

FUNCTIONAL CLASSIFICATION
OF
SERVICE PREFERRED, GUIDANCE AND CURRENT VALVES

1. This publication is designed to provide a means of choosing a suitable valve for a given use by:-

- (a) Listing the valves according to type,
- (b) Showing the relation of each type to others in the same class.

2. It is emphasised that valves must be chosen, if possible, from the Services List of Preferred Valves. The Availability Classification (Preferred or otherwise) shown herein should be checked with the Preferred List before design work begins.

3. The latest issue of the specification should be consulted to confirm the technical information given.

January, 1963

(163443)

DEFINITIONS OF AVAILABILITY CLASSIFICATIONS

4.1. PREFERRED TYPES

Types which are the best of their kind technically, provided

- (a) A C.V. Specification exists
- (b) Qualification Approval has been given
- (c) There is an assurance of continued production.

4.2. GUIDANCE TYPES

- (a) Types expected to become Preferred when they fulfil the criteria for Preferred given above.
- (b) Some N.A.T.O. Preferred Types having U.K. production sources but not included in the U.K. Preferred List.
- (c) Types which are sometimes necessary to meet special requirements, but which for reasons of manufacturing complexity, expense etc., are not included in the Preferred List.
- (d) Certain CV.4000 valves not yet in production.
- (e) All B7G, B9A Flying Lead Valves due to possible production difficulties.

4.3. CURRENT TYPES

Valves which may be available to designers of new equipment in addition to those in the Preferred List.

	<u>Page</u>
Cathode Ray Tubes	4
Coaxial Line Oscillators	34
Decade Scaling Tubes	41
Decade Selectors	41
Diodes	6
Diodes, Double	6
Diodes, Damping	6
Diodes, Noise Sources	26
Double Diodes	6
Double Tetrodes	20
Double Triodes	24
Gas Switches	36
Heptodes	25
Ignitrons	41
Indicators, Power (Standing Wave)	39
Indicators, Tuning	41
Indicators, Voltage	41
Klystrons	34
Local Oscillators	34
Magnetrons	32
Mercury Arc Rectifiers	41
Miscellaneous	41
Modulators, Hydrogen Thyratrons	31
Noise Sources, Diodes	26
Noise Sources, Discharge Tubes	26
Monitor Diodes	41
Pentodes ($V_a < 500V$)	11
Pentodes ($V_a > 500V$)	17
Photocells and Photomultiplier Tubes	30
Power Limiting Gas Cells	38
Pulsed Attenuators	38
Rectifier List	7
Chart	10

	<u>Page</u>
Rectifiers, Mercury Arc	41
Relay Valve, Cold Cathode	39
Spark Gaps	40
Stabilisers, Corona	29
Stabilisers, Series	41
Stabilisers, Shunt	41
Stabilisers, Voltage	28
T.B. Cells	37
T.R. Cells	36
Pre-T.R. Cells	37
Tetrodes and Pentodes ($V_a < 500$)	11
Tetrodes and Pentodes ($V_a > 500V$)	17
Tetrodes and Triodes (Gas Filled)	27
Tetrodes, Double	20
Thyratrons, Inert Gas Filled	27
Thyratron Hydrogen Modulators	31
Travelling Wave Amplifiers	35
Trigger Tubes	41
Triggered Spark Gap	41
Triode Heptodes	25
Triodes ($V_a < 500V$)	21
Triodes ($V_a > 500V$)	23
Triodes, Double	24
Triodes, Inert Gas Filled	27
Triode Hydrogen Modulators	31
Tuning Indicators	41
Voltage Indicators	41
Voltage Reference Tubes	28
Voltage Stabilisers	28
V.M. Tubes and Coaxial Line Oscillators	34
Voltage Tuned Oscillators	35
C.R.T. Screen Colour Code	42

CATHODE RAY TUBES

(Arranged in ascending order of nominal bulb diameter)

CV No.	Availa- bility Classn.	Nom. Bulb Dia. (ins.)	Defln.	Focus	Max. Final Anode Voltage (kV)	Mean Plate Sensitivity		Screen Type (See Page 42)	Min. Useful Screen Area (mm)	Base	Remarks
						X (mm/V)	Y (mm/V)				
2302	P	1	ES	ES	1.0	95/Va3	110/Va3	GG5	24 dia	B8G	PDA
389	C	)						) GGN	)		
2211	C	) 1½	ES	ES	4.0	0.10	0.093	) BBN	) 35 dia.	B9G	
2272	C	)						) BY8	)		
6050	C	2½	M	M	25	-	-	GG5	46 dia.	B9A/D	
6095	C	2½	ES	ES	0.7	510/Va3	867/Va3	GG5-6	55 dia.	B9G	
2175	C	2½	ES	ES	1.0	128/Va2	196/Va2	GG5	61 dia.	B9G	
2431	G	2½	ES	ES	0.8	110/Va3	175/Va3	GG2	61 dia.	B9G	
3946	G	3	ES	ES	2.75	0.363	0.529	GGN	70 dia.	B12A	
420	P	)						) 008	)		
2230	P	) 3½	M	ES	8.0	-	-	) BB1	) 80 dia.	B80	Compass Tube Double beam *11 Contact Clip Type *11 Contact Clip Type
2244	P	)						) YY7	)		
2292	C	4	ES	ES	3.0	290/Va3	390/Va3	YYN	-	B12G	
2193	P	4	ES	ES	4.0	750/Va3	650/Va3	GGN28	90X55	*	
2185	C	4½	ES	ES	4.0	630/Va3	950/Va3	GGN	85 dia.	*	

Contd. over

CATHODE RAY TUBES (Continued)

CV No.	Availa- bility Classn.	Nom. Bulb Dia. (ins.)	Defln.	Focus	Max. Final Anode Voltage (kV)	Mean Plate Sensitivity		Screen Type (See Page 42)	Min. Useful Screen Area (mm)	Base	Remarks
						X (mm/V)	Y (mm/V)				
2464	C	5	M	ES	8.0	-	-	YY7	109 dia.	B12A	PDA PDA
2469	C	5	M	ES	8.0	-	-	Willemite	105 dia.	B12A	
2191	C	5½	ES	ES	5.0	0.30	0.35	GCN	124 dia.	B14A	
5035	G	5½	ES	ES	6.6	0.75	0.93	GG4	108 dia.	B14A	
3954	C	5½	ES	ES	4.4	-	-	-	124 dia.	B12/37	
5125	G	5½	ES	ES	-	800/Va3	900/Va3	GCN	125 dia.	B12/37	
6109	C	6 (Rect)	ES	ES	6.0	1000/Va3	1270/Va3	BY8	125 x 35	B12F	
2498	P	6 (Rect)	ES	ES	6.0	925/Va3	1000/Va3	BY8	125 x 35	B14A	
2352								GG4			
307	P	6	M	ES	8.0	-	-	BBN	135 dia.	B80	
2435	P	6	M	ES	8.0	-	-	GG4	135 dia.	B80	Concave Face
1530	P	6	M	ES	8.0	-	-	YYM	135 dia.	B80	
2415	P	6	M	ES	8.0	-	-	009	135 dia.	B80	
Amulri 5119	C	6	M	M	12.5	-	-	GC5	-	B12A	
2904	C	7	M	M	.18	-	-	009	165 dia.	B80	
464	C	9	M	ES	9.0	-	-	OOL	190 dia.	B80	
2463	G	9	M	M	15.5	-	-	009	200 dia.	B12A	
2447	P	12	M	M	9.0	-	-	BB1	250 dia.	B12A	
429	P	12	M	M	15.5	-	-	009	250 dia.	B12A	
2314	P	12	M	M	15.5	-	-	BY8	250 dia.	B12A	
2388	C	20	M	M	15.5	-	-	009	480 dia	B12A	

DIODES AND DOUBLE DIODES

CV.No.	Availa- bility Classn.	Cathode	Heater		Max. P.I.V. (V)	Max.Mean Ia (mA)	Max.Peak Ia. (mA)	Max. Vh-k (V)	Base	Remarks
			(V)	(A)						
4007	P	IH	6.3	0.3	360	10	60	360	B7G	Double Diode
4049	G	IH	6.3	0.3	360	10	60	360	B7G/F	Double Diode
2318	C	IH	6.3	1.6	1600	100	600	250	B9G	Diode

DAMPING DIODES

(In order of Short Pulse P.I.V.)

CV No.	Availa- bility Classn.	Short Pulse P.I.V. Max. (kV)	Fault P.I.V. Max. (kV)	Short Pulse Peak Ia.Max. (A)	Internal Resistance		Anode Dissipa- tion (W)	Base	Remarks
					Nominal (ohms)	Measured at (A)			
265	C	4.0	5.5	15	36	12	5	B80	*1A as Rectifier) Also listed *1.1A as Rectifier) as a Rectifier
2264	C	6.5	9	26	29	26	15	B4A	
490	C	27	35	10*	105	8	32	GES	
2160	P	40	-	30*	600	0.3	130	GES	

RECTIFIERS

(Arranged in ascending order of C.V. Number)

C.V. No.	Availa- bility Classn.	Type	Heater		Max. No Load P.I.V. (kV)	Max. Mean d.c. Current (mA)	Max. Peak Current (A)	Base	Remarks
			Vh (V)	Ih (A)					
482	C	DH, HW, HV	4	12	65	2500*	-	G.E.S.	*Min. total emission, Max. Mean Pa = 100W. *P.I.V. = 27 kV under $t_p = 2 \mu s$ conditions. Also listed under Damping Diodes. C.Res. = $4 \mu F$ at 50 c/s. Max. Pa. = 400W.
490	C	IH, HW, HV	4	4	20*	350	1	G.E.S.	
717	C	DH, FW	5	2	3.05	275	0.7	B80	
1504	C	DH, HW	16.5	15.25	63	200	1.2	Medium E.S.	
1835	P	DH, HW Gas Filled.	2.5	5	10	250	1	USM4B	
2115	P	DH, HW, HV	1.25	0.2	33*	2.2	0.0187	B80	
2125	C	DH, HW, Gas Filled.	2.5	5	2*	500	2	B4	

(Contd. over)

RECTIFIERS (Continued)

Page 8

C.V. No.	Availa- bility Classn.	Type	Heater		Max.No. Load P.I.V. (kV)	Max. Mean d.c. Current (mA)	Max. Peak Current (A)	Base	Remarks
			Vh (V)	Ih (A)					
2160	P	DH, HW, HV	4	12	40*	300	1.1	G.E.S.	*Max. Working P.I.V. Max. Pa. = 130 W. (Also listed under Damping Diodes)
2180		C IH, HW	2.5	1.7	23	30	0.18	B80	C.Res. = 0.5 μ F. (0.1 μ F for 160C c/s).
2399		C DH, HW, gas filled.	4	11	13	1250	6	G.E.S.	
2518	P	DH, HW, gas filled.	5	7	10	1250	5	B4F	
4001		C IH, FW, HV	6.3	0.6	1.375	75	0.23	) B7G/F	) C.Res. = 8 to 32 μ F.) at 50 c/s input.
4005								) B7G	
4036		G) IH, HW	6.3	1.15	1.8	300	0.9	) B9A/F	) C.Res. = 16 μ F at 50 c/s input
4044	P							) B9A	

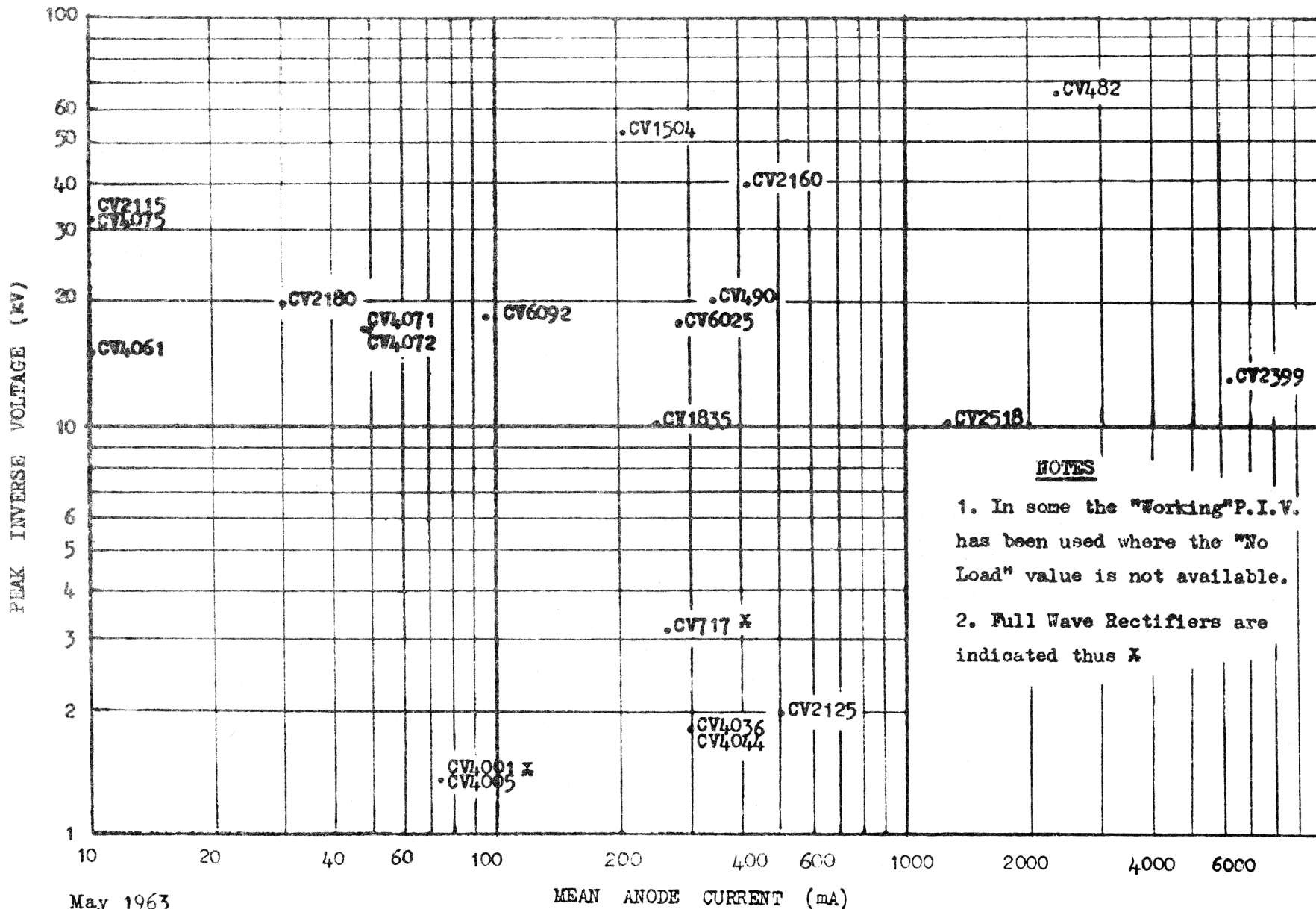
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RECTIFIER (Continued)

C.V. No.	Availa- bility Classn.	Type	Heater		Max. No. Load P.I.V. (kV)	Max. Mean d.c. Current (mA)	Max. Peak Current (A)	Base	Remarks
			Vh (V)	Ih (A)					
4061	P	DH, HW, HV	1.4	0.15	15*	2	0.012	None	C.Res. = 0.005 μ F at 50 c/s input and 0.001 μ F at 20 Kc/s, Tp = 5 μ S. *Flyback circuits. Max. P.I.V. = 10 kV in switched circuits.
4071 4072	) G	IH, HW, HV	4	1.5	16.5	50	0.3	)B80)Special	C.Res. 0.25 μ F. at 50 c/s input.
4075	G	IH, HW, HV	6.3	0.265	30*	4	0.3	B80	*Max. Working P.I.V.
4116	C	IH, HW, HV	4	1.5	17.5	50	0.3	B80	C.Res. = 0.25 μ F at 50 c/s input.
6025	C	IH, HW, HV	6.3	3.6	18* 20†	260* -	2* 13†	B4A	*Rectifier Ratings. †Overswing Diode.
6092	C	IH, HW, HV	6.3	2	18	100	0.6*	Medium E.S.	*Rectifier Ratings. Inverse Diode Applications, Max. Ia pulse = 7.5A and 14A under Fault Conditions.
6119	C	IH, HW, HV	4	4.8	25	150	0.9	G.E.S.	Also suitable for Inverse diode applications.

May 1963.

RECTIFIER CHART



TETRODES and PENTODES (LOW ANODE VOLTAGE 500V)

(In ascending order of Heater Voltage and then Mutual Conductance)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (MΩ)	Max. Vh-k (V)	Max. Freq. (Mc/s)	Base	Remarks
			VH (V)	Ih (A)										
4092	P	DH	1.25	0.020	-	100	-	100	0.65	-	-	-	B5G/F	Sub-miniature, Audio Output.
2371	C	DH	1.25	0.025	-	100	-	100	0.95	1.6	-	-	B5A/F	Beam Tetrode.
4093		DH	1.25	0.020	-	100	-	100	1.1	1.0	-	-	B5G/F	Sub-miniature. Sub-miniature.
4096	C	DH	1.25	0.020	-	100	-	100	1.1	1.0	-	-	B5G/F	H.F. Beam Tetrode, Sharp Cut-off.
224C	C	DH	1.25 2.5	0.33 0.165	3	150	1.1	135	1.85	-	-	100	B7G	Sub-miniature HF. Beam Tetrode, Sharp Cut-off. R.F. Beam Power Amplifier Transmitting.

(contd. over)

TETRODES and PENTODES (LOW ANODE VOLTAGE < 500V) (continued)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (M Ω)	Max. Vh-k (V)	Max Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)										
4094	P	DH	1.25	0.1	-	100	-	100	2.0	-	-	-	B5G/F	Sub-miniature R.F. Beam Tetrode, Sharp Cut-off.
4095	C	DH	1.25	0.1	-	100	-	100	2.0	-	-	-	B5G/F	Sub-miniature R.F. Beam Tetrode, Sharp Cut-off.
2299	C	DH	1.25	0.2	2.2	165	0.8	165	2.5	-	-	200	B8D/F	Sub-miniature Output Pentode.
2390	C	DH	1.4 2.8	0.2 0.1	2.2	165	1.0	150	2.0	0.1	-	-	B7G	Power Amplifier Pentode.
4097	C	DH	2.5 5.0	0.46 0.23	5.0	150	2.0	150	4.3	-	-	100	B9A	R.F. Beam Tetrode Power Amplifier.

(contd. over)

TETRODES and PENTODES (LOW ANODE VOLTAGE <500V) (continued)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (M Ω)	Max. Vh-k (V)	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)										
4039	P	IH	6.0	0.75	12	300	2.0	250	7	-	100	-	B9A	V.H.F. Power Amplifier Pentode.
2901	P	IH	6.3	0.2	1	300	0.2	200	1.85	2.5	100	-	B9A	) Low noise, low microphony Amplifier Pentode.
4085	G	IH	6.3	0.2	1	300	0.2	200	1.85	2.5	100	-	B9A	
4086	G	IH	6.3	0.2	1	300	0.2	200	1.85	2.5	100	-	B9A/F	
4015	) C	IH	6.3	0.2	3	300	0.7	300	2.45	-	150	-	)B7G	) Variable H.F. Pentode.
4084													)B7G/F	
3928	P	IH	6.3	0.15	0.55	165	0.45	155	3.2	-	200	-	B8D/F	Sub-miniature Pentode.
4011	P)	IH	6.3	0.175	1.65	200	0.55	155	3.2	-	100	-	)B7G	) R.F. Pentode.
4098	G)												)B7G/F	

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TETRODES and PENTODES (LOW ANODE VOLTAGE <500V) (continued)

Page 14

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (M Ω)	Max. Vh-k (V)	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)										
4064	C	IH	6.3	0.35	3.0	300	1.5	300	4.0	0.1	150	-	B7G	H.F. Pentode with limiting diode.
4083	C	IH	6.3	0.35	3.0	300	1.5	300	4.0	0.1	150	-	B7G/F	H.F. Pentode without limiting diode.
4043 4045	P G	) IH	6.3	0.45	13.2	350	2.1	310	4.1	-	90	-	)B9A)B9A/F	) Beam Tetrode.
4029	P	IH	6.3	0.45	3.7	165	0.4	155	4.2	-	200	-	B8D/F	Sub-miniature Power Amplifier Pentode.
4009	P	IH	6.3	0.3	3.3	330	0.7	135	4.4	1.0	150	-	B7G	Variable μ H.F. Pentode.
477	P	IH	6.3	0.15	0.75	165	0.35	155	4.5	0.175	200	-	B8D/F	Variable μ Pentode.
2721	C	IH	6.3	1.05	8.8	330	5.0	330	4.6	-	110	-	B9A	L.F. Pentode.

(contd. over)

TETRODES and PENTODES (LOW ANODE VOLTAGE < 500V) (Continued)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (M Ω)	Max. Vh-k (V)	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)										
2432	C	IH	6.3	0.15	0.8	165	0.35	155	5.0	0.175	200	-	B8D/F	Sub-miniature, Sharp Cut-off, Pentode.
3929	P	IH	6.3	0.15	0.8	165	0.35	155	5.0	0.175	200	-	B8D/F	Sub-miniature, Sharp Cut-off, Pentode.
4010	P	) IH	6.3	0.175	1.65	200	0.55	155	5.0	0.34	130	400	)B7G)B7G/F	)Sharp Cut-off) R.F. Pentode.
4050	G													
4002	G	) IH	6.3	0.3	3.0	300	0.9	300	7.5	-	150	-	)B7G/F)B7G	)H.F. Pentode.
4014	P													
4062	P	) IH	6.3	0.64	9.0	300	3.0	300	9.5	0.023	250	-	(B7G (	Low Impedance Pentode.
4065	G													
					12.0*	300*			12.0*	835 x 10 ^{-6*}			(B7G/F	*Anode and Screen Strapped as a Triode.

TETRODES and PENTODES (LOW ANODE VOLTAGE <500V) (Continued)

Page 16

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	gm (mA/V)	Ra (M Ω)	Max. Vh-k (V)	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)										
4055 4056	P G	) IH))))	6.3	0.75	12.0 *12.5	300 300*	2.5	300	11.0 13.0*	-	-	-	) B9A) B9A/F)))	Video Output Pentode. *Anode and Screen strapped as a Triode.
2975	P	IH	6.3	0.76	13.0	330	2.2	330	13.3	-	100	-	B9A	Audio Output Pentode.
3998	P	IH	6.3	0.3	3.0	210	0.9	175	16.5	-	60	-	B9A	Wideband Amp. Pentode.
2276	C	IH	6.3	0.3	2.0	500	0.8	300	19.0	-	-	-	B9A	Single Stage Electron Multiplier.
1928	C	IH	12.6	0.15	3.3	330	0.7	330	4.0	1.5	-	-	B7G	Variable R.F. Pentode.

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May 1963

TETRODES and PENTODES (HIGH ANODE VOLTAGE > 500V)

(In ascending order of Maximum Anode Dissipation)

C.V. N o.	Availa- bility Classn.	Max. Pa (W)	Max. Va (kV)	Max. Ia (A)	Max. Pg2 (W)	Max. Vg2 (kV)	gM (mA/V)	Max. Freq. (Mc/s)	Cath- ode	Heater		Base	Remarks
										Vh (V)	Ih (A)		
4040 4041	) C	3.5	0.6	-	0.7	0.6	8.3	-	IH	6.3	0.3	)B7G)B7G/F	) Pulse Tetrode.
2231	C	12.0	0.6	-	3.0	0.6	8.5	-	IH	6.3	1.2	B9A	Pulse Modulator
2659	C	15.0	3.5	-	3.0	0.85	5.2	-	IH	6.3	1.7	B80	Pulse Modulator
4082	P	15.0	6.0	7.5*	3.5	0.8	-	-	IH	6.3	1.32	B80	Beam Tetrode. Pulse Modulator Tetrode.
4106	G	15.0	4.0	7.5*	3.5	0.85	-	-	IH	6.3	1.3	B80	*Pulse Current Pulse Modulator Beam Tetrode
3523	P	20.0	0.6	0.14	0.25	0.25	-	-	IH	6.3	1.25	B80	*Pulse Current V.H.F. Beam Power Amplifier
391 499 2220	) C)	25	0.6	0.12	4.5	0.3	6.0	60	IH	) 6.3) 19.0) 12.0	0.9 0.3 0.47	)B8G	Beam Power Amplifier

(Contd. over)

TETRODES and PENTODES (HIGH ANODE VOLTAGE > 500V) (Continued)

(In ascending order of maximum Anode Dissipation)

C.V. No.	Availa- bility Classn.	Max. Pa (W)	Max. Va (kV)	Max. Ia (A)	Max. Pg2 (W)	Max. Vg2 (kV)	gM (mA/V)	Max. Freq. (Mc/s)	Cath- ode	Heater		Base	Remarks
										Vh (V)	Ih (A)		
428 2465	)) C	25	0.6	0.12	3.0	0.3	6.0	60	IH	6.3	0.9	(B8G) (B8G/F)	CV391 but with anode top cap.
4060 5220	P G	28 35	0.8 0.6	- -	5.0 6.0	0.3 0.6	12.5 -	- -	IH IH	6.3 6.3	0.9 1.6	B80 B80	Beam Tetrode. Beam Power Output Pentode.
2752 2416	P C	) 60	-	-	8.0	1.5	-	-	IH	26.0	2.15	Special	Pulse Amplifier Tetrode.
1905	P	65	3.0	0.15	10	0.4	4.0	150	DH	6.0	3.5	B7A	Transmitting Tetrode
6045	G	90	0.8	-	10	0.3	31	-	IH	26.0	1.3	B7A	Beam Tetrode.
2130	P	125	3.0	0.225	20	0.6	2.45	120	DH	5.0	6.5	B5F	V.H.F. Transmitting Power Tetrode.
2519	P	150	1.25	0.25	2.0	0.3	-	500*	IH	6.0	2.6	Special	R.F. Power Tetrode. *1000 Mc/s at half rating.
2131	P	250	4.0	0.35	35	0.6	4.0	75	DH	5.0	14.1	B5F	Transmitting Tetrode.

(Contd. over)

TETRODES and PENTODES (HIGH ANODE VOLTAGE > 500V) (Contd.)

C.V. No.	Availa- bility Classn.	Max. Pa (W)	Max. Va (kV)	Max. Ia (A)	Max. Pg2 (W)	Max. Vg2 (kV)	gm (mA/V)	Max. Freq. (Mc/s)	Cath- ode	Heater		Base	Remarks
										Vh (V)	Ih (A)		
2487	G	250*	2.0*	0.25	12	0.4*	-	500	IH	6.0	2.6	Special	R.F. Power Tetrode. *Class AB Conditions.
3879	C	400	4.0	0.35	35	0.8	-	-	DH	5.0	14.1	B5E	Transmitting Tetrode. Forced Air Cooling.
445	C	3500	6.0	2.5	-	1.5	6.0	30	DH	9.0	30	-	
2324	C	3550	7.5	-	200	-	7	30	DH	5.0	64	-	Transmitting Tetrode Air Cooled.

DOUBLE TETRODES

(Arranged in ascending order of Anode Dissipation (each anode))

C.V. No.	Availa- bility Classn.	Max. Pa (W)	Max. Va (V)	Max. Pg2 (W)	Max. Vg2 (V)	Max. Mean Ik (mA)	Max. Freq.	Heater				Base	Remarks
								Parallel		Series			
								Vh (V)	Ih (A)	Vh (V)	Ih (A)		
2466	P	3	250	3	200	50	500	6.3	0.6	12.6	0.3	B9A	R.F. Power Beam Tetrode.
2798	P	5	300	1	200	50	225	6.3	0.84	12.6	0.42	B9A	R.F. Power Beam Tetrode
2799	P	10	600	0.5	250	55	600	6.3	1.3	12.6	0.65	B7A	R.F. Power Beam Tetrode.
2295	P	15	5000	3	850	-	-	6.3	2.25	12.6	1.125	B7A	Transmitting Modulator Beam Tetrode
2797	P	20	600	3.5	250	120	500	6.3	1.8	12.6	0.9	B7A	R.F. Power Beam Tetrode.

TRIODES (LOW ANODE VOLTAGE < 500V)

(Arranged in ascending order of Heater Voltage and then Mutual Conductance)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Ik (mA)	gM (mA/V)	Ra (kΩ)	μ	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)									
451	C	DH	1.25	0.025	-	9	-	70μ A/V	14.3	1	-	-	)Sub-miniature) Electrometer) Triode.)
495	C	DH	1.25	0.013	-	25	0.25	80μ A/V	27.5	2.2	-	-	
2202	C	DH	1.25	0.015	-	15	-	80μ A/V	25	2	-	-	
2269	C	DH	1.25	0.013	-	25	0.25	80μ A/V	27.5	2.2	-	-	
2275	P	DH	1.25	0.2	2.6	170	22	3.75	4	14	-	B8D/F	Sub-miniature U.H.F. Triode.
4058	P	IH	6.3	0.15	3.8	330	21	2.2	7.7	17	150	B7G	R.F. Power Triode.
3930	P	IH	6.3	0.15	0.9	165	22	5.8	-	27	-	B8D/F	Sub-miniature Triode Oscillator.
273	P	IH	6.3	0.4	10	350	50	6.0	5	30	3000	-	)Disc Sealed Triode.)
354	C	IH	6.3	0.4	10	350	50	6.5	10.8	70	2000	-	
4070	C	IH	6.3	0.3	3.0	275	17	8.5	-	100	250	B7G	Ground Grid Triode.
397	C	IH	6.3	1.0	20	400	120	12.0	2.33	28	-	-	Disc Sealed Triode.
4038	G	)IH	6.3	0.95	15	300	120	12.0	0.38	4.5	-	)B9A/F)B9A	)Low Impedance) Triode.
4079	P												

(contd. over)

TRIODES (LOW ANODE VOLTAGE <500V) (Continued)

Page 22

C.V. No.	Availa- bility Classn.	Cathode	Heater		Max. Pa (W)	Max. Va (V)	Max. Ik (mA)	gM (mA/V)	Ra (kΩ)	μ	Max. Freq. (Mc/s)	Base	Remarks
			Vh (V)	Ih (A)									
4081 4107	} G	IH	6.3	0.37	-	200	20	14.0	4.15	52	-	)B7G/F)B7G	)Low Noise R.F.) Triode.
4105		IH	6.3	0.37	2.5	200	20	14.0	-	50	-	B9A	U.H.F. Low Noise Grounded Grid Triode.
5242	C	IH	6.3	0.3	2.5	250	20	14.0	-	-	-	B9A	Low Noise R.F. Grounded Cathode Triode.
5112	C	IH	6.3	0.45	7.0	350	45	47	1.0	-	-	B8G	Triode.
2397	P	IH	6.3	0.5	10	400 1000**	40	-	-	65	5200* 7000†	-	Disc Sealed Transmitting Triode. *Oscillator or Amplifier †Frequency Multiplier **Pulsed Va.

TRIODES (HIGH ANODE VOLTAGE 500V)

(Arranged in ascending order of Max. Anode Dissipation)

C.V. No.	Availa- bility Classn.	Max. Pa (kW)	Max. Va d.c. (kV)	Max. Va Pulse (kV)	gm (mA/V)	μ	Max. Freq. Mc/s	Cathode	Base	Remarks
2516	C	.1*	1	-	25	-	2460*	IH	-	*P out 12W at 2460 Mc/s.
436	C	.45	1	6	30	80	1000	IH	-	Disc Seal Triode, Air Cooled.
2245	C	1	3	-	13	19	120	DH	-	V.H.F. Triode Air Cooled.
2163	C	1.5	-	11	50	45	-	IH	-	Disc Seal, Triode.
570	C	5	10	-	5.8	26	-	DH	-	Water Cooled.
2323	C	8	8.5	-	10	28	100	DH	-	Air Cooled.
2159	C	12	15	-	-	45	20	DH	-	Air Cooled.
2322	C	15	12	-	23	45	50	DH	-	Air Cooled.
1734	C	15	12	-	-	23	22	DH	-	Water Cooled.
446	C	20	13	-	23	35	30	DH	-	Single Ended Triode, Water Cooled.

DOUBLE TRIODES

(Arranged in ascending order of Anode Dissipation (each anode))

C.V. No.	Availa- bility Classn.	Cathode	Heater				Max. Pa (W)	Max. Va (V)	gm (mA/V)	Ra (kΩ)	μ	Max. Freq. (Mc/s)	Base	Remarks
			Parallel		Series									
			VH (V)	Ih (A)	Vh (V)	Ih (A)								
3986	G	IH	6.3	0.3	-	-	0.7	165	5.4	-	35	-	B8D/F	Sub-miniature. For D.C. Amplifier Applications.
4051	G	IH	6.3	0.6	12.6	0.3	1.0	300	1.3	23.85	31	-	B9A/F	
4004	P	) IH	6.3	0.3	12.6	0.15	1.1	330	1.6	62.5	100	-	) B9A	) High Impedance
4035	G												) B9A/F	
4031	) C	) IH	6.3	0.45	-	-	1.6	330	5.6	6.8	38	250	) B7G	
4076													) B7G/F	
4108	G	) IH	6.3	0.335	-	-	1.65	100	12.5	-	33	-	) B9A	) Low Noise.
4109	G												) B9A/F	
4110	C	) B9A												
4111	C	) B9A/F												
2492	) C	) IH	6.3	0.3	-	-	1.9	250	12.5	-	33	-	) B9A	Low Noise.
2493													)	
5212	G	) IH	6.3	0.3	12.6	0.15	2.8	380	5.5	10.9	60	-	) B9A	
4024	C												) B9A	
4033	C	) B9A/F												
4003	P	) IH	6.3	0.3	12.6	0.15	3.0	330	2.2	7.7	17	-	) B9A	) Low Impedance
4034	G												) B9A/F	

DOUBLE TRIODES (Continued)

C.V. No.	Availa- bility Classn.	Cathode	Heater				Max. Pa (W)	Max. Va (V)	gm (mA/V)	Ra (kΩ)	μ	Max. Freq. (Mc/s)	Base	Remarks
			Parallel		Series									
			Vh (V)	Ih (A)	Vh (V)	Ih (A)								
6091	C	IH	6.3	0.4	12.6	0.2	3.5	500	6.2	10.0	62	-	B9A	Separate Cathodes.
4068 4069	P G	)) IH	6.3	0.6	12.6	0.3	5.0	300	2.3	-	32	-	)B9A)B9A/F	
5008	G	IH	6.3	2.5	-	-	13.0	250	7.0	-	2	-	Large Wafer Octal*	

HEPTODES and TRIODE HEPTODES

C.V. No.	Availa- bility Classn.	Type	Heater		Max. Va (V)	Max. Pa (W)	Max. Vg2+ g4 (V)	Max. Pg2+ g4 (W)	Conversion Conductance (μ A/V)	Base	Remarks
			Vh (V)	Ih (A)							
2128	P	Triode- Heptode	6.3	0.3	330 275	1.9 0.9	140 -	1.1 -	2,400 3,700*	B9A	*Va = 100V, Ia = 13.5 mA for triode. Max. Ik = 15.5 mA. Max. Ik = 15.5 mA.
4012 4037	P G	Heptode Heptode	6.3 6.3	0.3 0.3	330 330	1.1 1.1	110 110	1.1 1.1	470 470	B7G B7G/F	

NOISE SOURCES (DISCHARGE TUBES)

C.V. No.	Availability Classn.	Nominal Useful Freq. Range (Mc/s)	Nominal Available Noise Power (db)	Max. Operating Current (mA)	Remarks
1881 2479	P C	3000 to 12000 7000 to 40000	15.5 15.25	250 50	

NOISE SOURCES (DIODES)

C.V. No.	Availability Classn.	Max. Freq. Range (Mc/s)	Mean Saturated Ia (mA)	Measured at Vf (V)	Max. V for Saturation (V)	Max. Pa. (W)	Base	Remarks
2171 2417	P C)	500	5.0 *20.0	3.7 *4.4	40 *200	2	) B7G) B7G/F	*Reduced Life (300 hrs.)
2341 2364	P	1000	87.5	3.0	200	10*	-	Coaxial Diode, *Dissipation 40W with forced air cooling.
2398	C	500	45.0	5.6	200	3.5	B9A/F	

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INERT GAS FILLED TRIODES AND TETRODES
(In ascending order of Mean Anode Current)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Mean Ia(A)	Max. Peak Ia (A)	Max. Peak Va (kV)	Max P.I.V. (kV)	Base	Class	Remarks
			Vh (V)	Ih (A)							
1949	G	IH	6.3	0.25	0.025 ^x	0.11	0.35	0.35	B7G	Triode	Thyratron *Max d.c. Ia * Vg = 0V
1992	C	Cold	-	-	0.025	0.1	0.235 ^x	-	B80	Triode	
2296	C	Cold	-	-	0.04 to 0.1	0.25	0.38	0.35	B80	Triode	
2349	C	Cold	-	-	0.05	0.25	0.4	0.35	B7G	Tetrode	For stroboscopic service For relay rectifier and modulator service. Thyratron
4018	P	IH	6.3	0.6	0.1	0.5	0.65	1.3	B7G	Tetrode	
2210	P	DH	2.5	12	3.2	40	1.5	1.5	B4D	Triode	
2215	P	DH	2.5	21	6.4	80	1.5	1.5	B4D	Triode	

COLD CATHODE GAS FILLED VOLTAGE STABILISERS

(Arranged in ascending order of mean operating voltage)

Page 28

C.V. No.	Availability Classn.	Maintaining Voltage (Mean) (V)	Max. Striking Voltage (V)	Anode Current		Regulation at Ia.min. to Ia.max. (V)	Base	Remarks
				Min. (mA)	Max. (mA)			
2208	C	50	90	0.1	0.5	5	-	Sub miniature
2266	C	60*	85	0.05	0.65	3+	-	Sub miniature * Ia = 0.5 mA. + Ia = 0.3 to 0.5mA
2213	P	60*	85	0.3	1.0	3+	-	Sub miniature * Ia = 0.5 mA. + Ia = 0.3 to 0.5mA.
4030	C	75	115	5.0	60	6.5	B8G/F	
4080	P	78	110	2.0	60	8	B7G	
6004	C	85	104	0.5	1.0	1	-	Sub miniature
4066	P	85	125	0.5	3.5	3	-	Sub miniature
4048	P	85	115	1.0	10.0	4	B7G	
4054	G	85	115	1.0	10.0	4	B7G/F	
3897	G	95	125*	5.0	25.0	5	B8D/F	* 175V in darkness
4052	C	108	133	2.0	15.0	3	B7G/F	
422	C	108	120*	5.0	45.0	5	B8G	*With Priming Anode at 150V through 0.1 M ohm
4028	P	133	210	5.0	30.0	4	B7G	
4053	C	150	180	2.0	15.0	4.5	B7G/F	
4020	P	150	225	5.0	30.0	5	B7G	
4100	G	150	165	5.0	30.0	10	B7G	
1832	C	150	180	5.0	30.0	6	B7G	
395	C	150	170*	5.0	45.0	5	B8G	*With Priming Anode at 200V through 0.1 M ohm.
4047	C	304	400	2.0	4.0	1	B7G/F	

May, 1963

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CORONA STABILISER VALVES

C.V. No.	Availability Classn.	Operating Voltage (V)	Min. Stable Current (μ A)	Max. Stable Current (μ A)	Regula- tion (250-275 μ A) (V)	Base	Remarks
2456	C	350	5	300	1.0	B7G	
2457	C	400	5	300	1.0	B7G	
2458	C	600	10	300	1.5	B7G	
2459	C	800	15	400	2.0	B7G	
2460	C	1000	20	400	2.5	B7G	
2461	C	1200	20	500	3.0	B7G	
2462	C	1400	20	500	3.5	B7G	
6065	C	1600	20	600	4.5	B7G	
6066	C	1800	20	600	5.5	B7G	
6067	C	2000	20	600	6.5	B7G	

PHOTOMULTIPLIERS and PHOTOCELLS

(In order of C.V. No.)

C.V. No.	Availability Classn.	Type	Max. Va (V)	Minimum Sensitivity (μ A/Lumen)	Measured at		Base	Remarks
					Va (V)	Light Flux (L)		
337	P	Nine Stage Electron Multiplier	1100	7.5	100	0.1	Sub-magnal 11 pin Small Shell	Max. Ia = 2.5 mA.
2132	P	Caesium Antimony. Vacuum	110	30 27.5	100 50	0.04 0.04	B7G	Max. Ik = 5 μ A.
2133	P	Caesium on Oxidised Silver. Gas filled.	100	72 10	90 25	0.02 0.02	B7G	Max. Ik = 2 μ A
2134	P	Caesium on Oxidised Silver. Vacuum	110	13.5 11	100 25	0.02 0.02	B7G.	Max. Ik = 10 μ A.
2270		C Caesium Antimony. Gas filled	100	75 21	90 25	0.02 0.02	B7G	Max. Ik = 2.5 μ A.
2316		C Eleven Stage Electron Multiplier.	1920*	20	300	0.01	EMI, Pressed Glass Base $\neq$	*Max. inter-stage Voltage = 200V. $\neq$ Drg. No. 6260 D.21
2428		C Caesium Antimony Vacuum	150	2.5	108	0.1 μ A	B9G	Max. Ik = 0.2 μ A

HYDROGEN THYRATRON MODULATORS

(Arranged in ascending order of Max. Peak Anode Voltage)

C.V. No.	Availa- bility Classn.	Ratings		Conditions for Ratings			Min. Trigger Pulse Volt (V)	Vgdc (-V)	Base	Remarks
		Max. Peak Va (kV)	Max. Peak Ia (A)	Rate of Rise of Current (A/ μ S)	Max. tp (μ S)	p.r.f. (p.p.s.)				
6007	P	3.0	35	750	5.0	2800	-	-	Medium 4 pin	With top cap Flying lead, tetrode With top cap (CT3) Low Jitter short recovery tetrode. With top cap (CT3) With top cap With top cap (CT3) With top cap
3629	G	3.0	35	750	5.0	-	175	-	Medium 4 pin	
6015	C	8.0	90	1500	-	--	-	-	-	
1787	P	8.0	90	1000	0.5	3000	175	200	B4D	
6051	G	16.0	325	2500	-	-	-	10	B4M - Super Jumbo	
6022	G	16.0	325	1500	2.0	1000	200	-	Super B4M Jumbo	
2520	P	16.0	325	1500	1.0	1000	200	200	B4D	
2418	C	18.0	700	5000	5.0	2500	500	100	Special	
6118	C	As CV 2418 with reservoir requiring 22VA nom.								
3518	C	25.0	1000	5000	-	5000	700	-	Special	
3521	G	25.0	500	2500	2.0	500	-	-	Special	
6026	G	25.0	200	7500	5.0	1500	1000	110	Special	

MAGNETRONS

(In ascending order of Nominal Frequency and Mean Input Power)

Page 32

C.V. No.	Availa- bility Classn.	Nominal Frequency (Mc/s)	Max. Mean Input Power (W)	Max. Pulse Length (μ S)	Typical Operating Conditions					Remarks
					Min. Peak P.out.(kW)	Max. Peak Va. (kV)	Peak Ia (A)	Duty Cycle	tp (μ S)	
1916	P	2800	1200	2.5	400	28	40	-	2	
3611	G	2800	1200	2.5	400	30	70	0.001*	2.5*	*maximum
3958	G	3000	1300	2.5	400	32.5	70	0.001*	2.5*	*maximum
1495	C	3010)								
1496	C	3030)								
1497	C	3050)								
1498	C	3070)	500	-	200	21.5	22.5	0.001	0.5	
1499	C	3090)								
1500	C	3110)								
5011	G	3200	1300	2.5	400	32.5	70	0.001*	2.5*	*maximum
6072	C	8800	60	6.0	0.017	0.8	0.11	0.5*	4.0	*maximum
6108	C	8800	82.5	2.5	16	6*	5.5*	0.0025*	2.5*	*maximum
5134	G	9150	230	3.4	40	-	15.5	0.0011	3.4	
370	C	9240	82.5	2.5	17.5	6	5.5*	0.0025	2.5	Packaged * maximum
2473	P	9240	750	6.0	225	-	27.5	0.001	0.5	
2421	C	9375	6	5.0	18	1.15	0.15	-	0.5)	
2420	C	9375	60	-	5.0	1.1	0.1	-	-)	Packaged
5135	G	9375	80	2.5	18	8*	8*	0.0025*	2.5*	Packaged * maximum
3676	P	9375	82.5	2.5	14	6*	5.5*	0.0025*	2.5*	*maximum
2313	G	9375	150	-	50	14	12	-	0.6	
5018	G	9375	240	5	70	16*	15*	-	5.0	*maximum

MAGNETRONES (Continued)

C.V. No.	Availa- bility Classn.	Nominal Frequency (Mc/s)	Max. Mean Input Power (W)	Max. Pulse Length (μ S)	Typical Operating Conditions					Remarks
					Min. Peak P.out.(kW)	Max. Peak Va. (kV)	Peak Ia (A)	Duty Cycle	tp (μ S)	
2284	P	9375	750	6	225	-	27.5	-	-	
6034	C	9545	360*	1	100	17	20	0.001	0.25	) *tp=1 μ S
6035	C	9600	360*	1	100	17	20	0.001	0.25	) Packaged *tp=1 μ S
2412	P	9642	635	6	225	-	10	0.0004	0.2	) *tp = 0.75 μ S
6036	C	9655	360*	1	100	17	20	0.001	0.25	) *tp = μ S
2350	C	35000	140000*	0.25	6	-	10	0.0004	0.2	Packaged *peak

VELOCITY MODULATED TUBES

KLYSTRONS

(Arranged in ascending order of Minimum Frequency)

Page 34

C.V. No.	Availability Classn.	Operating Frequency Range (Mc/s)	Min. R.F. Power Output (mW)	Max. Resonator Voltage (V)	Max. Resonator Dissipation (W)	Reflector Voltage Range (-V)	Base	Remarks
2116	P	C 1800-4500	100	250	8	55-350	B7G	*Maximum For waveguide WG. No. 22
6071		C 2700-4100	100	350	16	500*	See Wee 4	
6001		C 3450-3550	30	2200	24	150-375	B80	
2187	P	C 3600-4200	1000	1100	-	140-260	-	For waveguide WG. No. 16
2346		C 8000-10000	30	300	12	75-250	B7G	
6003		P 8500-9000	30	400	18	140-255	Special	
2494	C	C 8500-9600	8	350	-	0-500	-	Waveguide output for UG. 40/u coupler
2304		C 9000-10000	30	400	20	215-415	B80	

COAXIAL LINE OSCILLATORS

(Arranged in ascending order of Minimum Tuning Range)

C.V. No.	Availability Classn.	Tuning Range		Min. Power Output (mW)	Resonator Voltage Range (V)	Anode Voltage Range (V)	Max. Screen Voltage (V)	Max. Mean Power Output (W)	Base	Remarks
		Min. (cms)	Max. (cms)							
485	C	6.17*	6.55*	250	209-231	219-251	209	15	B7G	*4580 to 4860 Mc/s *Anode + Resonator *At 9 cms.
2422	C	6.2	6.8	300	303-321	313-341	75-350	25*	B7G	
2190	C	7.14	11.11	350	250*	214-338	368	18	B7G	
2189	C	7.4	7.5	350	240-270	300	400	18	B7G	
2221	C	7.5	11.5	500	295-335	150-420	400	15	B7G	

VOLTAGE TUNES OSCILLATORS

(Arranged in ascending order of Minimum Operating Frequency)

Page 35

C.V. No.	Availability Classn.	Operating Frequency Range (Mc/s)	Min. Power Output (mW)	Delay Line Voltage Range (kV)	Max. Delay Line Diss. (W)	Max. Va (V)	Max. Ia (mA)	Max. -Vg (V)	Base	Remarks
2381	G	2400-4500	20	0.15-1.17	60	200	30	100	B7D	50 Ω output connector.
6023	G	2400-4500	20	0.15-1.17	60	200	30	100	B7D	50 Ω output connector.
6076	C	4000-7500	20	0.15-1.17	-	300	3	200	Special 6 pin	50 Ω output socket.
2393	G	7000-11500	20	0.3-1.5	50	300	10	250	A7-13	50 Ω output connector.
6024	G	7000-11500	20	0.3-1.5	50	300	10	250	A7-13	50 Ω output connector.
6112	C	26500-40000	10	0.68-3.0	-	700	2	450	Flying Lead	Output connector via No. 22 Waveguide

TRAVELLING WAVE AMPLIFIERS

(Arranged in ascending order of Minimum Operating Frequency)

C.V. No.	Availability Classn.	Operating Frequency Range (Mc/s)	Max. Collector		Max. Helix		Min. Sat. Power Output (mW)	Min. Gain (dB)	N.F. (dB)	Base	Remarks
			Volt (kV)	Current (mA)	Volt (kV)	Current (μ A)					
6106	C	1200-1400	0.6	0.250	0.4	20	2	25	7.5	B80	
2499	C	2500-4100	0.55	5	0.475	500	50	28	21.5	B9A	
6090	C	2500-4100	0.8	0.6	0.6	50	3	38	10	Special 9 pin	
6085	C	2500-4100	3	20	2.7	1500	500	20	30	B80	
6117	C	2700-3250	3	25	2.5	1600	-	19	-156*	B80	*dB/c/s
6098	C	4100-7000	0.8	0.4	0.65	25	3.5*	37	10	B80	*4.5mW (4.5 to 6.5k Mc/s)
6087	C	7000-11500	1.7	0.6	1.6	100	3	20	24	Special 7 pin	
6096	C	7000-11500	2.8	10	2.8	2000	100	-	-	Special 7 pin	

GAS SWITCHES

T.R. CELLS

(Arranged in ascending order of Min. Frequency)

C.V. No.	Availability Classn.	Operating Frequency Range (Mc/s)	Max. Peak Power (kW)	Remarks
2285	C	2500-4100	2500*	*Minimum. For Polarisation-twist T.R. systems.
713	G	2700-3400	50*	*Nominal
2378	C	2727-3158	5	For No. WG 10. waveguide.
1297	C	2925-3075	500	For use in tunable cavity resonator
293	C	2925-3075	500	
497	C	2935-3060	500	For $3\frac{1}{2}$ " x $1\frac{1}{2}$ " waveguide.
2429	G	3288-3324	0.3	For use in either No. WG.10 or 11 waveguide.
			500*	*When used in conjunction with CV 2430 Pre-TR.Sw.
2826	G	8490-9578	4*	*Minimum
2307	C	8500-9050	200	Broad-band.
2312	P	8500-9300	250	Twin-primer, Broad-band.
2480	G	8500-10,000	200	Broad-band.
2359	C	8950-9600	10	Broad-band passive protection cell.
2306	C	9000-9600	200	Broad-band
2311	P	9180-10000	250	Twin-primer, Broad-band.
2330	C	34000-36000	20*	Tunable *Nominal

GAS SWITCHES (Contd.)

PRE T.R. CELLS

(Arranged in ascending order of Min. Frequency)

C.V. No.	Availa- bility Classn.	Operating Frequency Range (Mc/s)	Max. Peak Power (kW)	Max. Mean Power (kW)	Remarks
6028	G	2000-4000	2500	3	*Switched R.F. Power
6110	C	2000-4000	6000	12	
2482	C	2500-12000	500	0.5	
6086	C	2500-12000	250	0.25	
2157	C	2727-3158	-	2000*	
2430	G	3288-3324	500	0.5	

T.B. (A.T.R.) CELLS

(Arranged in ascending order of Min. Frequency)

C.V. No.	Availa- bility Classn.	Operating Frequency Range (Mc/s)	Min. Transmitter Peak Power (kW)	Remarks
3877	G	2660-2940	20	Broad Band
2309	C	8500-9050	5	
3628	G	9000-9600	4*	*Max. 250 kW
453	C	9020-9140	5	Broad Band
2308	C	9050-9060	5	Broad Band
462	C	9180-9300	5	Broad Band
461	C	9315-9435	5	Broad Band
6070	G	9315-9435	200	Broad Band
2274	C	9500-9700	5	Broad Band
577	G	23760-24240	4	Broad Band

GAS SWITCHES (Contd.)
POWER LIMITING GAS CELLS

C.V. No.	Availa- bility Classn.	Operating Frequency Range (Mc/s)	Max. Peak Power (kW)	Remarks
2484	C	7000-11500	100	
6006	C	7000-11500	100	
6073	P	7000-11500	100	

PULSED ATTENUATORS

C.V. No.	Availa- bility Classn.	Operating Frequency Range (Mc/s)	Max. Peak Power (W)	Remarks
6089	C	2500-4000	100*	*Excitation
2379	C	2755-2915	3	
2483	C	8000-12000	80*	*Excitation

May, 1963

GAS FILLED POWER (STANDING WAVE) INDICATOR TUBES

C.V. No.	Availability Classn.	Frequency Band	Peak Powers Measured (KW)	Remarks
263	C	S and X 2,800 to 10,000 Mc/s	1 max.	
359	C	S	200 to 400	
360	C	S	450 to 800	

COLD CATHODE GAS FILLED RELAY VALVES

C.V. No.	Availability Classn.	Main Gap Break- down Voltage (V)	Control Gap (Trigger) Break- down Voltage (V)	Max. Peak Cathode Current (mA)	Max. Mean Cathode Current (mA)	Max. Trigger Current for Reliable Operation (μ A)	Remarks
413	C	150	70*	50	30	5	*Anode Floating
2174	C	230	75*	50	30	10 +	*Anode Floating *Va = 200 Vdc.
2236	C	285	146*	10	2.5	10	*Va = 260 Vdc.
2255	C	170	-	10	2.5	4	
2486	C	220	68	-	1.0	-	Subminiature F/L
6016	C	275	70-85	40	5.0	-	B7G

PROTECTIVE SPARK GAPS

(Arranged in ascending order of Max. Breakdown Voltage)

C.V. No.	Availa- bility Classn.	Max. Breakdown Voltage (kV)	Max. Mean Ia (mA)	Max. Peak Ia (A)	Base	Remarks
2248	P	1	2	50*	None	*Approximately Sine waveform pulse, 40 μ S duration at half amplitude.
2249	P	1.25	2	50*	None	*Approximately sine waveform pulse, 40 μ S duration at half amplitude.
2250	P	1.5	2	50*	None	*Approximately sine waveform pulse, 40 μ S duration at half amplitude.
2251	P	1.75	2	50*	None	*Approximately sine waveform pulse, 40 μ S duration at half amplitude.
2252	F	2	2	50*	None	*Approximately sine waveform pulse, 40 μ S duration at half amplitude.
233	C	5.5	2	50*	B80	*Voltage pulse 1 μ S duration and between 50 and 1500 p.p.s.
402	C	8	2	50*	B80	*Voltage pulse 1 μ S duration and between 50 and 1500 p.p.s.

MISCELLANEOUS

(See Specifications for details)

Class of Valve	Availability Classification		
	Preferred Types	Guidance Types	Current Types
Decade Scaling Tubes	-	CV6044, CV6100	CV5143
Decade Selector Tubes	CV2325	-	CV6103
Ignitrons	-	-	CV1742, CV3710
Mercury Arc Rectifiers (Hg Pool Cathode)	-	-	CV3710
Monitor Diodes	-	-	CV6005, CV6107
Series Stabilisers	CV4062	CV4065	-
Shunt Stabilisers (Triode)	-	-	CV6097
Tuning Indicators	-	-	CV394, CV2747
Trigger Tubes	-	CV2434	CV2224
Triggered Sparks Gaps	-	-	CV6008
Voltage Indicators	-	CV6094	-

May, 1963

CATHODE RAY TUBESCREEN CODE

First Letter
Colour of Flash

Second Letter
Colour of Afterglow

Third Letter
Length of Afterglow

B = Blue
G = Green
Y = Yellow
R = Red
O = Orange
W = White
U - Ultra Violet

B = Blue
G = Green
Y = Yellow
R = Red
O = Orange
W = White

L - 5 secs upwards
M - 1 sec. to 5 sec.
S - 0.1 sec. to 1. sec.
N - 1 millisec. to 0.1 sec.
K - less than 1 millisec.

This code will in due course be replaced by an amended Code in which the first two letters are unchanged and the third will be replaced by a number selected according to the following table. The afterglow is defined as the time taken from the cessation of excitation for the brightness to decay from a level of one equivalent Foot Candle to one per cent of that value.

T A B L E

Symbol	Length of Afterglow		Description
	Min.	Max.	
1	-	10 μ s	Killed. (K)
2	10 μ s	100 μ s	Ultra short (US)
3	100 μ s	1000 μ s	Very short (VS)
4	1 ms	10 ms	Short (S)
5	10 ms	100 ms	Medium short (MS)
6	100 ms	1000 ms	Medium (M)
7	1 s	10 s	Medium long (ML)
8	10 s	100 s	Long (L)
9	100 s	-	Very long (VL)

e.g. The blue photographic screen BBK will become BB1 and the double layer afterglow BYL will become BY8.

FUNCTIONAL CLASSIFICATION
OF
SERVICE PREFERRED, GUIDANCE AND CURRENT VALVES

DATED JANUARY 1963

AMENDMENT No. 1

The Functional Classification of Service Preferred, Guidance and Current Valves dated January 1963 should be amended as follows:-

1. Page 5. CV5119. In column headed "Availability Classn." delete "G" and substitute "C".
2. Pages 9 and 10.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 9 and 10, dated May 1963, attached hereto.
3. Pages 15 and 16.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 15 and 16, dated May 1963, attached hereto.
4. Pages 23 and 24.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 23 and 24, dated May 1963, attached hereto.
5. Page 26. Noise Sources (Diodes). In column headed "CV.No." delete "2361".
6. Pages 27 and 28.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 27 and 28, dated May 1963, attached hereto.

2.

7. Page 32. CV3958. In column headed Availability Classn.", delete 'C' and substitute 'G'.
8. Pages 35 and 36.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 35 and 36, dated May 1963, attached hereto.
9. Pages 37 and 38.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 37 and 38, dated May 1963, attached hereto.
10. Pages 41 and 42.
 - (a) Remove and destroy the existing pages.
 - (b) Substitute new pages 41 and 42, dated May 1963, attached hereto.

May, 1963.

T.V.C.
Room 113,
Castlewood House,
77/91 New Oxford Street,
LONDON, W.C.1.

✓ AAB
5/6/63

(163737)

INERT GAS FILLED TRIODES AND TETRODES

(In ascending order of Mean Anode Current)

C.V. No.	Availa- bility Classn.	Cathode	Heater		Mean Ia (A)	Max. Peak Ia (A)	Max. Peak Va (kV)	Max. P.I.V. (kV)	Base	Class	
			Vh (V)	Ih (A)							
1949	G	IH	6.3	0.25	0.025*	0.11	0.35	0.35	B7G	Triode	Thyratron *Max d.c. Ia * Vg = 0V
1992	C	Cold	-	-	0.025	0.1	0.235*	-	B80	Triode	
2296	C	Cold	-	-	0.04 to 0.1	0.25	0.38	0.35	B80	Triode	
2349	C	Cold	-	-	0.05	0.25	0.4	0.35	B7G	Tetrode	For strotoscopic service For relay rectifier and modulator service. Thyratron
4018	P	IH	6.3	0.6	0.1	0.5	0.65	1.5	B7G	Tetrode	
2210	P	DH	2.5	12	3.2	40	1.5	1.5	B4D	Triode	
2215	P	DH	2.5	21	6.4	80	1.5	1.5	B4D	Triode	

COLD CATHODE GAS FILLED VOLTAGE STABILISERS

(Arranged in ascending order of mean operating voltage)

Page 28

C.V. No.	Availability Classn.	Maintaining Voltage (Mean) (V)	Max. Striking Voltage (V)	Anode Current		Regulation at Ia.min. to Ia.max. (V)	Base	Remarks
				Min. (mA)	Max. (mA)			
2208	C	50	90	0.1	0.5	5	-	Sub miniature
2266	C	60*	85	0.05	0.65	3†	-	Sub miniature * Ia = 0.5 mA. † Ia = 0.3 to 0.5mA
2213	P	60*	85	0.3	1.0	3†	-	Sub miniature * Ia = 0.5 mA. † Ia = 0.3 to 0.5mA.
4030	C	75	115	5.0	60	6.5	B8G/F	
4030	P	78	110	2.0	60	8	B7G	
6004	C	85	104	0.5	1.0	1	-	Sub miniature
4066	P	85	125	0.5	3.5	3	-	Sub miniature
4048	P	85	115	1.0	10.0	4	B7G	
4054	G	85	115	1.0	10.0	4	B7G/F	
3987	G	95	125*	5.0	25.0	5	B8D/F	* 175V in darkness
4052	C	108	133	2.0	15.0	3	B7G/F	
4101	G	108	130	5.0	30.0	5	B7G	
422	C	108	120*	5.0	45.0	5	B8G	*With Priming Anode at
4028	P	133	210	5.0	30.0	4	B7G	150V through 0.1 M ohm
4053	C	150	180	2.0	15.0	4.5	B7G/F	
4020	P	150	225	5.0	30.0	5	B7G	
4100	G	150	165	5.0	30.0	10	B7G	
1832	C	150	180	5.0	30.0	6	B7G	
395	C	150	170*	5.0	45.0	5	B8G	*With Priming Anode at 200V through 0.1 M ohm.
4047	C	304	400	2.0	4.0	1	B7G/F	