MULLARD DATA FOR SERVICE ENGINEERS

MULLARD 2-VOLT VALVES FOR BATTERY SETS

References :—
If = Filament or Heater Current. ra = Anode Impedance. m = Amplification Factor.
gm = Mutual Conductance. Va = Anode Voltage. Ia = Anode Current.
Vs = Screen Voltage. Vaux = Auxiliary Grid Voltage. Vg = Negative Grid Bias Voltage.

Type.	Description.	Base.	Metallising.	If.	Characteristics. At Va = 100 ; Vg=0. ra.	m.	gm.	(a) Va.	(b) Vs. or Vaux.	(c) Vg. for (a) or (b)	Ia for (c).	Optimum Load	Price.
V.P.2 ...	Variable mu H.F. Pentode	7-pin ...	Met. ...	0.18	750,000	—	1.75	150	150	.0	3.75	—	15/6
							0.017	150	150	7.0	0.1		
S.P.2 ...	H.F. Pentode	7-pin ...	Met. ...	0.18	500,000	1,100	2.2	150	150	0	3.6	—	15/6
							1.5	100	100	0	1.5		
P.M.12A ...	Screened Grid	4-pin ...	Met. or Clear.	0.18	330,000*	500*	1.5*	150	90	0	2.9	—	15/6
								100	60	0	1.2		
P.M.12M	Variable-mu Screened Grid	4-pin ...	Met. or Clear.	0.18	—	—	1.4†	150	90	0	2.5	—	15/6
							0.014†	150	90	7.0	0.1		
P.M.1HL...	H.F., Det. or L.F.	4-pin ...	Met. or Clear.	0.1	20,000	28	1.4	100	—	1.5	1.0	—	7/-
								125	—	1.5–3.0	1.5		
								150	—	1.5-3.0	2.0		
P.M.2DX	Det. or L.F. ...	4-pin ...	Met. or Clear.	0.1	12,000	18	1.5	100	—	1.5–3.0	2.0	—	7/-
								125	—	3.0	3.0		
								150	—	3.0–4.5	4.0		
T.D.D.2 ...	Double-diode-triode.	5-pin ...	Met. ...	0.1	12,000	16.5	1.4	100	—	2.0	1.7	—	9/-
								150	—	5.5	2.5		
P.M.2A ...	Power ...	4-pin...	Clear ...	0.2	3,600	12.5	3.5	100	—	4.0	4.0	7,000	8/9
								125	—	5.0	5.0		
								150	—	7.0	6.0		
P.M.202 ...	Super-power...	4-pin ...	Clear ...	0.2	2,000	7.0	3.5	100	—	7.5	10.0	3,700	12/-
								125	—	9.0-10.5	14.0		
								150	—	12.0–15.0	14.0		
P.M.22A ...	Pentode ...	4-pin or 5-pin.	Clear ...	0.2	—	—	2.5	100	100	3.0	4.5	15,000	16/6
								150	150	4.5	9.5		
P.M.2B ...	Class "B" ...	7-pin ...	Clear ...	0.2	—	—	2.5††	150	—	—	—	14,000	14/-

* At Va 125; Vs 75; Vg 0. † At Va 150; Vs 90. †† At Va 120; Vg 0.

MULLARD VALVES FOR A.C. MAINS SETS

Type.	Description.	Base.	Metallising.	If.	Characteristics. At Va=100 ; Vg=0. ra.	m.	gn.	(a) Va.	(b) Vs or Vaux.	(c) Vg for (a) of (b).	Ia for (c).	Optimum Load.	Price
V.P.4 ...	Variable-mu H.F. Pentode	5-pin or 7-pin.	Met. ...	1.0	—	—	2.5‡	200	100	1.5	6.0	—	17/6
							0.025‡	200	100	22.0	0.25		
S.P.4 ...	H.F. Pentode	5-pin / 7-pin.	Met. or Clear. / Met. ...	1.0	900,000‡	2,700‡	3.0‡	200	100	1.5	4.4	—	17/6
354V ...	Det. or L.F.	5-pin ...	Met. or Clear.	1.0	12,000	36	3.0	100	—	2.0	2.0	—	13/6
								150	—	3.0	3.0		
								200	—	4.0	4.0		
T.D.D.4 ...	Double-diode-triode.	7-pin ...	Met. ...	1.2	15,000	30	2.0	100	—	1.5	1.5	—	15/6
								150	—	2.5	2.5		
								200	—	3.5	3.0		
2.D.4A ...	Double-diode	5-pin ...	Met. ...	.65	—	—	—						5/6
Pen.4VA ...	Pentode (Indirectly Heated).	5-pin ... or 7-pin	Clear ...	1.5	—	—	3.5	250	250	22.0	32.0	6,000	18/6
P.M.24M	Pentode (Directly Heated).	5-pin ...	Clear ...	1.0	—	—	3.0	250	150	9.0	20.0	8,000	18/6
									200	12.0	30.0		
									250	18.0	30.0		
A.C.044 ...	Output Triode (Directly Heated).	4-pin ...	Clear ...	1.0	950	6.4	6.8	150	—	16.0	33.0	2,500	16/6
								200	—	22.0	40.0		
								250	—	29.0	48.0		

‡ At Va 200; Vs 100.

MULLARD EQUIVALENTS

2-VOLT VALVES

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
210 V.P.T.	V.P.21	**V.P.2**	V.P.215	218 V.P.
210 S.P.T.	—	**S.P.2**	S.P.215	218 H.P.
220 V.S.	V.S.24	**P.M.12M**	S.215V.M.	218V.S.G.
[illegible] V.S.G.	V.S.2	**P.M.12V**	—	215 V.S.G.
[illegible] S.G.	S.22, S.24	**P.M.12A**	S.215B	218 S.G.
215 S.G.	S.215, S.23	**P.M.12**	S.215A S.G.215	215 S.G.
210 R.C.	H.2	**P.M.1A**	H.210	210 R.C.
210 H.F.	H.L.210	**P.M.1H.F.**	—	210 H.F.
210 H.L.	H.L.2	**P.M.1H.L.**	H.L.210 H.L.2	210 H.L.
210 L.F.	L.210	**P.M.1L.F.**	—	210 L.F.
—	H.D.21	**T.D.D.2**	L.2/DD.	210 D.D.T.
210 Det.	L.2/B, L.21	**P.M.2DX**	L.210, L.2	210 D.
220 P.A.	L.P.2	**P.M.2A**	P.220	220 P.A.
220 P.	P.215, LP.2/C	**P.M.2**	P.215	220 P.
—	P.2	**P.M.202**	P.220A	220 S.P.
230 X.P.	P.240	**P.M.252**	P.240	240 S.P.
220 H.P.T.	P.T.2	**P.M.22A**	Pen.220	220 Pen.
230 H.P.T. 220 P.T.	PT.240	**P.M.22**	Pen. 230 Pen.220A	230 Pen.
220 B.	B.21	**P.M.2B**	P.D.220	220 B.

4-VOLT VALVES

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
410 S.G.	S.410	**P.M.14**	—	4075 S.G.
410 R.C.	H.410	**P.M.3A**	—	4075 R.C.
410 H.F.	H.L.410	**P.M.3**	—	4075 H.F.
410 L.F.	L.410	**P.M.4DX**	—	410 D.
410 P.	P.410	**P.M.4**	—	410 P.
425 X.P. 415 X.P.	P.415 P.425	**P.M.254**	P.425	420 S.P.
415 P.T. 410 P.T.	425 P.T.	**P.M.24**	Pen.425	415 P.P.

6-VOLT VALVES

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
610 S.G.	S.610	**P.M.16**	—	6075 S.G.
610 H.F.	H.L.610	**P.M.5X**	H.L.610	6075 H.F.
610 L.F.	L.610	**P.M.6D**	—	610 D.
610 P.	P.610	**P.M.6**	—	610 P.
625 P.	P.625	**P.M.256**	P.625B	625 S.P.
610 X.P.	P.625A	**P.M.256A**	P.625A	625 S.P.A.
615 P.T.	P.T. 625	**P.M.26**	—	617 P.P.

INDIRECTLY-HEATED A.C. MAINS VALVES

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
MVS/Pen.	V.M.P.4	**V.P.4**	AC/V.P.1	H.P.2AC.
MS/Pen.A	M.S.P.4	**S.P.4**	AC/S2Pen	H.P.1.AC.
MSVG	VMS4	**MM4V**	AC/SG.VM.	4MMAC.
MSG/HA	—	**S.4.VA.**	AC/S2	4X.SG.AC.
MSG/LA	MS/4/B	**S.4.VB.**	AC/SG	4Y.SG.AC.
D.D.T.	MHD4.	**T.D.D.4.**	AC/HL.DD.	4DDT.AC.
41 MH.	MH.41.	**904V.**	AC2/LH.	4DX.AC.
41 MHF.	MH.4.	**354V.**	AC.HL.	4GPAC.
—	MHL.4.	**244V.**	—	4HLAC.
41 MLF.	MHL.4/C.	**164V.**	—	4LAC.
41 MP.	ML.4.	**104V.**	AC.P.	4PAC.
MP.Pen.A.	M.P.T4.	**Pen.4VA.**	AC.Pen.	4Pen.A.AC.
M.P.Pen.	—	**Pen.4V.**	—	4 Pen.AC.

DIRECTLY-HEATED A.C. OUTPUT VALVES

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
—	—	**A.C.064.**	—	HV.4/1.
4. X.P.	P.X.4.	**A.C.044.**	P.P.3/250	HV.4/2.
—	P.X.25.	**D.O.24.**	P.P.5/400.	—
620 T.	L.S.6A.	**D.O.25.**	—	HV.6/5.
—	—	**D.O.26.**	—	—
—	—	**P.M.24A.**	—	4.Pen.S.P.
P.T.41.	P.T.4.	**P.M.24M.**	—	4.Pen.M.
—	P.T.25.	**P.M.24D.**	—	—
660 T.	D.A.60.	**D.O.60.**	—	—

FULL-WAVE RECTIFIERS

Cossor.	Marconi-Osram.	**Mullard.**	Mazda.	Six-Sixty.
506 B.U.	U.10.	**D.W.2.**	U.U.4.	W.462.
442 B.U.	U.12.	**D.W.3.**	U.U.120/350.	W.120/350.
460 B.U.	U.14.	**D.W.4.**	U.U.120/500.	W.120/500.
—	—	**I.W.2.**	U.U.2. U.U.60/250.	W.60/250.
—	M.U.12.	**I.W.3.**	—	I.H.120/350.
—	M.U.14.	**I.W.4.**	—	—