9 1/2	3 3/16	*	14	354A
355A	A & Hg	O-F	2.5	16.0	16.0	4.0	15	350	—	—20 to +80	1000	9 1/2	3 3/16	*	14	355A
393A	A & Hg	O-F	2.5	7.0	6.0	1.5	5	1250	—	—40 to +80	1000	6 5/8	2 1/16	Octal	59	393A
394A	A & Hg	O-F	2.5	3.25	2.5	0.64	5	1250	—	—40 to +80	1000	6	1 25/32	Octal	60	394A

Key to Symbols and Abbreviations:

A — Argon Cur. — Current Hg — Mercury Med. — Medium $\mu\text{sec.}$ — Microseconds
 Amps. — Amperes F — Filament-Type Cathode Inst. — Instantaneous O — Oxide-Coated * — Westinghouse S # 793202
 Aver. — Average H — Heater-Type Cathode Max. — Maximum Temp. — Temperature

Cold Cathode Tubes

Code	Number of Elements	Starter Gap		Main Gap		Maximum Transfer Current μA. DC (Anode at 130V)	Forward Current Milliamperes DC for Life of				Peak Inverse Current Ma. DC.	Nominal Deionization Time Milliseconds		Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
		Nominal Breakdown Volts DC	Nominal Sustaining Volts DC (At 20 Ma.)	Minimum Breakdown Volts DC	Nominal Sustaining Volts DC (At 20 Ma.)		10 Hrs.	100 Hrs.	1000 Hrs.	10000 Hrs.		Main Gap	Starter Gap	Height	Diam.			
313C	3	70	60	150	75	5	100	35	20	10	5	10	3	3 13/32	1 3/16	Small 4-pin	18	313C
313CA	3	72	60	200	75	5	72	25	14	7	5	10	3	3 13/32	1 3/16	Small 4-pin	18	313CA
313CB	3	70	60	185	76	5	72	25	14	7	5	10	3	3 13/32	1 3/16	Small 4-pin	18	313CB
313CC	3	72	60	170	75	5	72	25	14	7	5	10	3	3 13/32	1 3/16	Small 4-pin	18	313CC
313CD	3	72	60	—	—	5	72	25	14	7	5	10	3	3 13/32	1 3/16	Small 4-pin	18	313CD
333A	3	70	60	150	75	5	100	35	20	10	5	10	3	3 5/16	1 3/16	Bkt. Mtg.	19A	333A
346B	3	70	60	225	80	200†	100	35	20	10	5	8	2	3 29/32	1 3/16	Bkt. Mtg.	19	346B
353A	3	70	60	150	75	5	100	35	20	10	5	10	3	3 17/32	1 3/16	Bkt. Mtg.	19	353A
358A	2	70	60	—	—	—	50	18	10	5	—	—	—	1 13/16	3/4	None	43	358A
359A	3	75	60*	180	75*	50	40	15	8	4	1	8*	2*	2 21/32	1/2	None	51	359A
372A	3	70	60	150	75	5	100	35	20	10	5	10	3	3 5/16	1 3/16	Bkt. Mtg.	19A	372A
395A	3	77	60*	155	75*	5	35	13	7	4	1	10*	3*	3 1/4	1/2	None	51	395A
5589	3	80	60	275	65	200	100	60	35	20	5	2	1	4 1/8	1 3/16	Octal	78	5589

Key to Symbols and Abbreviations:

Bkt. Mtg. — Bracket Mounting
DC — Direct Current

Diam. — Diameter
Hrs. — Hours

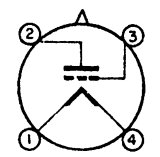
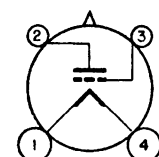
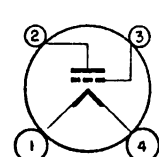
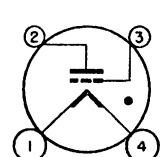
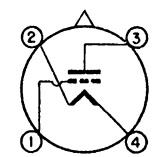
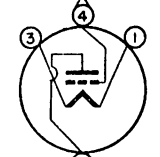
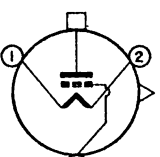
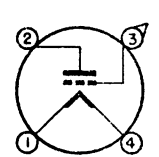
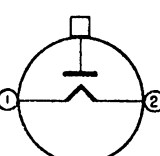
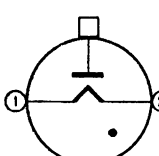
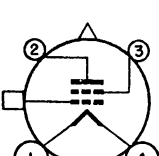
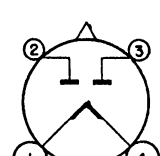
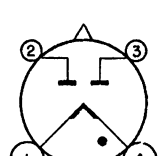
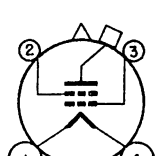
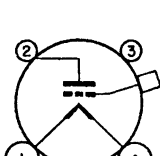
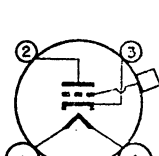
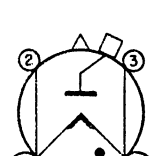
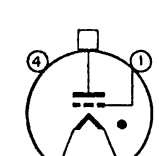
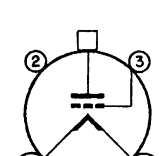
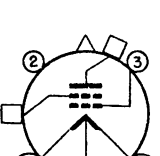
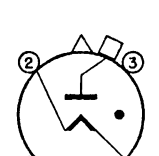
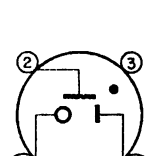
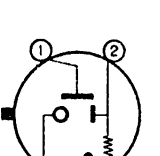
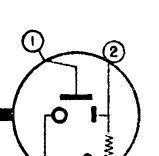
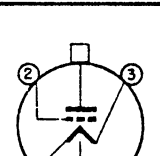
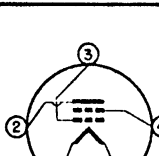
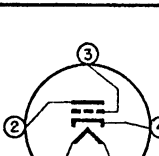
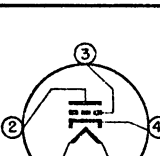
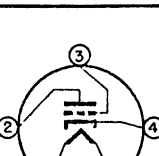
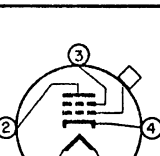
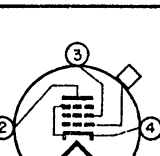
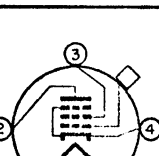
Ma. — Milliamperes
μA — Microamperes

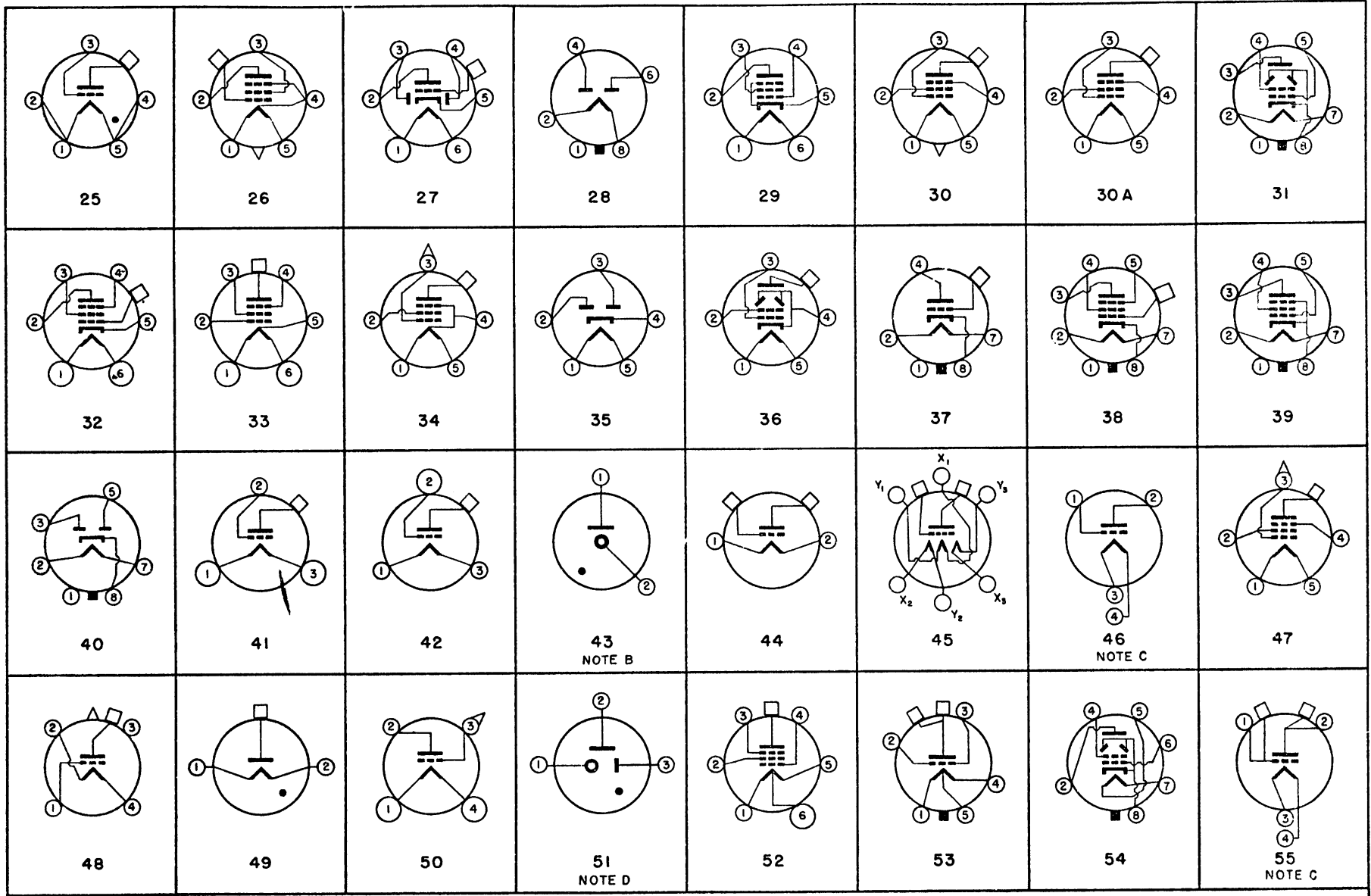
* — At 10 Milliamperes DC
† — Anode at 110 Volts

Ballast Lamps












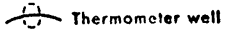
Code	Ballasted Current Amperes	Ballast Range Volts	Maximum Dimensions Inches		Western Electric Socket or Base Type	Basing Diagram Number	Code
			Height	Diameter			
2A21	.98 to 1.01	6.5 to 9.5	3 15/16	1 3/16	Octal	73	2A21
4B	1.08 to 1.17	3 to 9.5	5	1 5/16	Medium Screw	72	4B
5A	.95 to 1.01	3 to 9.5	4 3/8	2 3/8	Medium Screw	72	5A
5B	1.08 to 1.16	3 to 9.5	4 3/8	2 3/8	Medium Screw	72	5B
7A	.499 to .530	3 to 10	3 1/2	1 5/16	Medium Screw	72	7A
8A	.494 to .525	3 to 10	3 1/2	1 5/16	Medium Screw	72	8A
111A	4.94 to 5.46	1 to 3	4	1 5/16	Small 4-pin	79	111A
117A	.478 to .510	3 to 10	3 1/2	1 5/16	Medium Screw	72	117A
119A	1.90 to 2.10	6 to 18	6 3/16	2 7/16	Medium 4-pin	80	119A
120A	.386 to .475	5.5 to 12	4	1 5/16	Small 4-pin	80	120A
121B	.765 to .965	5.5 to 12	4	1 5/16	Small 4-pin	80	121B
122A	1.65 to 2.15	3.0 to 7.5	4	1 5/16	Small 4-pin	80	122A
123A	2.50 to 3.50	4 to 12	6 3/16	2 7/16	Medium 4-pin	80	123A
124A	8.2 to 11.7	5 to 12	7 3/4	2 1/8	Mogul Screw	72	124A
125A	1.60 to 2.35	10 to 60	7 3/4	2 1/8	Mogul Screw	72	125A
126B	.94 to 1.00	5.5 to 14.5	4 1/2	1 9/16	Medium Screw	72	126B
127A	2.52 to 2.88	25 to 55	7 3/4	2 1/8	Mogul Screw	72	127A

BASING DIAGRAMS (VIEWED FROM BOTTOM OF BASE)

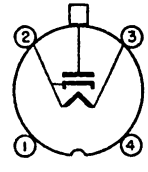
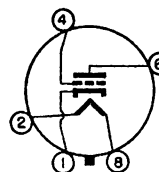
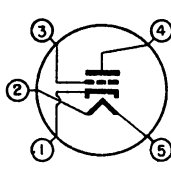
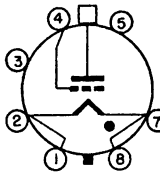
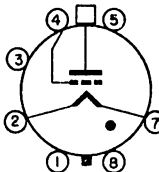
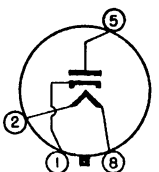
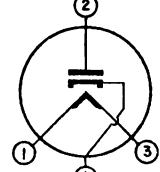
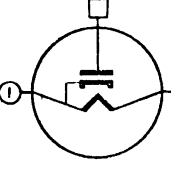
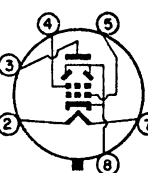
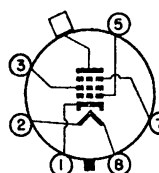
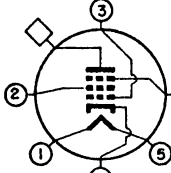
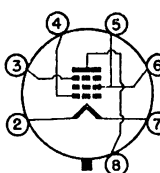
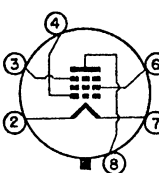
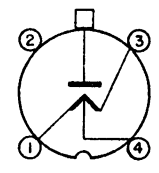
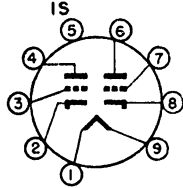
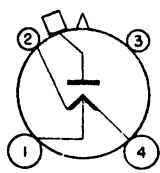
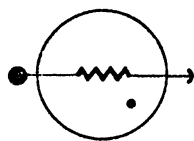
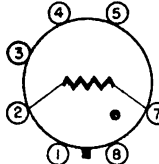
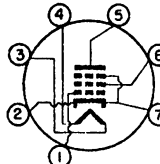
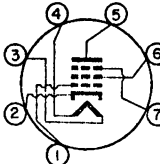
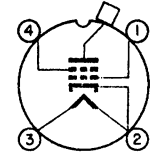
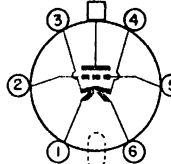
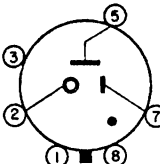
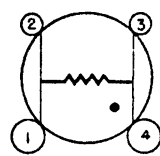
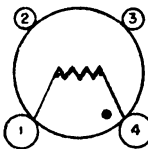
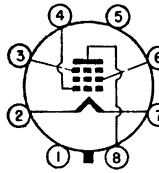
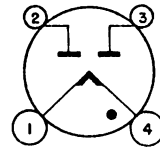
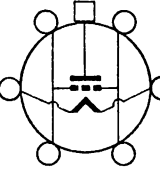
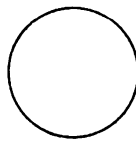
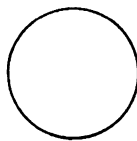
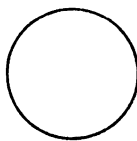
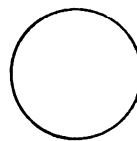













 1	 2	 2A	 2B	 3	 4	 5	 6
 7	 7A	 8	 9	 9A	 10	 11	 12
 13	 14	 15	 16	 17	 18 NOTE A	 19	 19 A
 20	 21	 22	 22 A	 22 B	 23	 24	 24 A



KEY TO SYMBOLS IN BASING DIAGRAMS

- | | | | | |
|---|---|---|---|--|
|  Base pin—small |  Gas-Filled | NOTE A: Elements 1 and 4 interchangeable. |  IS Internal shield |  Key |
|  Flexible lead in base |  Base pin—large | NOTE B: Elements 1 and 2 interchangeable.
2 is upper electrode designated by red dot on base |  Bayonet pin |  Keyway |
|  Connection in bulb |  Flexible connection in bulb | NOTE C: Four base pins in lower half of envelope arranged in T formation |  Bayonet and base pin in same radial plane |  Thermometer well |
| | | NOTE D: 1 Yellow, 2 Black, 3 Red. | | |

BASING DIAGRAMS (CONTINUED)

 56	 57	 58	 59	 60	 61	 62	 63
 64	 65	 66	 67	 68	 69	 70	 71
 72	 73	 74	 75	 76	 77	 78	 79
 80	 81	 82	 83	 	 	 	
 Base pin—small	 Gas-Filled	KEY TO SYMBOLS IN BASING DIAGRAMS		 Internal shield	 Keyway		
 Flexible lead in base	 Base pin—large	 Center connection in screw type base	 Bayonet pin	 Bayonet and base pin in same radial plane	 Thermometer well		
 Connection in bulb	 Flexible connection in bulb	 Shell connection in screw type base					

WESTERN ELECTRIC ELECTRON TUBES—GENERAL BULLETIN

Discontinued Codes

DISCONTINUED CODE	TYPE	REPLACING CODE	DISCONTINUED CODE	TYPE	REPLACING CODE
101A	Triode	101D	235D	Triode	—
101B	Triode	101D	237A	Rectifier	—
101G	Triode	—	239A	Triode	—
101H	Triode	—	240A	Triode	240B
101DW	Triode	101D	241A	Triode	241B
102A	Triode	102D	242A	Triode	242C
102DW	Triode	102D	242B	Triode	242C
102E	Triode	102D	243A	Triode	—
102H	Triode	—	243A	Triode	—
104A	Triode	104D	249A	Rectifier	249B
104C	Triode	—	255A	Rectifier	255B
104DW	Triode	104D	258A	Rectifier	258B
104H	Triode	—	259B	Tetrode	259A
104G	Triode	—	260A	Tetrode	—
105A	Triode	205F	261A	Triode	276A
112A	Triode	212E	262A	Triode	262B
113A	Triode	242C	264A	Triode	264C
115A	Triode	215A	264B	Triode	264C
117AW	Rectifier	—	265A	Triode	—
118AW	Triode	—	266A	Rectifier	266B
201A	Triode	—	267A	Rectifier	267B
201B	Triode	102D	280A	Rectifier	—
203A	Triode	—	282B	Tetrode	282A
203B	Triode	—	284A	Triode	284D
203C	Triode	—	284B	Triode	284D
203D	Triode	—	288A	Rectifier	—
205A	Triode	205F	289A	Rectifier	—
205B	Triode	205F	292A	Duplex-Diode Triode	352A
205D	Triode	205F	300A	Triode	300B
205E	Triode	205F	302A	Cathode Ray Tube	—
208A	Triode	101D	304A	Triode	—
208C	Triode	—	304B	Triode	—
209A	Triode	102D	308A	Triode	308B
210A	Triode	104D	313A	Cold Cathode Gas Triode	313C
211A	Triode	242C	313B	Cold Cathode Gas Triode	313CA
211D	Triode	—	313AA	Cold Cathode Gas Triode	313CA
211E	Triode	242C	323A	Thyratron	323B
212A	Triode	212E	325A	Cathode Ray Tube	—
212D	Triode	212E	325B	Cathode Ray Tube	—
214A	Rectifier	—	325C	Cathode Ray Tube	—
214D	Rectifier	—	326A	Cathode Ray Tube	—
216A	Triode	—	326B	Cathode Ray Tube	—
217A	Rectifier	—	326C	Cathode Ray Tube	—
219A	Rectifier	—	327A	Rectifier	—
219D	Rectifier	—	330A	Cathode Ray Tube	—
220A	Triode	220C	330B	Cathode Ray Tube	—
220B	Triode	220C	330C	Cathode Ray Tube	—
221D	Triode	—	334A	Thyratron	—
222B	Rectifier	222A	335A	Thyratron	—
223A	Triode	—	346A	Cold Cathode Gas Triode	346B
224A	Cathode Ray Tube	—	356A	Triode	356B
224B	Cathode Ray Tube	—	360A	Pentode	—
224C	Cathode Ray Tube	—	361A	Pentode	—
225A	Triode	—	362A	Pentode	—
226A	Rectifier	—	365A	Rectifier	—
227A	Diode	—	CW931	(Same as 205B)	205F
229D	Triode	—	CW933	(Same as 203B)	—
232A	Triode	232B	VT 1	(Same as 203B)	—
233B	Rectifier	233A	VT 2	(Same as 205A)	205F
234A	Rectifier	—	VT 5	(Same as 215A)	215A