



Tube Chart Supplement Model 666-05



Dynamic Conductance Tube & Transistor Tester

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
01A	5.0	7	91	23511	11111	2	3	23	1LC6	1.4	7	7	24353	21111	2	4	3	
0A2/6073/150C2	117	0	10	21616	66111	1	3	1	1LD5	1.4	27	36	24361	51111	1	5	2346	
0A3/VR-75	0	0	92	11113	11111	4	2	5	1LD5	1.4	7	25	24361	51111	4	6	4	
0A4/PL1267	Z	0	50	11113	15111	4	2	57	1LE3	1.4	13	73	23116	51111	4	3	26	
0A4/PL1267	Z	0	50	11113	12111	4	2	5	1LE5	1.4	7	83	23316	51111	3	3	246	
0B2/6074/108C1	0	0	67	41666	66111	2	3	1	1LH4	1.4	13	86	23161	51111	2	5	246	
0B3/VR-90	6.3	0	90	12113	11111	4	2	5	1LH4	1.4	7	23	23161	51111	4	6	246	
0C2	35	0	85	32666	66111	2	2	1	1LN5	1.4	7	65	23316	51111	4	4	246	
0C3/VR105	12.6	0	0	12113	11111	4	2	5	1N3/DM70/1M3	1.4	100	70	56112	11411	1	5	1	
0B3/VR150	70	0	73	12113	11111	4	2	5	1N3/DM70/1M3	1.4	0	70	56112	11411	1	5	8	
0G3/5TV85-10	25	0	50	42666	66111	1	3	13	1N5	1.4	7	79	12335	61111	2	3	34C	
0Z4	Z	0	80	11113	11211	4	2	35	1N6	1.4	34	92	12335	61111	2	3	3456	
0Z4	Z	0	80	11311	11211	4	2	3	1N6	1.4	7	25	12335	61111	4	6	6	
1A3/DA90/1D13	1.4	7	21	26116	61111	4	6	23	1P5	1.4	7	51	12331	11115	4	4	34C	
1A4P	2.0	7	38	24311	11115	2	4	3C	1P39	0	0	100	11141	11111	2	6	3	
1A4T	2.0	7	51	24311	11115	2	4	23C	(Shine light on cathode. Needle indication must be greater than when light not on cathode.)									
1A5	1.4	39	84	12335	11111	2	3	345										1P40
1A6	Mix.	2.0	30	62	24453	11112	2	4	2345	(Shine light on cathode. Needle indication must be greater than when light not on cathode.)								
1A6	Osc.	2.0	30	35	24453	11112	2	4	3									
1A7	Mix.	1.4	70	20	12351	31111	4	5	3456	1Q6	1.25	30	67	15112	63311	2	4	2678
1A7	Osc.	1.4	80	95	12351	31111	4	5	6	1Q6	1.25	7	28	15112	63311	4	6	7
1AB6/DK96	1.4	40	20	14353	52111	1	5	23456	1R4/1294	1.4	7	17	21161	11111	4	6	47	
1AC5	1.25	7	25	15112	13311	2	4	27	1R5/DK91/X17	1.4	7	70	13316	12111	2	4	234	
1AD4/DF62	1.25	7	5	33152	11111	2	4	24	1R5/DK91/X17	1.4	7	24	13316	12111	2	4	3	
1AD5	1.25	20	62	15112	13311	2	4	27	1S2/DY87/DY86	1.4	0	31	12616	16613	2	4	C	
1AE4	1.25	7	95	13311	52111	4	4	236	1S4	1.4	7	44	13531	62111	2	3	234	
1AF4	1.4	7	50	13311	52111	4	4	236	1S5/DAF91/6AU	1.4	20	65	11633	52111	2	4	3456	
1AF5	1.4	7	74	11633	52111	4	4	3456	1S5/DAF91/6AU	1.4	7	29	11633	52111	4	6	3	
1AF5	1.4	7	74	11633	52111	4	6	3	1S6	1.25	20	70	31512	61311	2	4	1368	
1AG4	1.25	70	8	43251	11111	1	4	124	1S6	1.25	20	70	31512	61311	2	4	6	
1AH4	1.25	7	86	33152	11111	2	4	124	1S6	1.25	7	20	31512	61311	4	6	1	
1AJ5	1.25	7	84	33615	21111	2	4	1235	1S6	1.4	7	77	12151	31311	2	4	34	
1AJ5	1.25	7	25	33615	21111	4	6	3	1SB6	1.4	20	69	12436	11511	2	4	34	
1AK4	1.25	7	0	33152	11111	2	5	124	1SB6	1.4	7	25	12436	11511	4	6	5	
1AN5	1.4	7	75	14311	52111	2	4	346	1T4/DF91/W17	1.4	7	85	13311	52111	4	3	236	
1AX2	1.4	0	88	12666	66663	4	4	C	1T5	1.4	39	54	12352	11111	2	3	345	
1AX4	1.4	0	86	21166	61663	4	4	C	1T6	1.25	25	67	13515	61311	2	4	1368	
1B3/8016	1.25	0	85	62616	11613	2	4	C	1T6	1.25	7	98	31512	61311	3	6	6	
1B4P/951	2.0	7	49	24311	11115	2	4	23C	1T6	1.4	7	60	13311	52111	4	4	236	
1B5/255	2.0	7	10	23665	11111	2	5	234	1T6	1.4	7	60	13311	52111	4	4	236	
1B5/255	2.0	7	10	23665	11111	4	6	34	1U5/DAF92	1.4	25	50	13361	52111	2	4	2346	
1B7	Mix.	1.4	70	81	12351	31111	4	4	3456	1U5/DAF92	1.4	7	10	13361	52111	4	6	4
1B7	Osc.	1.4	70	78	12351	31111	4	4	6	1U6	1.4	7	96	14413	22111	2	4	45
1B8	1.4	42	59	12335	31615	2	3	34568C	1U6	1.4	7	88	14413	22111	2	4	3	
1B8	1.4	13	94	12335	31615	2	5	4	1V/XR1	6.3	0	29	23111	11111	2	2	23	
1B8	1.4	7	10	12335	31615	4	6	5	1V2	6.25	0	85	66621	66631	2	4	9	
1C3/DK96/	1.4	7	84	23151	51111	4	3	24	1V5	1.25	45	85	15112	13311	1	4	278	
1C5/DL35/	1.4	29	41	12335	11111	2	3	35	1V6	1.25	14	79	33511	32111	1	5	1235	
1C6	2.0	40	65	24453	11112	2	4	245	1V6	1.4	93	71	13311	52111	2	3	236	
1C6	2.0	40	90	24453	11112	2	4	345	1W5	1.25	25	53	15112	13311	2	4	278	
1C7	2.0	50	77	12435	41112	2	3	345	1X2	1.25	0	20	12116	11613	1	5	C	
1C7	2.0	50	75	12435	41112	2	3	6	1Z2	1.4	0	3	21661	61113	2	4	C	
1C8	1.25	35	72	65112	33511	1	5	267	2A3/5930	2.5	17	82	23511	11111	4	1	23	
1C8	1.25	35	29	65112	33511	1	6	7	2A4	2.5	20	78	12511	11111	4	2	35	
1D5	2.0	7	29	12431	11115	2	4	3C	2A4	2.5	85	78	12511	11111	4	2	3	
1D7	2.0	35	72	12435	31112	2	4	345	2A5/KR25	2.5	7	44	24451	11111	4	2	2345C	
1D7	2.0	35	20	12435	31112	2	4	6	2A6	2.5	7	20	24661	11115	2	5	2345C	
1D8	1.4	26	75	12335	31615	2	3	34568	2A6	2.5	7	20	24661	11115	4	6	34	
1D8	1.4	7	82	12335	31615	3	4	6	2A7	2.5	7	87	23341	11111	4	3	2356	
1D8	1.4	7	22	12335	31615	4	6	8	2A7	2.5	7	0	23341	11111	4	4	4	
1DN5	1.4	7	95	24311	51111	2	4	2346	2AF4	2.5	10	57	35211	66111	4	2	25	
1DN5	1.4	0	45	21141	11111	2	4	4	2B3	1.4	0	56	62111	11613	2	4	C	
1E4	1.4	7	85	12315	11111	4	3	35	2B7	2.5	78	12	24366	11115	3	3	23456C	
1E5	2.0	7	53	12331	11115	2	4	34C	2B7	2.5	7	20	24366	11115	4	6	45	
1E7	2.0	7	65	12455	41311	4	3	34568	2BN4	2.0	28	70	15213	66111	4	2	12	
1E8	1.25	95	92	65112	33511	1	4	267	2C21/1642	6.3	23	26	21353	11115	3	3	2356	
1E8	1.25	95	76	65112	33511	1	4	7	2C21/1642	6.3	23	26	21353	11115	3	3	3	
1F4	2.0	21	33	23531	11111	3	3	234	2C52	12.6	7	82	53153	12111	4	4	2356	
1F5	2.0	25	26	12335	11111	3	3	345	2C52	12.6	7	82	53153	12111	4	4	2	
1F6	2.0	18	29	24366	11115	2	4	2345C	2CY5	2.5	7	75	51214	31111	2	3	156	
1F6	2.0	7	29	24366	11115	4	6	45	2D21/5727/EN91	6.3	0	58	61213	43111	2	1	1256	
1F7	2.0	20	28	12466	31115	2	4	345C	2E5	2.5	7	87	24141	11111	4	3	2345	
1F7	2.0	7	28	12466	31115	2	4	45	2E26	6.3	15	80	12465	61114	4	1	135	
1G3/1B3	1.25	0	85	62616	11613	2	4	C	2EA5	2.5	50	51	51214	31111	2	3	156	
1G4	1.4	10	20	12315	11111	2	4	35	2EN5	2.0	0	55	14211	14111	1	2	257	
1G5	2.0	18	12335	11111	2	3	345	3	2FH5	2.0	16	0	65214	11111	2	3	2567	
1G6	1.4	7	91	12355	31111	3	4	3456	2FQ5	2.0	50	70	15214	66111	2	2	125	
1H2	1.4	0	85	12616	16613	2	4	C	2FY5	2.5	15	45	15124	16111	3	2	125	
1H4	2.0	24	94	12315	11111	2	3	35	2T4	2.5	35	71	35211	66111	2	2	25	
1H5/HD14/DAC32	1.4	12	98	12316	11115	2	5	35C	2V2	2.5	0	65	12116	11114	4	3	C	
1H5/HD14/DAC32	1.4	7	20	12316	11115	4	6	5	2V3	2.5	0	93	12111	11113	4	3	C	
1H6	2.0	7	16	12366	51111	2	5	3456	2W3	2.5	0	96	12131	11111	4	1	4	
1H6	2.0	7	15	12366	51111	4	6	45	2X2/879	2.5	0	60	21111	11113	4			

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THANKS AGAIN AND PLEASE TAKE THE TIME TO VISIT OUR STORE.

ATTENTION! EVERYTHING ON SALE NOW!!



HOT SALE!

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT
3B2	2.8	0	10	12111	61614	1	5	C	5BT8	4.7	0	5	66121	11111	4	6	12
3B4/DL98	2.5	80	83	36521	63111	2	3	137	5B8	4.7	60	36	31321	51341	1	4	1236789
3B7/1291	2.8	45	34	23561	53111	3	3	36	5B8	4.7	0	56	31321	51341	1	3	13
3BA6	2.8	40	5	51214	31111	3	3	127	5CG8	4.7	53	5	53621	43151	3	3	16789
3BC5	2.8	15	37	56214	31111	3	3	1567	5CG8	4.7	63	5	53621	43151	3	3	2
3BE5	2.8	7	75	51214	31111	4	3	1257	5CL8	5.0	7	20	53121	33151	3	3	13789
3BE6	2.8	7	25	51214	31111	4	3	127	5CL8	5.0	7	50	53121	33151	3	3	6
3BN4	2.8	18	69	15213	66111	4	2	127	5CM8	4.7	7	80	45121	43151	4	3	1236789
3BN6	2.8	7	35	15213	13111	3	4	126	5CM8	4.7	7	25	45121	43151	4	4	1
3BU8	2.8	25	34	13421	55451	2	4	1679	5C08	4.7	7	84	45321	41151	3	2	23789
3BY6	2.8	7	56	51214	31111	3	3	1257	5C08	4.7	7	45	45321	41151	3	3	6
3BY6	2.8	7	26	11214	35111	3	3	127	5CR8	4.7	7	100	45121	43151	2	3	1236789
3BZ6	2.8	46	92	51214	31111	3	2	127	5CR8	4.7	7	35	45121	43151	2	3	1
3C2	2.8	0	16	12166	61614	1	4	C	5CU4	5.0	0	15	12141	61111	4	1	4
3C4	1.4	60	99	14312	51111	1	3	236	5CU4	5.0	0	15	12141	61111	4	1	4
3C6	2.8	7	90	21115	31111	4	3	45	5CZ5	4.7	20	30	31521	61641	4	2	1379
3C6	2.8	7	90	21351	11111	4	3	3	5DH8	5.0	7	30	54121	43151	3	3	13789
3CB6	2.8	55	90	51214	31111	3	2	127	5DH8	5.0	7	45	54121	43151	3	3	6
3CE5	2.8	16	5	56214	31111	3	3	1567	5EA8	5.0	7	75	45321	41151	1	3	1236789
3CF6	2.8	13	10	51214	31111	3	3	127	5EA8	5.0	7	88	45321	41151	2	3	6
3CS6	2.8	7	70	51214	31111	2	4	1257	5EH8	4.7	7	17	15421	65341	2	3	12378
3CS6	2.8	7	70	11214	35111	2	4	5	5EH8	4.7	7	100	15421	65341	2	3	9
3CY5	2.8	7	75	51214	36111	2	3	1256	5EU8	5.0	7	100	45421	15131	2	3	1236789
3DE	2.8	29	5	24311	56111	2	3	236	5EU8	5.0	7	28	45421	15131	2	3	1
3DE6	2.8	0	28	51214	31111	3	3	127	5EW6	5	14	12	51214	31111	3	3	1275
3DG4	2.8	0	100	26114	14111	2	1	57	5FG7	4.7	35	25	54621	43151	3	3	126789
3DG4	2.8	0	95	26114	14111	2	1	7	5FG7	4.7	35	70	54621	43151	3	2	2
3DK6	2.8	7	35	51214	36111	3	3	1267	5FV8	4.7	40	70	54121	43151	3	2	1236789
3DT6	2.8	10	25	51214	35111	3	4	127	5FV8	4.7	7	20	54121	43151	3	3	6
3E5	2.8	7	71	13316	52111	2	3	236	5GH8	4.7	7	90	45321	41151	2	3	1236789
3E6	2.8	20	89	13316	51111	2	3	46	5GH8	4.7	7	38	45321	41151	2	3	1
3EA5	2.8	25	50	51214	31111	2	3	156	5GM6	5.0	15	80	51214	36111	4	2	126
3ER5	2.8	30	75	15124	16111	3	2	125	5J6	4.7	25	35	33215	51111	3	3	567
3FH5	2.8	15	15	65214	11111	2	3	267	5R4	5.0	0	43	12111	41111	4	1	46
3FQ5	2.8	50	70	15214	66111	2	2	125	5R4	5.0	0	43	12141	41111	4	1	4
3FY5	2.8	7	80	15214	66111	4	3	124	5T4	5.0	0	30	12111	41111	4	1	46
3GS8	2.8	30	85	13421	15411	3	3	1236789	5T4	5.0	0	30	12141	41111	4	1	4
3LF4	2.8	23	29	24311	56111	2	3	236	5T8	4.7	7	84	66121	61531	3	4	123678
3M4/DL95/N18	2.8	35	29	13536	62111	2	3	234	5T8	4.7	7	0	66121	61531	4	6	126
3O5	2.8	25	27	12335	11611	2	3	345	5U4/5931	5.0	0	41	12111	41111	4	1	46
3S4/DL92/N17	2.8	7	40	13536	62111	2	3	234	5U4/5931	5.0	0	41	12141	41111	4	1	4
3V4/DL94/1P11	2.8	30	34	13316	52111	2	3	236	5U8	4.7	71	5	35321	41151	3	3	236789
4A6	3.8	7	77	12355	31611	1	4	3456	5U8	4.7	71	88	35321	41151	3	2	6
4A6	4.2	7	80	51213	31111	3	3	127	5V3	5.0	0	25	12111	41111	3	1	46
4AV6	4.2	25	85	51216	64111	3	3	12567	5V3	5.0	0	25	12141	41111	3	1	4
4AV6	4.2	0	5	51216	64111	4	6	56	5V4/GZ32	5.0	0	76	12111	41111	4	1	46
4BC5	4.2	15	37	56214	31111	3	3	1567	5V4/GZ32	5.0	0	76	12131	41111	4	1	4
4BC8	4.2	10	70	35121	35111	2	3	2378	5V6	4.7	21	98	12445	41111	4	1	3458
4BN6	4.2	7	65	15213	13111	4	4	126	5W4	5.0	0	46	12111	41111	4	1	46
4BQ7	4.2	7	23	35121	35111	4	3	2378	5W4	5.0	0	46	12141	41111	4	1	4
4BS8	4.2	40	85	35121	35111	3	2	2378	5X3	5.0	0	60	21411	41111	4	1	23
4BU8	4.2	25	34	13421	55451	2	4	12679	5X3	5.0	0	60	24111	41111	4	1	5
4BX8	4.2	23	15	35121	35111	2	3	2378	5X4	5.0	0	40	11114	12111	4	1	35
4BZ6	4.2	46	85	51214	31111	3	2	127	5X4	5.0	0	40	11411	12111	4	1	3
4BZ7	4.2	7	27	35121	35111	4	3	2378	5X8	4.7	25	52	15321	15341	3	3	12678
4BZ8	4.2	7	75	45121	45111	3	2	2378	5X8	4.7	25	18	15321	15341	3	3	3
4CB6	4.2	40	90	51214	31111	3	2	127	5Y3/6087/6106	5.0	0	55	12111	41111	4	1	46
4CS6	4.2	7	55	51214	31111	2	4	1257	5Y3/6087/6106	5.0	0	55	12141	41111	4	1	4
4CS6	4.2	7	55	11214	35111	2	4	5	5Y4	5.0	0	57	11114	12111	4	1	35
4CX7	4.2	7	43	35121	35161	4	3	2378	5Y4	5.0	0	57	11411	12111	4	1	3
4CY5	4.2	7	65	51214	36111	2	3	1256	5Z3	5.0	0	35	21411	41111	4	1	23
4DE6	4.2	7	9	51214	31111	3	3	127	5Z3	5.0	0	35	24111	41111	4	1	2
4DK6	4.2	15	75	51214	31111	2	3	12567	5Z4/GZ30	5.0	0	76	12111	41111	4	1	46
4DT6	4.2	7	80	51214	33111	3	3	127	5Z4/GZ30	5.0	0	76	12131	41111	4	1	4
4ES8	4.2	7	75	45121	45111	2	2	23789	6A3	6.3	7	65	23511	41111	4	2	23
4EW6	4.2	7	35	51214	31111	3	3	127	6A4/LA	6.3	7	73	24531	41111	4	2	234
4GS8	4.2	30	85	13421	15411	4	3	1236789	6A5	6.3	7	79	12315	11611	4	1	5
5A6	5.0	7	30	31112	35661	4	2	37	6A6	6.3	17	94	23515	31111	3	3	23456
5AM8	4.7	42	100	15321	31611	3	2	1239	6A7	6.3	7	78	23345	41111	4	3	23456
5AM8	4.7	0	5	15321	31611	4	6	8	6A7	6.3	7	98	24345	41111	4	3	4
5AN8	4.7	50	93	35121	43511	3	2	23689	6A8	6.3	7	30	12435	41111	2	4	34568
5AN8	4.7	15	94	35121	43511	4	2	1	6A8	6.3	15	35	12435	41111	2	4	1
5A05	4.7	67	97	51214	36111	4	1	1256	6AB4/EC92	6.3	7	21	41211	51111	4	3	67
5AS4	5.0	0	41	12111	41111	4	1	46	6AB5/6N5	6.3	7	87	24141	41111	4	3	2345

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT		
6AJ8/ECH81	6.3	45	43	35121	43111	2	3	126789	6	6BH6/6661/6265	6.3	45	42	51214	31111	3	3	12567	5
6AJ8/ECH81	6.3	7	10	35121	43451	1	4		8	6BH8	6.3	15	55	15321	15341	2	3	12678	39
6AK4	6.3	70	15	51211	11411	1	3	15	8	6BJ6/6662	6.3	25	95	51214	31111	3	2	12567	5
6AK5/5654/EF95	6.3	15	60	51213	36111	2	3	1256	5	6BJ7	6.3	0	32	14121	41411	2	2	126789	8
6AK6	6.3	50	89	51214	31111	3	2	127	5	6BJ7	6.3	0	32	14121	41411	1	2		26
6AK8/EABC80	6.3	10	77	66121	61531	2	4	123678	9	6BJ8	6.3	7	41	61121	63511	4	3	123689	7
6AK8/EABC80	6.3	7	95	66121	61531	2	6		126	6BJ8	6.3	7	0	61121	63511	4	6		16
6AL5/5726/6663	6.3	0	60	13211	13111	1	3	1257	7	6BK4	6.3	20	70	12665	61614	4	5	15	C
6AL5/5726/6663	6.3	0	48	13211	13111	1	3		2	6BK5	6.3	44	30	41521	16311	4	2	1368	1
6AL7	6.3	15	90	52455	51111	4	5	34568	3	6BK6	6.3	7	90	51216	63111	4	4	1256	7
6AL7	6.3	7	90	52455	51111	4	5		3	6BK6	6.3	7	20	51216	63111	4	6		56
6AM4	6.3	35	33	51663	62161	3	3	12	5	6BK7	6.3	30	80	35121	35111	4	2	2378	16
6AM8	6.3	15	65	15321	41611	2	3	1279	6	6BL4	6.3	0	10	66164	62111	4	1	15	5
6AM8	6.3	7	0	15321	41611	4	6		8	6BL7	6.3	7	10	54154	12111	4	2	1346	25
6AN4	6.3	7	93	45211	66111	4	2	25	1	6BL8/ECF80	6.3	7	58	45321	41151	3	3	1236789	6
6AN5	6.3	7	95	51213	36111	2	2	1256	5	6BL8/ECF80	6.3	7	50	45321	41151	3	2		1
6AN6	6.3	0	66	26663	11111	1	3	23456	5	6BM8/ECL82	6.3	7	0	51521	43141	3	2	126789	9
6AN6	6.3	0	66	26663	11111	1	3		3	6BM8/ECL82	6.3	7	96	51521	43141	3	3		9
6AN6	6.3	0	66	26311	11111	1	3		2	6BN4	6.3	18	69	15213	66111	4	2	12	5
6AN6	6.3	0	66	23111	11111	1	3		3	6BN6	6.3	7	25	15213	13111	4	4	126	7
6AN7	6.3	7	93	35121	63351	4	3	2379	7	6BN7	6.3	7	85	35121	15131	2	2	2367	19
6AN7	6.3	7	64	35121	63351	4	3		8	6BN8	6.3	7	90	31121	33511	2	4	2389	7
6AN8	6.3	50	93	35121	43511	3	2	23689	6	6BN8	6.3	7	30	31121	33511	1	2		16
6AN8	6.3	15	94	35121	43511	4	2		1	6BQ5/EL84/6267	6.3	45	95	65121	14131	4	1	2379	7
6AQ5/6669/6005	6.3	67	97	51214	36111	4	1	1256	5	6BQ6/6CU6	6.3	7	78	12135	11114	4	1	458C	C
6AQ6	6.3	7	90	51216	63111	4	4	1256	7	6BQ7	6.3	7	23	35121	35111	4	3	2378	16
6AQ6	6.3	7	12	51216	63111	4	6		6	6BR6	6.3	22	98	53121	43151	4	2	136789	6
6AQ6	6.3	7	30	51216	63111	4	6		5	6BR8	6.3	22	89	53121	43151	4	2		2
6AQ7	6.3	7	25	61654	12111	4	4	12346	5	6BS8	6.3	40	81	35121	35111	3	2	2378	16
6AQ7	6.3	7	20	61654	12111	4	6		13	6BT6	6.3	7	80	51216	63111	4	4	1256	7
6AQ8/ECC85	6.3	46	16	45121	45111	2	3	2378	16	6BT6	6.3	7	20	51216	63111	4	6		56
6AR5	6.3	65	33	51213	31111	4	2	1256	5	6BU4	6.3	75	95	12665	61614	4	4	15C	C
6AR6/6098	6.3	7	73	11424	25111	4	1	1357	3	6BU5	6.3	20	15	11351	62114	3	5	245	C
6AR8	6.3	7	75	11421	51441	4	3	1236789	89	6BU6	6.3	7	0	51216	64111	4	3	1256	7
6AS5	6.3	7	25	15216	33111	4	2	1267	7	6BU6	6.3	7	25	51216	64111	4	6		56
6AS6/5725	6.3	22	67	51213	35111	3	3	1257	5	6BU8	6.3	25	34	13421	55451	2	4	12679	38
6AS7	6.3	7	82	53153	12111	2	1	1346	25	6BV8	6.3	11	95	15421	61161	2	2	126789	3
6AS8	6.3	7	80	35121	31141	1	4	23678	9	6BV8	6.3	7	95	15421	61161	2	6		69
6AS8	6.3	7	5	35121	61141	4	6		6	6BW4	6.3	0	84	41121	14111	3	1	179	17
6AT6/EBC90	6.3	7	78	51216	63111	4	4	1256	7	6RW8	6.3	60	60	31321	51341	1	4	1236789	9
6AT6/EBC90	6.3	7	25	51216	63111	4	6		56	6RW8	6.3	0	60	31321	51341	1	3		13
6AT8	6.3	27	35	53121	43151	3	3	1389	2	6BX7	6.3	35	98	53153	12111	3	1	1346	25
6AT8	6.3	10	40	53121	43151	3	3		6	6BX8	6.3	23	15	35121	35111	2	3	2378	16
6AU4	6.3	0	10	11113	12111	2	2	35	5	6BY5	6.3	0	80	12133	11111	2	2	1458	45
6AU5	6.3	25	90	52113	11311	3	1	1358	7	6BY6/5915/7036	6.3	7	56	51214	35111	3	3	1257	5
6AU6/6136/EF94	6.3	50	5	51213	31111	3	3	127	5	6BY6/5915/7036	6.3	7	95	51214	35111	3	2		6
6AU7	6.3	40	18	45121	45161	2	3	2378	16	6BY7/EF85	6.3	10	90	15621	14311	4	2	12689	7
6AU8	6.3	12	88	15321	15331	4	2	123678	9	6BY8	6.3	7	85	51121	53311	3	7	2389	7
6AU8	6.3	15	25	15321	15331	4	3		3	6BY8	6.3	0	0	11121	31111	1	3		6
6AV5	6.3	7	82	52113	11311	4	1	1358	5	6BZ6	6.3	46	85	51214	31111	3	2	127	5
6AV6/EBC91	6.3	60	55	51216	63111	3	3	1256	7	6BZ7	6.3	7	27	35121	35111	4	3	2378	16
6AV6/EBC91	6.3	0	5	51216	63111	4	6		56	6BZ8	6.3	7	25	35121	35116	2	4	2378	1
6AW6	6.3	19	39	51214	31111	3	3	127	5	6BZ8	6.3	7	95	35121	35116	2	3		6
6AW8	6.3	10	85	15321	15331	3	2	126789	9	6C4	6.3	40	98	36216	51111	3	2	67	1
6AX4	6.3	20	80	15321	15331	3	3		3	6C5	6.3	45	27	12315	11111	3	3	58	3
6AX5	6.3	0	90	12513	12111	4	1	35	5	6C6	6.3	15	40	24311	11115	2	4	235C	2
6AX5	6.3	0	90	12311	11111	4	1	358	5	6C7	6.3	20	77	23166	11115	3	3	2456C	2
6AX7	6.3	7	93	45121	45161	2	4	2378	16	6C7	6.3	7	28	23166	11115	4	6		45
6AX8	6.3	20	94	35321	41151	4	2	236789	6	6C8	6.3	24	94	12315	31115	3	3	34568C	36
6AX8	6.3	20	76	35321	41151	4	2		1	6CA4/EZ81	6.3	0	65	46121	64661	1	2	137	17
6AZ5	6.3	7	99	61211	11611	2	6	1278	18	6CA5	6.3	19	5	16215	33111	4	2	1576	7
6AZ8	6.3	53	5	43121	56551	2	3	123679	1	6CA7/EL34	6.3	15	95	12435	61111	4	1	158	3
6AZ8	6.3	23	85	11121	11351	3	2		8	6CB5	6.3	10	50	32156	61614	3	1	348	C
6B4	6.3	7	75	12315	11111	4	1	35	3	6CB6/6676	6.3	35	90	51214	31111	3	2	127	5
6B6	6.3	7	41	12466	11115	2	5	2358C	3	6CB6	6.3	90	90	12115	11314	2	1	35C	C
6B6	6.3	7	25	12466	11115	4	6		45	6CE5/6BC5	6.3	16	2	56214	31111	3	3	1567	5
6B7	6.3	78	12	24366	11115	3	3	23456C	2	6CF6	6.3	11	10	51214	31111	3	3	127	5
6B7	6.3	7	20	24366	11115	4	6		45	6CG7	6.3	45	15	35121	35111	3	3	2378	16
6B8	6.3	26	12	12466	31115	4	3	3458C	3	6CG8	6.3	63	5	53621	43151	3	3	16789	6
6B8	6.3	7	23	12466	31115	4	6		45	6CG8	6.3	53	5	53621	43151	3	3		2
6BA5	6.3	20	62	51213	13111	3	3	1578	5	6CH7	6.3	20	50	35121	35161	2	3	2378	1
6BA6/5749/6660	6.3	40	90	51214	31111	3	2	156	5	6CH7	6.3	30	50	35121	35161	2	3		6
6BA7	6.3	7	80	45121	15141	2	3	2367	9	6CH8	6.3	28	90	54321	15551	3	2	12878	2
6BA8	6.3	7	98	45121	15141	2	2		1	6CH8	6.3	35	15	11121	11531	2	2		9
6BA8	6.3	7	36	15321	15341	2	3	126789	9	6CJ6/EL81	6.3	12	3	65121	66314	2	2	239	C
6BA8	6.3	7	96	15321	15341	2	3		3	6CK4	6.3	7	80	52614	11111	2	1	1358	5
6BC4	6.3	20	87	35621	16661	3	2	26	1	6CL5	6.3	95	35	32156	61614	2	1	134C	C
6BC5/6CE5	6.3	10																	

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
6CS6/EH90	6.3	7	55	11214	35111	2	4		6FM8	6.3	0	48	13121	31541	1	3	1236789	26
6CS7/EH90	6.3	95	77	41521	45111	2	2	3789	6FM8	6.3	7	26	16121	61541	3	4		9
6CS7/EH90	6.3	90	20	41521	45111	2	2		6F05	6.3	50	70	15214	66111	2	2	125	5
6CU5	6.3	9	93	15216	34111	3	1	1267	6F07	6.3	25	85	45121	45111	3	2	123678	16
6CU6/6BQ6	6.3	7	82	12135	11114	4	1	458C	6F35	6.3	20	50	51214	36111	3	3	1256	5
6CU8	6.3	7	35	14321	15541	3	3	1236789	6FV6	6.3	15	75	51214	31111	3	2	1567	5
6CU8	6.3	7	65	14321	15541	3	2		6FV8	6.3	7	35	54121	43151	2	3	13789	2
6CV7/EBC41	6.3	15	75	14516	61211	4	3	3567	6FV8	6.3	7	90	54121	43151	2	3		6
6CV7/EBC41	6.3	15	20	14516	61211	4	6		6FW5	6.3	7	65	52114	11311	3	1	1358	5
6CW5/EL86	6.3	7	65	65121	64631	2	2	2379	6FY5/EC97	6.3	7	70	15214	66111	3	2	12	5
6CX8	6.3	7	17	15421	15341	3	3	12678	6G6	6.3	59	85	12335	11111	3	2	3458	3
6CX8	6.3	7	65	15421	15341	3	2		6GC5	6.3	7	60	31521	61641	2	2	1379	9
6CY5	6.3	7	60	51214	31111	2	3	156	6GE8	6.3	7	75	31521	41541	2	1	12378	6
6CY7	6.3	7	80	41521	45111	2	1	1267	6GE8	6.3	50	5	31521	41541	2	4		9
6CY7	6.3	7	88	41521	45111	2	4		6GH8	6.3	7	90	45321	41151	2	3	1236789	6
6CZ5	6.3	20	45	31521	61641	4	2	139	6GH8	6.3	7	38	45321	41151	2	3		5
6D4	6.3	0	78	16211	63111	1	3	7	6GK5	6.3	15	75	16214	16111	3	2	125	5
6D6	6.3	32	21	24311	11115	3	3	45C	6GK6	6.3	30	20	15121	14361	4	2	12378	7
6D7	6.3	15	45	24311	11115	2	4	236C	6GM6	6.3	15	80	51214	36111	4	2	126	5
6D8	6.3	7	0	12431	41111	2	4	3458	6GN8	6.3	7	85	15421	15341	3	3	12578	3
6D8	6.3	7	75	12431	41111	2	4		6GN8	6.3	7	75	15421	15341	3	2		9
6DA4	6.3	0	70	66164	62111	2	1	3	6GS8	6.3	30	85	13421	15411	4	3	1236789	38
6DB5	6.3	7	95	31521	66641	3	1	12368	6GW6	6.3	7	70	12135	11114	3	1	458C	C
6DB6	6.3	7	85	51214	31111	3	3	12567	6GX6	6.3	10	60	51214	31111	3	3	12567	5
6DC6	6.3	7	9	51214	31111	3	3	127	6GY6	6.3	7	65	51214	31111	3	3	12567	5
6DC8/EBF89	6.3	7	19	35121	46611	3	3	1239	6GY8	6.3	7	83	54512	41141	2	3	1236789	269
6DC8/EBF89	6.3	0	85	35121	43611	1	3		6H4	6.3	7	0	12161	11111	4	6	48	4
6DC8/EBF89	6.3	0	85	35121	46311	1	3		6H6/D63	6.3	0	77	12313	11111	1	3	3458	35
6DE4	6.3	0	73	16114	12111	2	1	35	6HC8	6.3	7	60	51521	43141	4	2	12378	6
6DE6	6.3	7	9	51214	31111	3	3	127	6HC8	6.3	7	90	51521	43141	4	3		9
6DE7	6.3	0	63	45621	45111	3	2	2789	6HF8	6.3	15	60	15421	15341	3	2	1236789	9
6DE7	6.3	7	95	45621	45111	3	2		6HF8	6.3	15	15	15421	15341	4	3		3
6DG6	6.3	7	93	12435	11111	3	1	3458	6HS8	6.3	10	20	13421	15411	3	4	1345	38
6DK6	6.3	15	60	51214	31111	2	3	12567	6J4	6.3	15	85	51216	63111	3	2	12	7
6DM4	6.3	0	35	11114	12111	4	1	35	6J5/L63	6.3	36	15	12315	11111	3	3	58	3
6DN6	6.3	71	9	12115	11314	4	1	358C	6J6/ECC91	6.3	7	50	33215	51111	3	3	567	12
6DN7	6.3	7	15	54154	12111	3	2	123456	6J7/Z63	6.3	7	80	12431	11115	2	4	58C	3
6DN7	6.3	7	98	54154	12111	3	2		6J8	6.3	60	55	12435	41111	2	4	34568C	3
6DQ5	6.3	7	47	52136	16114	3	1	134	6J8	6.3	60	25	12435	41111	2	3		6
6DR7	6.3	7	70	12135	11114	4	1	458C	6JB8	6.3	25	60	45321	41151	3	3	1236789	61
6DR7	6.3	7	75	45521	45111	2	4	32789	6JCB	6.3	7	65	15321	46541	3	2	123689	6
6DR7	6.3	7	85	45521	45111	2	1		6JC8	6.3	30	70	15321	46541	3	2		9
6DS5	6.3	7	83	51214	36111	4	2	1256	6JH8	6.3	7	60	33421	51441	4	3		89
6DT5	6.3	7	55	31521	61641	3	2	1379	6K5	6.3	7	80	12311	11115	4	4	38C	3
6DT6	6.3	7	90	51214	35111	3	3	127	6K5	6.3	65	30	12435	11111	4	2	3458	3
6DT6	6.3	43	80	45121	45111	4	2	123678	6K7	6.3	28	30	12431	11115	3	3	348C	3
6DW5	6.3	7	33	31521	61141	2	2	1379	6K8	6.3	7	75	12435	31111	4	3	34568C	3
6DZ7	6.3	7	70	52435	41111	4	2	134568	6K8	6.3	7	64	12435	31111	4	3		6
6DZ8	6.3	7	90	51521	43141	2	3	278	6L5	6.3	45	25	12315	11111	3	3	368	3
6DZ8	6.3	7	43	51521	43141	2	2		6L6/5881/5932	6.3	25	76	12445	61111	4	1	3458	3
6E5	6.3	7	80	24541	11111	4	4	2345	6L7	6.3	7	73	12435	11115	4	3	348C	3
6E5	6.3	7	87	21541	11111	4	4		6M3	6.3	0	60	62416	16111	2	1	3C	3
6E6	6.3	40	80	23515	31111	3	2	23456	6M5	6.3	25	20	35121	64611	4	2	1237	7
6E7	6.3	27	27	24311	11115	3	3	236C	6N3/EY82	6.3	0	27	66121	66641	4	1	1236789	9
6EA5	6.3	25	50	51214	31111	2	3	156	6N4	6.3	7	25	51213	66111	4	3	12	5
6EA7	6.3	7	94	54154	12111	1	4	123456	6N6	6.3	65	0	12445	11111	4	2	3458	3
6EA7	6.3	7	35	54111	12111	1	2		6N7	6.3	20	93	12355	31111	3	3	4568	36
6EA8	6.3	7	85	45321	41151	1	3	1236789	6N8/EBF80	6.3	27	72	35121	46611	2	3	123678	6
6EA8	6.3	7	95	45321	41151	2	3		6N8/EBF80	6.3	7	25	35121	46611	4	6		78
6EB8	6.3	7	50	15421	15341	2	4	12578	6P5	6.3	7	74	12315	11111	3	3	358	3
6EB8	6.3	7	75	15421	15341	3	2		6P7	6.3	35	52	12143	35115	3	3	45678C	4
6EH5	6.3	15	95	16215	33111	4	1	1567	6Q4/EC80	6.3	7	88	56121	16641	4	2	139	9
6EH8	6.3	20	13	15421	65341	2	3	12378	6Q5/884	6.3	0	70	12311	11111	3	1	38	3
6EH8	6.3	7	98	15421	65341	2	3		6Q7/DH63/6T7	6.3	7	85	62466	11115	2	4	3458C	3
6EM5	6.3	7	50	31521	61641	3	2	1367	6Q7/DH63/6T7	6.3	0	25	62636	11115	1	4		4
6EM7	6.3	7	65	54154	12111	2	4	1346	6Q7/DH63/6T7	6.3	0	25	62663	11115	1	4		5
6EM7	6.3	7	65	54154	12111	2	4		6R3/EY81	6.3	0	6	66621	66641	1	2	9C	9
6ER5	6.3	40	81	15214	36111	2	2	12567	6R4/EC81	6.3	7	65	51121	11411	4	2	33	8
6ES8/ECC189	6.3	7	60	45121	45111	2	2	23789	6R6	6.3	17	42	12314	11115	4	3	358C	5
6EU7	6.3	68	65	12115	44511	1	4	456789	6R7	6.3	7	0	12466	11115	4	3	458C	3
6EU8	6.3	7	100	45421	15131	2	3	1236789	6R7	6.3	7							

TUBE TYPE	FIL	GRID PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID PLATE	LEVERS	V	S	LEAK	MERIT				
6SR7	6.3	7	98	15166	42111	4	2	2345	6	7	80	24351	11111	4	3	3456Z	2		
6SR7	6.3	7	25	15166	42111	4	6		45	7	54	24361	11111	4	3		3		
6S7	6.3	25	19	12151	31411	3	3	345	8	6.3	17	62	24663	51111	3	3	23456Z	2	
6S7	6.3	7	0	15166	42111	4	3	2345	6	6.3	7	25	24663	51111	4	6		34	
6S7	6.3	7	27	15166	42111	4	6		45	6.3	60	30	24353	51111	2	4	23456Z	2	
6SU7/6188	6.3	7	38	54154	12111	4	4	1346	25	6.3	60	76	24353	51111	2	3		3	
6SV7	6.3	35	39	15136	42111	3	3	23456	6	6.3	50	0	24316	51111	3	3	2367	2	
6SV7	6.3	7	0	15136	42111	4	6		5	6.3	30	10	24316	51111	3	3	2367	2	
6SZ7	6.3	7	89	15166	32111	4	4	2345	6	6.3	14	4	24311	56111	3	3	2346	2	
6SZ7	6.3	7	30	15166	32111	4	6		45	6.3	0	74	23516	31111	4	1	236Z	6	
6T4	6.3	35	71	34211	66111	2	2	25	1	6.3	0	74	21216	11111	4	1		3	
6T7/6Q7/DH63	6.3	7	85	12466	11115	2	4	458C	3	6.3	0	74	24516	51111	4	1	23456Z	2	
6T7/6Q7/DH63	6.3	7	30	12466	11115	4	6		45	6.3	7	50	24516	51111	4	6		56	
6T8/6AK8/EABC80	6.3	7	84	66121	61531	3	4	1236Z8	126	6.3	0	84	21311	11111	4	1	36Z	6	
6T8/6AK8/EABC80	6.3	7	0	68121	61531	4	6		126	6.3	0	84	21311	11111	4	1		3	
6U4	6.3	0	71	11113	12111	4	1	35	5	6.3	0	94	21511	31111	4	1	36Z	6	
6U5/6G5	6.3	7	87	24541	11111	4	3	25	2	6.3	0	94	21311	11111	4	1		3	
6U5/6G5	6.3	7	0	21541	11111	4	1		2	9.0	12	75	15321	15331	4	2	12678	9	
6U6	6.3	7	94	12435	11111	4	1	3458	3	9.0	12	50	15321	15331	4	3		3	
6U7	6.3	27	30	12431	11115	3	3	58C	3	8AW8	7.5	10	90	15321	15331	3	2	126789	9
6U8/6678/ECF82	6.3	71	5	35321	41151	3	3	236Z89	6	8AW8	7.5	10	90	15321	15331	3	3		3
6U8/6678/ECF82	6.3	71	88	35321	41151	3	2		6	8BA8	7.5	7	60	15321	15341	2	3	126789	9
6V3	6.3	0	70	13121	16161	4	1	2C	2	8BA8	7.5	7	90	15321	15341	2	3		3
6V4/EZ80	6.3	0	79	51121	13111	4	1	137	7	8BN8	7.5	7	75	15321	15341	2	3	12678	39
6V4/EZ80	6.3	0	79	31121	11111	4	1		1	8BN8	7.5	7	18	31121	33511	2	5	238Z	7
6V5	6.3	36	90	11335	12111	4	1	345	3	8BN8	7.5	0	50	31121	33511	1	3		16
6V6	6.3	21	98	12445	11111	4	1	3458	3	8BQ5	7.5	35	100	65121	14131	4	1	237	7
6V7	6.3	22	28	12466	11115	2	3	3458C	3	8BQ7	9.0	7	43	35121	35111	4	3	2378	16
6V7	6.3	7	22	12466	11115	4	6		45	8CG7	9.0	45	15	35121	35111	3	3	2378	16
6V8	6.3	7	51	46121	56161	2	4	236Z89	1	8CM7	9.0	10	50	51121	45511	2	3	3789	6
6V8	6.3	7	0	46121	56161	4	6		279	8CM7	9.0	37	67	41121	15111	2	2		1
6W4	6.3	0	70	11113	12111	4	1	35	5	8CM7	9.0	7	80	66121	15361	3	4	12367	8
6W5	6.3	0	78	12513	11111	4	1	358	5	8CM7	9.0	7	0	66121	15361	4	6		12
6W5	6.3	0	78	12311	11111	4	1		3	8CS7	7.5	90	90	41521	45111	2	2	3789	6
6W6	6.3	7	90	12335	11111	4	1	3458	3	8CS7	7.5	90	20	41521	45111	2	2		1
6W7	6.3	7	50	12413	11115	2	4	348C	3	8CX8	7.5	7	24	15421	15341	3	3	12678	3
6X4/6202/EZ90	6.3	0	86	51211	31111	4	1	16Z	6	8CX8	7.5	7	80	15421	15341	3	2		9
6X4/6202/EZ90	6.3	0	86	31211	11111	4	1		1	8EB8	7.5	20	20	15421	15341	2	4	12678	3
6X5	6.3	0	30	12641	11111	1	2	358	3	8EB8	7.5	7	75	15421	15341	3	2		9
6X5	6.3	0	30	12416	11111	1	2		3	8EM5	7.5	7	60	31521	61641	3	2	1367	9
6X8	6.3	25	20	15321	15341	3	3	1267	9	8GN8	7.5	7	80	15421	15341	4	3	126789	9
6X8	6.3	25	16	15321	15341	3	3		3	8GN8	7.5	7	65	15421	15341	4	2		9
6Y5	6.3	0	83	21513	11111	4	1	345	5	8SN7	7.5	7	6	54154	12111	3	3	1346	25
6Y5	6.3	0	83	21311	11111	4	1		3	9A8/PCF80	9.0	7	95	45321	41151	2	2	1236Z89	1
6Y6	6.3	7	90	12335	11111	4	1	3458	3	9A8/PCF80	9.0	7	60	45321	41151	3	3		6
6Z4/84	6.3	0	83	25311	11111	4	1	234	2	9A8/PCF80	9.0	7	97	45121	45111	3	2	123678	16
6Z4/84	6.3	0	83	23111	11111	4	1		2	9A7*	9.0	40	18	45121	45111	2	3	2378	16
6Z5	12.6	0	81	62513	11111	4	1	345	5	9BR7*	9.0	7	15	45121	55111	4	3	23678	1
6Z5	12.6	0	81	62311	11111	4	1		5	9BR7*	9.0	0	70	45121	44161	1	2		67
6ZY5	6.3	0	37	12513	11111	2	2	358	5	9DZ8	9.0	7	30	51521	43141	2	4	278	9
6ZY5	6.3	0	37	12311	11111	2	2		3	9DZ8	9.0	7	50	51521	43141	2	2		6
7A4	6.3	35	17	24116	51111	2	3	26Z	2	9EF6	9.0	7	55	12335	11111	4	2	3458	3
7A5	6.3	66	93	23311	51111	3	1	2367	2	9U8	9.0	71	5	35321	41151	3	3	236Z89	6
7A6	6.3	0	60	21316	31111	1	3	236Z	6	9U8	9.0	71	88	35321	41151	3	2		1
7A6	6.3	0	60	21316	31111	1	3		3	10	7.5	7	5	13511	11111	4	3	23	2
7A7	6.3	25	15	24316	51111	2	4	2367	2	10BQ5	9.0	7	80	65121	14131	3	2	2379	7
7A8	6.3	7	47	24453	11111	4	3	245Z	2	10C8	9.0	7	95	45121	43511	2	3	1236789	16
7A8	6.3	7	68	24453	11111	4	3		3	10DE7	9.0	0	63	45621	45111	3	2	23789	1
7A87	6.3	14	84	32415	61611	3	3	13458	3	10DE7	9.0	7	100	45621	45111	3	2		6
7AD7	6.3	20	50	24113	51111	4	2	2367	2	10EG7	9.0	7	75	54154	12111	2	1	123456	2
7AF7	6.3	35	14	21355	31111	3	3	23456Z	36	10EG7	9.0	7	40	54154	12111	4	3		5
7AG7	6.3	7	50	24416	51111	4	3	2367	2	10EM7	9.0	10	35	53153	12111	2	2	123456	2
7AH7	6.3	7	54	24416	51111	4	3	2367	2	10EM7	9.0	10	30	53153	12111	4	6		5
7AJ7	6.3	14	18	24316	51111	2	4	236Z	2	10HF8	9.0	15	60	15421	15341	3	2	123456789	9
7AK7	6.3	7	65	24316	51111	4	2	46Z	2	10HF8	9.0	15	35	15421	15341	4	3		1
7AN7/PCC84	6.3	7	22	15421	51641	2	3	1236Z	39	11CY7	9.0	7	5	41521	45111	2	2	1267	1
7AU7	6.3	45	25	35121	35161	3	3	2378	16	11CY7	9.0	7	98	41521	45111	2	3		6
7B4	6.3	7	90	24111	51111	2	4	26Z	2	12A*	12.6	17	30	23511	11111	2	4	23	2
7B5	6.3	7	54	24411	51111	4	2	2367	2	12A*	12.6	90	56	15621	16131	4	2	12	9
7B6	6.3	7	22	24566	61111	2	5	2366Z	2	12A5*	12.6	7	54	24345	11111	4	2	2345	3
7B6	6.3	7	25	24566	61111	4	6		56	12A6	12.6	7	30	23315	11115	3	3	23456C	2
7B7	6.3	35	23	24356	51111	3	3	236Z	2	12A7	12.6	0	30	21113	11111	2	2		5
7B8	6.3	48	9	24453	11111	2	4	235Z	2	12A8	12.6	60	0	12435	41111	2	4	3458	3
7B8	6.3	48	92	24453	11111	2	3		3	12A8	12.6	60	85	12435	41111	2	3		6
7C4/1203A	6.3	0	75	21131	11111	1	3	47	4	12AB5	12.6	55	97	31521	61641	4	1	1379	9
7C5	6.3	30	92	24411	51111	4	1	236Z	2	12AC6	12.6	62	38	51213	31111	1	4	127	5
7C6	6.3	15	78	24566	61111	3	4	2356Z	2	12AD6	12.6	7	79	51213	31111	1	4	1267	5
7C6	6.3	7	22	24566	61111	4	6		56	12AD6*	12.6	7	15	51213	31111	1	4		6
7C7	6.3	13	25	24316	51111	2	4	236Z	2	12AD7*	12.6	7	93	45121	45161	2	4	2378</	

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
12A76/HBC90	12.6	7	25	51216	63111	4	6	56	12EK6	12.6	7	55	51214	31111	1	3	1256Z	5
12A77/6679/8201	12.6	20	60	35121	35161	3	3	2378	12EL6	12.6	31	100	53126	61111	1	4	156Z	2
12AU6/HF94	12.6	50	5	51214	31111	3	3	127	12EL6	12.6	0	60	11123	61111	1	4		5
12AU7/6680/5814	12.6	40	18	45121	45161	2	3	2378	12EL6	12.6	0	60	11126	31111	1	4		6
12AV5	12.6	7	82	52113	11311	4	1	1358	12EM6	12.6	7	30	51321	31131	1	3	12369	6
12AV6/HBC91	12.6	7	87	51216	63111	4	4	1256	12EM6	12.6	0	85	51321	31131	1	4		9
12AV6/HBC91	12.6	7	25	51216	63111	4	6	56	12EM6	12.6	7	94	12435	11111	4	1	3458	3
12AV7/5965/6829	12.6	20	80	35121	35161	4	2	2378	12E07	12.6	15	40	5121	34411	3	3	123678	7
12AW6	12.6	19	39	51214	31111	3	3	127	12E07	12.6	0	40	5121	34411	1	3		8
12AX4	12.6	0	78	11113	12111	4	1	35	12E07	12.6	7	94	51216	11111	4	1	3458	3
12AX7/5751/6681	12.6	7	93	45121	45161	2	4	2378	12E26	12.6	7	100	51213	31111	1	3	127	5
12AY7/6072	12.6	16	98	35121	35161	3	3	2378	12F5	12.6	7	94	12131	11115	4	4	8C	4
12AZ7*	12.6	7	20	45121	45161	4	3	2378	12F8	12.6	11	89	63321	61511	1	4	12789	3
12B4	12.6	7	77	15621	16131	4	1	12	12F8	12.6	7	100	61121	61111	2	6		16
12BA6/HF93	12.6	40	90	51214	31111	3	2	127	12FK6	12.6	7	70	51216	63111	1	4	1256	7
12BA7	12.6	7	80	45121	15141	2	3	2367	12FK6	12.6	0	45	51216	33111	1	4		6
12BA7	12.6	7	98	45121	15141	2	2		12FK6	12.6	0	30	51213	63111	1	4		5
12BD6	12.6	22	20	51214	31111	3	3	127	12FM6	12.6	7	85	51216	63111	3	2	1256	7
12BE6/HK90	12.6	7	75	51214	31111	4	3	1257	12FM6	12.6	7	5	51216	63111	4	6		56
12BE6/HK90	12.6	7	25	51214	31111	4	3		12F08	12.6	7	58	45421	45411	4	4	1236789	136
12BF6	12.6	7	0	51216	64111	4	3	1256	12F8	12.6	7	90	51521	33331	1	3	136789	7
12BF6	12.6	7	25	51216	64111	4	6	56	12FR8	12.6	7	55	51521	33331	1	4		8
12BH7	12.6	7	96	35121	35161	4	2	2378	12FR8	12.6	7	65	51521	33331	1	4		9
12BK5	12.6	44	30	41521	16511	4	2	1268	12FR8	12.6	7	75	35321	51351	1	4	1236789	3
12BK6	12.6	7	90	51216	63111	4	4	1256	12FX8	12.6	7	60	35321	51351	1	4		8
12BK6	12.6	7	20	51216	63111	4	6	56	12G4	12.6	30	20	31216	51111	3	3		1
12BL6	12.6	7	60	51213	31111	1	4	1267	12G8	12.6	7	54	31321	31561	1	2	6Z	6
12BM6	12.6	7	59	15213	13111	4	4	126	12G8	12.6	7	54	31521	31561	1	4	2378	1
12BQ6/12CU6	12.6	7	78	12135	11114	4	1	458C	12GA6	12.6	7	85	51214	31111	1	4	1267	5
12BR7*	12.6	7	0	45121	55161	4	3	23678	12GC6	12.6	7	65	12135	11614	3	1	345C	C
12BR7*	12.6	0	60	45121	44161	1	2	67	12GW6	12.6	7	70	12135	11114	3	1	458C	C
12BT6	12.6	7	80	51216	63111	4	4	1256	12H4	12.6	52	16	36126	51111	3	3	6Z	1
12BT6	12.6	7	20	51216	63111	4	6	56	12H6	12.6	0	77	12313	11111	1	3	3458	35
12BU6	12.6	7	0	51216	64111	4	3	1256	12J5	12.6	36	15	12315	11111	3	3	58	3
12BU6	12.6	7	25	51216	64111	4	6	56	12J7	12.6	16	40	12431	11115	2	4	58C	3
12BV7	12.6	28	52	15121	64361	3	2	123	12J8	12.6	15	98	51321	31331	1	2	123789	6
12BW4	12.6	0	84	41121	14111	3	1	179	12J8	12.6	0	58	51321	31331	1	3		89
12BY7*	12.6	15	55	15121	64361	4	2	123	12K5	12.6	98	27	13216	53111	1	3	1267	7
12BZ7	12.6	25	5	35121	35161	2	4	2378	12K7	12.6	28	30	12431	11115	3	3	348C	3
12C5/12CU5	12.6	7	98	15216	33111	4	1	1267	12K8	12.6	7	81	12435	31111	4	3	468	3
12C8	12.6	26	22	12466	31115	4	6	34568C	12K8	12.6	7	64	12435	31111	4	3		6
12C8	12.6	7	25	12466	31115	4	6	45	12L6	12.6	7	94	12435	11111	4	1	3458	3
12CA5	12.6	19	6	16215	33111	4	2	1567	12L8	12.6	7	39	51543	21411	4	3	123458	48
12CN6	12.6	25	52	31521	61131	4	2	1379	12Q7	12.6	7	85	12466	11115	2	4	3458C	3
12CN5*	12.6	7	75	15216	33111	1	3	126	12Q7	12.6	7	25	12466	11115	4	6		45
12CR6	12.6	15	0	16214	35111	4	3	12567	12R5	12.6	7	70	15216	34111	2	2	1267	7
12CR6	12.6	0	22	16214	35111	4	6	2	12R5	12.6	7	20	61661	32115	4	5	123456C	6
12C36	12.6	7	70	51214	31111	2	4	1257	12R8	12.6	7	20	61661	32115	4	6		134
12C36	12.6	7	70	11214	35111	2	4	5	12SA7	12.6	7	78	12435	11111	4	3	1568	3
12C78	12.6	7	80	45121	43511	2	3	123689	12SA7	12.6	7	42	12435	11111	4	3		4
12C78	12.6	7	75	45121	43511	2	3	1	12SC7	12.6	7	50	14554	12111	4	4	346	25
12CU5/12C5	12.6	7	98	15216	33111	4	1	1267	12SF5	12.6	7	93	11513	12111	4	4	23	5
12CU6/12BQ6	12.6	7	82	12135	11114	4	1	458C	12SF7	12.6	61	93	15136	42111	3	2	23456	6
12CX6	12.6	7	84	51213	31111	1	3	1267	12SF7	12.6	7	20	15136	42111	4	6		5
12D4	12.6	0	70	66164	62111	2	1	3	12SG7	12.6	31	17	12156	31411	3	3	3468	8
12D85	12.6	7	100	31521	6664	3	1	12368	12SH7	12.6	50	97	12156	31411	3	2	3468	8
12DE8	12.6	7	78	51321	31311	1	4	1236789	12SJ7	12.6	17	0	12151	31411	2	4	345	8
12DE8	12.6	0	94	51321	31311	1	2	3	12SK7	12.6	25	13	12151	31411	3	3	1456	8
12DF5*	12.6	0	27	41121	41161	2	2	38	12SL7/836	12.6	7	28	54154	12111	4	4	1346	25
12DF7*	12.6	11	93	45121	45161	2	4	2378	12SN7/836	12.6	52	16	53153	12111	3	3	1346	25
12DK7	12.6	7	7	51321	33631	1	3	123679	12S07	12.6	23	37	65133	42111	4	3	2345	6
12DK7	12.6	7	17	51321	33631	1	4	6	12SQ7	12.6	0	65	65133	42111	1	4		45
12DK7	12.6	7	35	51321	33631	1	4	9	12SR7	12.6	7	98	15166	42111	4	2	2345	6
12DL8	12.6	7	45	31321	35131	1	2	2378	12SR7	12.6	7	25	15166	42111	4	6		45
12DL8	12.6	7	95	31321	35131	1	3	19	12SV6	12.6	21	98	12445	11111	4	1	3458	3
12DN4	12.6	0	95	16114	12111	1	1	3	12SV7	12.6	21	98	12445	11111	4	1	3458	3
12DN7	12.6	10	95	45121	45161	2	4	2378	12SW7	12.6	7	0	15166	42111	4	3	2345	6
12DQ6	12.6	7	77	12135	11114	4	1	458C	12SW7	12.6	7	30	15166	42111	4	6		45
12DQ7*	12.6	7	72	15121	64361	4	2	123	12SX7	12.6	52	20	53153	12111	3	3	1346	25
12D57	12.6	7	95	36521	33131	1	4	136789	12SY7	12.6	7	72	12431	11111	4	3	1568	3
12D37	12.6	0	75	36521	33131	1	4	19	12SY7	12.6	7	35	12431	11111	4	3		4
12DT5	12.6	7	55	31521	6164	3	2	1379	12U7*	12.6	14	100	35121	35161	1	4	2378	16
12D78	12.6	25	90	45121	45111	4	2	381267	12V6	12.6	21	98	12445	11111	4	1	3458	3
12DU7	12.6	0	51321	33631	1	1	123679	12W6	12.6	7	90	12335	11111	4	1	3458	3	
12DU7*	12.6	0	51321	33631	1	1	79	12X4	12.6	0	86	51211	31111	4	1	16Z	1	
12DV7*	12.6	7	30	13321	35161	1	5	178	12X4	12.6	0	86	31211	11111	4	1		1
12DV7*	12.6	0	85	13321	35161	1	4	23	12Z3	12.6	0	15	23111	11111	2	2	23	2
12DV8	12.6	7	85	11321	35111	1	2	123679	13DE7	12.6	0	63	45621	45111	3	2	2789	1
12DV8	12.6	0	95	31121	11111	1	3	1	13DE7	12.6	7	100	45621	45111				

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
14F7	12.6	7	30	21455	4	4	234567	36	25DN6	25	71	62	12116	11314	4	1	358C	C
14F8	12.6	7	50	52411	4	3	134568	36	25DQ6	25	7	70	12135	11121	4	1	458C	C
14GT8/7724	12.6	0	0	14121	4	1	23	2	25E5/PL36	25	7	15	62635	11114	2	2	458	C
14GT8/7724	12.6	0	0	11121	4	1	16	9	25EC6	25	7	0	12115	11314	2	2	358	C
14H7	12.6	7	20	11121	1	2	789	6	25EH5	25	15	0	16215	33111	4	2	1567	7
14J7	12.6	30	14	24316	5	1	2367	2	25F5	25	7	26	15216	33111	4	2	1267	7
14J7	12.6	49	100	24353	5	1	461	2	25L6/KT32	25	7	94	12435	11111	4	1	3458	3
14J8	12.6	40	100	24353	5	1		3	25N6	25	7	5	12445	11111	4	2	458	3
14J8	12.6	0	5	16121	6	1	1236	26	25S/185	2.0	7	10	23665	11111	2	5	234	2
14J8	12.6	80	85	11121	1	5	189	9	25S/185	2.0	7	10	23665	11111	4	6		34
14N7	12.6	35	24	21355	3	3	234567	36	25W4	25	0	70	11113	12111	4	1	35	5
14Q7	12.6	30	100	24351	1	1	4567	2	25W6	25	7	99	12335	11111	4	1	3458	3
14Q7	12.6	11	100	24351	1	1		3	25X6	25	0	75	12513	11111	4	1	3458	3
14R7	12.6	17	62	24663	5	1	234567	2	25X6	25	0	75	12311	11111	4	1		3
14R7	12.6	7	25	24663	5	1		34	25Y5	25	0	85	25113	11111	4	1	2345	5
14S7	12.6	60	30	24353	5	1	23467	2	25Y5	25	0	85	23111	11111	4	1		2
14S7	12.6	60	76	24353	5	1		3	25Z5	25	0	71	25113	11111	4	1	2345	5
14W7	12.6	30	10	24311	5	1	2346	2	25Z5	25	0	71	23111	11111	4	1		2
14X7	12.6	20	60	24516	6	1	23456	2	25Z6	25	0	71	12113	11111	4	1	53	5
14X7	12.6	0	0	24516	6	1		56	25Z6	25	0	71	12311	11111	4	1		3
14Y4	12.6	0	84	21511	3	1	367	6	26	1.4	7	50	23511	11111	4	3	23	2
14Y4	12.6	35	84	21511	3	1		3	26A6	25	7	28	51214	31111	3	3	127	5
15	2.0	25	55	24311	1	1	234C	C	26A7	25	7	78	15143	21411	1	2	123458	48
15A8	12.6	7	40	12553	1	3	13456	C	26BK6	25	7	90	51216	63111	4	4	1256	7
15A8	12.6	7	80	12553	1	3		8	26BK6	25	7	20	51216	63111	4	6		56
15E6	12.6	7	5	51214	3	1	127	5	26C6	25	7	96	51216	64111	4	2	12567	7
17AVS5GA	12.6	7	30	52113	1	2	1358	5	26C6	25	7	25	51216	64111	4	6		56
17AX4	19	0	78	11113	1	2	35	5	26D6	25	7	84	11214	31111	4	3	256	7
17B06	19	56	0	12135	1	2	845C	C	26D6	25	7	44	1214	31111	4	3		6
17C5	12.6	7	100	15216	3	1	1267	7	26E6	25	25	76	12435	11111	4	1	3458	3
17CA5	12.6	19	0	16215	3	1	1567	7	26Z5	25	0	25	11121	31161	2	2	16	6
17D4	12.6	0	70	66164	6	2	3	5	26Z5	25	0	25	31121	11161	2	2		1
17DE4	19	0	73	16114	1	2	35	5	27	2.5	7	66	23511	11111	4	3	234	2
17DQ6	19	0	70	12135	1	1	458C	C	30	2.0	7	77	23511	11111	4	3	23	2
17E8/HCC85	12.6	7	20	45121	4	1	2378	16	30A5/HL94	25	7	54	15216	34111	2	2	1267	7
17G6	19	0	70	12135	1	1	13	3	31	2.0	7	58	23511	11111	4	2	23	2
17H3	19	0	70	11421	1	1	13	3	32	2.0	7	58	23511	11111	4	2	23	2
17HC8	12.6	7	50	51521	4	2	12378	6	32ET5	35	7	0	15216	44111	2	2	23C	2
17HC8	12.6	15	85	51521	4	3		9	33	2.0	73	65	15216	44111	2	2	1256	7
17L6	12.6	7	80	12445	6	1	3458	3	34	8.0	24	0	24311	11115	2	4	234	2
17W6	12.6	7	25	12335	1	2	3458	3	34GD5	35	15	80	15216	34111	2	2	23C	2
18	12.6	7	5	24421	1	1	234	2	35/51	25	28	51	24311	11115	2	3	234C	2
18A5	19	7	55	52113	1	3	1358	5	35A5	35	7	80	24311	51111	2	2	2367	2
18DZ8	19	7	20	51521	4	2	278	6	35B5	35	80	38	51213	36111	2	2	1256	5
18DZ8	19	7	50	51521	4	2		6	35C5	35	7	22	15216	33111	4	2	1267	7
18F6	19	20	70	56214	3	1	1567	5	35DZ8	35	75	100	51521	43141	2	1	12378	6
18FX6	19	7	25	51214	3	1	1257	5	35DZ8	35	45	100	51521	43141	2	3		9
18FX6	19	7	95	51214	3	1		6	35EH5	35	7	35	16215	33111	4	2	1567	7
18FY6	19	20	25	51216	6	3	1256	7	35GL6	35	7	60	15213	64111	2	2	125	7
18FY6	19	0	100	51216	6	3		56	35H88	35	15	75	51421	34151	2	2	1236789	7
19	2.0	50	71	23535	1	1		25	35H88	35	15	75	51421	34151	2	2		3
19A04	19	0	10	11113	1	2	2345	5	35L6	35	7	10	12335	11111	4	2	3458	3
19B66	19	85	82	12115	1	3	35	5	35W4/HY90	35	0	70	11213	61111	4	1	57	2
19C8	19	7	40	66121	6	5	123678	9	35Y4	35	0	71	23111	11111	4	1	27	2
19C8	19	7	0	66121	6	5		126	35Z3	35	0	71	23111	11111	4	1	27	2
19CL8	19	15	95	53121	3	3	12789	2	35Z4	35	0	71	12113	11111	4	1	58	5
19CL8	19	15	80	53121	3	3		6	35Z5	35	0	71	12613	11111	4	1	58	5
19EA8	19	7	85	45321	4	1	1236789	1	35Z6	35	0	72	12513	11111	4	1	3458	5
19EA8	19	7	90	45321	4	1		6	35Z6	35	0	72	12311	11111	4	1		3
19EZ8	19	10	30	15412	4	5	1236789	368	36	6.3	7	91	24311	11115	4	3	234C	2
19HV8	19	35	70	54121	4	3	123678	2	36AM3	35	0	70	11214	61111	2	1	57	5
19HV8	19	70	80	54121	4	3		6	37	6.3	26	39	23511	11111	3	3	234	2
19J6	19	15	35	33215	3	2		6	38	6.3	7	67	24411	11115	4	2	234C	2
19T8	19	7	84	66121	6	5	567	12	39/44	6.3	21	64	24311	11115	3	3	234C	2
19T8	19	0	0	66121	6	5	123678	9	41	6.3	80	65	24351	11111	4	2	2345	2
19V8	19	7	81	46121	5	6	236789	1	42	6.3	30	65	24351	11111	4	2	2345	2
19V8	19	7	0	46121	5	6		1	43	25	20	30	23351	11111	3	2	2345	2
19X8	19	25	52	15321	5	3	1267	9	44/39	6.3	21	64	24311	11115	3	3	234C	2
19X8	19	25	18	15321	5	3		3	45	2.5	7	44	23511	11111	4	2	23	2
20	3.8	46	56	23511	1	1		2	45Z3	50	0	78	23111	61111	4	1	24	2
20E07	19	7	60	15121	3	3	23	2	45Z5	50	0	70	12613	11111	4	1	56	5
20E07	19	0	30	15121	3	3	1236	7	46	2.5	7	60	23531	11111	4	2	234	2
21A6/PL81	19	61	93	65121	6	6		8	47	2.5	7	54	23541	11111	4	2		

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
52	6.3	7	51	24531	11111	4	2	234	5692/69N7	6.3	52	16	53153	12111	3	3	1346	25
53	2.5	16	10	24515	41111	2	4	23456	5693/69J7	6.3	17	0	12151	31411	2	4	345	8
55	2.5	25	30	23661	11115	3	3	23456	5718	6.3	10	95	56261	16411	2	2	158	8
55	2.5	7	25	23661	11115	4	6		5725/6A36	6.3	22	67	51213	35111	3	3	1257	5
56	2.5	7	74	23511	11111	4	3	234	5726/6A15/6663	6.3	0	48	13211	13111	1	3	1257	57
57	25	15	45	24311	11115	2	4	235C	5727/2D21/EN91	6.3	0	58	61213	43111	2	1	1256	6
58	2.5	34	25	24311	11115	3	3	235C	5749/6BA6/6660	6.3	40	90	51214	31111	3	2	127	5
59	2.5	50	35	24351	11111	4	2	235C	5750/6BE6/EK90	6.3	7	75	51214	31111	4	3	1257	5
60FX5	50	30	50	15216	34111	2	2	126	5750/6BE6/EK90	6.3	7	25	51214	31111	4	3		6
70L7	70	7	97	12335	11511	4	1	13468	5761/12AX7/6681	12.6	7	93	45121	45161	2	4	2378	16
70L7	70	0	70	12135	61311	4	1		5763	6.3	70	92	41121	31561	4	1	378	1
71A	5.0	7	38	23511	11111	4	2	23	5814/12AU7	12.6	45	20	45121	45161	2	3	2378	16
75	6.3	7	0	23661	11115	4	5	2345C	5823	70	0	70	46266	66111	3	1		1
75	6.3	7	25	23661	11116	4	6		5824	25	7	35	62435	11111	2	2	3458	3
76	6.3	7	77	23511	11111	4	3	234	5840	6.3	7	85	51264	13611	2	3	1257	5
77	6.3	7	98	24311	11115	4	3	235C	5844	6.3	7	30	44215	51111	2	3	1256Z	12
78	6.3	60	13	24311	11115	3	3	235C	5879	6.3	7	95	51121	13411	3	3	137	8
79	6.3	46	66	24514	11115	3	3	2345C	5881/6L6G	6.3	25	76	12445	11111	4	1	3458	3
79	6.3	46	66	24514	11115	3	3		5902	6.3	7	80	51264	13611	2	2	1257	5
80	5.0	0	85	21411	11111	2	1	23	5915/6BY6/7036	6.3	7	56	51214	35111	3	3	1257	5
80	5.0	0	85	24111	11111	2	1		5915/6BY6/7036	6.3	7	95	51214	35111	3	2		6
81	7.5	0	72	24111	11111	4	1	2	5963	12.6	15	20	45121	45161	2	3	123678	16
82	2.5	0	76	23111	11111	4	1	23	5965/12AV7	12.6	20	80	35121	35161	4	2	2378	16
82	2.5	0	76	23111	11111	4	1		6012	6.3	7	7	12514	11311	4	1	1358	5
83	5.0	0	60	21311	11111	4	1	23	6021	6.3	7	60	45211	15411	2	3	124578	1
83	5.0	0	60	23111	11111	4	1		6021	6.3	7	70	45211	15411	2	3		8
83V	5.0	0	80	21311	11111	4	1	234	6028/408A	19	7	95	51214	36111	2	3	1256	5
83V	5.0	0	80	23111	11111	4	1		6073/OA2/150C2	117	0	10	121616	66111	1	3		1
84/6Z4	6.3	0	83	25311	11111	4	1	234	6074/OB2/108C1	0	0	67	41666	68111	2	3		1
84/6Z4	6.3	0	83	23111	11111	4	1		6111	6.3	85	60	45211	15411	2	2	124578	18
85	6.3	35	34	23661	11116	3	3	2345C	6112	6.3	7	53	45216	16611	2	4		1
85	6.3	7	25	23661	11115	4	6		6112	6.3	7	45	66261	15411	2	4	57	8
85A2/063	25	0	50	42666	66111	1	3	13	6134/6AC7	6.3	13	87	12151	31411	4	2	345	8
89	6.3	7	85	24311	11115	4	2	235C	6136/6AU6/EF94	6.3	50	5	51213	31111	3	3	127	5
108C1/OB2/6074	0	0	67	41666	66111	2	3	1	6146	6.3	7	80	12365	61114	4	1	135C	C
117L7/117M7	117	30	0	12353	11111	3	2	34568	6159	25	7	90	12365	61114	4	1	135C	C
117L7/117M7	117	0	60	12111	31111	4	1		6186/6A65	6.3	16	43	51214	36111	3	3	1256	5
117M7/117L7	117	30	0	12353	11111	3	2	34568	6188/6SU7	6.3	7	38	54154	12111	4	4	1346	25
117M7/117L7	117	0	60	12111	31111	4	1		6189/12AU7*	12.6	40	18	45121	45161	2	3	2378	16
117P7	117	50	98	12353	11111	3	1	456	6205	6.3	25	50	51214	13611	2	3	1257	5
117Z3	117	0	74	61213	11111	4	1	58	6211	12.6	7	35	45121	45161	1	3	123678	16
117Z4	117	0	75	12113	11111	4	1	58	6267/EF86	6.3	7	95	31121	41151	4	3	389	6
117Z6	117	0	71	12414	11111	4	1	3458	6350	12.6	7	92	41521	41561	2	2	23678	16
150C2/OA2/6073	117	0	10	21616	66111	1	3	1	6360	12.6	7	67	51521	43461	3	2	1237	68
150C3/OB3/VR150	70	0	73	12113	11111	4	2	5	6386	6.3	7	90	21531	35111	2	3	2378	46
182B/482B	5.0	7	55	23511	11111	4	2	23	6550	6.3	15	90	12435	11111	4	1	3458	3
183B/483	5.0	7	23	23511	11111	4	2	23	6628/OA2/150C2	117	0	10	21616	68111	1	3		1
407A	35	40	95	21546	45111	2	2	234678	6627/OB2/108C2	0	0	67	41666	66111	2	3		1
407A	35	50	95	21546	45111	2	2		6669/6AQ5/6005	6.3	67	97	51214	36111	4	1	1256	5
408A/6028	19	7	95	51214	36111	2	3	1256	6676/6C86	6.3	35	90	51214	31111	3	2	127	5
482B/182B	5.0	7	55	23511	11111	4	2	23	6677/6CL6	6.3	63	38	15321	41661	3	2	127	6
483/183B	5.0	7	23	23511	11111	4	2	23	6678/6UB/ECF82	6.3	71	5	35321	41151	3	3	236789	6
484/485	2.8	17	61	24511	11111	2	3	34	6678/6UB/ECF82	6.3	71	88	35321	41151	3	2		1
485/484	2.8	17	61	24511	11111	2	3	34	6679/12AT7	12.6	20	60	35121	35161	3	3	2378	16
502AX	6.3	0	70	12312	11111	4	1	358	6680/12AU7*	12.6	40	18	45121	45161	2	3	2378	16
502AX	6.3	0	70	12311	11111	4	1		6681/12AX7/5751	12.6	7	93	45121	45161	2	4	2378	16
802	6.3	25	41	26451	11114	3	2	456	6792	6.3	4	95	12365	31314	4	4	1368	C
807/5933/QE06140	6.3	15	91	24511	11114	4	1	234C	6814	6.3	30	75	51211	11411	2	2	158	8
816	2.5	0	66	21111	11113	4	1	C	6887	6.3	0	60	14211	14111	1	2	1657	27
864	1.25	7	90	23511	11111	4	3	3	6919	6.3	0	60	13211	13111	2	2	2257	27
866/866A	2.5	0	70	21111	11113	4	1	C	6922/E88CC	6.3	13	60	45121	45161	2	2	2378	16
884/605	6.3	0	25	12412	11111	1	2	58	6973	6.3	7	72	31521	61641	4	2	1379	9
884/605	6.3	0	25	12411	11111	1	2		7025/12AX7/ECC83	12.6	7	93	45121	45161	2	4	2378	16
950	2.0	50	42	24531	11111	2	3	23	7027	6.3	7	42	32465	61111	4	2	158	3
955	6.3	21	54	21951	11111	3	3	35	7036/6BY6/5915	6.3	7	56	51214	35111	3	3	1257	5
957	1.25	7	34	21311	11511	4	4	3	7036/6BY6/5915	6.3	7	95	51214	35111	3	2		6
958	1.25	7	5	21351	16111	2	4	3	7044	12.6	7	75	45121	15641	2	2	123679	1
1203A/7C4	6.3	0	75	21131	11111	1	3	47	7044	12.6	7	70	45121	15641	2	2		9
1229	2.0	7	42	24311	11115	2	4	2C	7054	12.6	15	55	15121	64361	4	2	123	7
1247	-625	7	18	11121	11116	4	6		7055	12.6	0	48	13211	13111	1	3	1257	27
1267/OA4/PL1267	Z	0	50	13114	13111	4	2	7	7056	12.6	13	13	51214	31111	3	3	127	5
1267/OA4/PL1267	Z	0	50	12114	13111	4	2		7057	12.6	10	43	35121	35111	4	3	123678	1
1273	6.3	7	50	24316	51111	2	4	467	7057	12.6	7	50	35121	35111	4	3		6
1280	12.6	7	50	24316	51111	2	4	467	7058	12.6	7	93	45121	45161	2	4	2378	16
1291/3B7*	2.8	45	34	23561	59111	3	3	36	7059	12.6	35	100	15321	41111	3	2	123679	6
1293	1.4	20	61	23111	51111	3	3	6	7059	12.6	10	15	41121	11151	2	3		1
1602	1.5	7	0	23511	11111	4	3	3	7060	12.6	7	5	45121	43511	3	3	1236789	1
1603	6.3	16	41	24311	11115	2	4	456	7060	12.6	25	0	45121	43511	2	3		6
1609	1.25	7	59	24531	11111	2	4	23	7061	12.								

TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID	PLATE	LEVERS	V	S	LEAK	MERIT	
7699	12.6	20	67	51521	43461	3	2	1237	68	ECF82/6U8	6.3	71	88	35321	41151	3	2	
7701	12.6	20	88	15621	43661	3	2	1267	6	ECH81/6AJ8	6.3	45	42	35121	43111	2	3	126789
7716	12.6	7	80	15421	15341	3	2	12678	9	ECH81/6AJ8	6.3	7	10	35121	43451	1	4	8
7716	12.6	7	50	15421	15341	2	4		3	ECH83/6DS8	6.3	7	98	35121	35351	1	4	1236789
7724/14GT8	12.6	0	0	14211	11111	1	2	23	2	ECH83/6DS8	6.3	7	95	35121	35121	1	4	8
7724/14GT8	12.6	0	0	11121	41111	1	2	16	6	ECL80/6AB8	6.3	7	85	45121	41351	2	3	23789
7724/14GT8	12.6	7	20	11121	11541	4	4	789	9	ECL80/6AB8	6.3	7	72	45121	41351	2	3	6
8016/1B3	1.25	0	85	62616	11613	2	4	C	C	ECL82/6BM8	6.3	7	0	51521	43141	3	2	126789
9001	6.3	7	40	51213	36111	3	4	16	5	ECL82/6BM8	6.3	7	96	51521	43141	3	3	9
9002	6.3	7	66	66213	51111	3	3	567	5	EF39	6.3	7	70	12431	11115	4	3	134568
9003	6.3	7	65	56214	31111			567	5	EF80/6BX6	6.3	7	88	15621	14311	2	3	12789
9006	6.3	0	55	41216	16111	1	2	12	1	EF85/6BY7	6.3	10	90	15621	14311	4	2	12689
B36/12SM7	12.6	52	16	53153	12111	3	3	1346	25	EF86/Z729	6.3	7	95	31121	41151	4	3	389
B65/63N7	6.3	52	16	53153	12111	3	3	1346	25	EF86/Z729	6.3	7	15	15121	14311	3	3	7
B152/ECC81	12.6	20	60	35121	35161	3	3	2378	16	EF93/6BA6/PM04	6.3	40	90	51214	31111	3	2	12567
B309/ECC81	12.6	20	60	35121	35161	3	3	2378	16	EF93/6BA6/PM04	6.3	50	5	51213	31111	3	3	127
CK510AX	-625	7		25313	15111	2	5	5	5	EF95/6AK5/5654	6.3	15	60	51213	36111	2	3	1256
CK510AX	-625	7		25313	15111	2	5	5	5	EF95/6AK5/5654	6.3	50	50	11121	14351	3	3	3789
CK512AX	-625	7	100	33251	11111	2	5	12	1	EF804	6.3	95	77	41521	45111	2	2	7
CK526AX	1.25	40	90	43251	11111	2	3	124	1	EH90/6CS7	6.3	90	20	41521	45111	2	2	1
CK533AX	1.25	7	70	33251	11111	1	5	124	1	EH90/6CS7	6.3	7	75	51214	31111	4	3	1257
CK5676AX	1.25	7	48	42511	11111	2	3	13	1	EK90/6BE6	6.3	7	25	51214	31111	4	3	6
CK5744	6.3	40	55	42151	11111	2	3	145	1	EK90/6BE6	6.3	7	25	51214	31111	4	3	3
CK5875	1.25	10	25	43152	11111	2	4	124	1	EL34/6CA7	6.3	15	95	12435	61111	4	1	158
CK5886	1.25	7	20	43211	15111	2	5	127	1	EL36/6CM6	6.3	7	15	62635	11114	2	2	458
CK6029	1.25	40	65	41521	11111	1	3	13	1	EL37/5881/6L6	6.3	79	65	62435	11114	4	1	358
D63/6H6	6.3	0	77	12313	13111	1	3	3458	35	EL38/6CN6	6.3	7	80	12145	11114	4	1	1458
D77/DD6/6AL5	6.3	0	60	13211	13111	1	3	1257	2	EL81/6CJ6	6.3	12	3	65121	66314	2	2	239
D77/DD6/6AL5	6.3	0	48	13211	13111	1	3	1257	2	EL84/6B05	6.3	35	95	65121	64631	3	2	2379
D152/6AL5/D77	6.3	0	60	13211	13111	1	3	1257	2	EL86/6CW5	6.3	67	97	51214	36111	4	1	1256
D152/6AL5/D77	6.3	0	48	13211	13111	1	3	1257	2	EL90/6A05/N727	6.3	7	92	51214	36111	3	2	126
DA90/1A3/10D13	1.4	7	21	26116	61111	4	6	23	2	EL95/6DL5	6.3	7	92	51214	36111	4	3	456
DAF91/1S5/ZD17	1.4	20	65	11633	52111	2	4	3456	3	EM35	6.3	0	80	62194	11111	4	3	3
DAF91/1S5/ZD17	1.4	7	29	11633	52111	2	4	3456	3	EM35	6.3	0	80	62194	11111	4	3	179
DAF92/1U5	1.4	25	50	13361	52111	2	4	2346	4	EM80/6BR5	6.3	0	54	11621	64641	3	3	7
DAF92/1U5	1.4	7	10	13361	52111	1	5	3456	5	EM80/6BR5	6.3	0	54	11621	61641	3	3	9
DAF96/1AH5	1.4	27	97	16334	52111	1	4	5	2	EM81/6DA5	6.3	7	25	51621	64641	4	5	1279
DAF96/1AH5	1.4	0	65	16334	52111	1	4	5	2	EM81/6DA5	6.3	7	75	51621	61641	4	5	9
DC90	1.4	37	97	14615	62111	1	3	5	2	EM84/6F86	6.3	7	75	56121	44641	4	4	13679
DCC90/3A5*	2.8	15	84	23565	31111	2	3	35	6	EM84/6F86	6.3	0	58	61213	43111	2	1	1256
DCC90/3A5*	2.8	15	63	23565	11111	2	3	35	6	EN91/2D21	6.3	65	92	33121	45631	1	4	136
DD6/6AL5/D77	6.3	0	60	13211	13111	1	3	1257	7	EQ80/6BE7	6.3	0	6	66621	66641	1	2	90
DD6/6AL5/D77	6.3	0	48	13211	13111	1	3	1257	7	EY81/6R3	6.3	0	27	66121	66641	4	1	1236789
DF62/1AD4	1.25	7	5	33152	11111	2	4	24	7	EY82/6N3	6.3	0	79	51121	13111	4	1	137
DF91/1T4/W17	1.4	7	85	13311	52111	4	3	236	2	EZ80/6V4	6.3	0	79	31121	11111	4	1	167
DF92/1L4/IF2	1.4	7	92	13311	52111	4	3	236	2	EZ81/6CA4	6.3	0	60	46121	64661	1	1	6
DF96	1.4	50	95	14366	52111	1	4	36	2	EZ90/6X4/U78	6.3	0	86	31211	11111	4	1	46
DF97	1.4	7	75	14311	52111	2	4	346	3	EZ90/6X4/U78	6.3	0	86	31211	11111	4	1	6
DH63/607/6T7	6.3	0	85	62466	11115	1	4	3456	3	GZ30/5Z4	5.0	0	76	12111	11111	4	1	46
DH63/607/6T7	6.3	0	25	62636	11115	1	4	3456	3	GZ30/5Z4	5.0	0	76	12131	11111	4	1	46
DH63/607/6T7	6.3	0	78	62663	11115	1	4	3456	3	GZ32/5V4	5.0	0	76	12111	11111	4	1	46
DH77/6AT6	6.3	7	25	51216	63111	4	6	1256	7	GZ32/5V4	5.0	0	76	12131	11111	4	1	46
DH77/6AT6	6.3	7	25	51216	63111	4	6	1256	7	GZ33	5.0	0	66	12111	11111	2	1	46
DK91/1R5/X17	1.4	7	70	13316	12111	2	4	234	2	GZ33	5.0	0	66	12141	11111	2	1	46
DK91/1R5/X17	1.4	7	24	13316	12111	2	4	234	2	GZ34/5AR4	5.0	0	30	12111	11111	4	1	46
DK96/1AB6	1.4	40	20	14353	52111	1	5	23456	2	GZ34/5AR4	5.0	0	30	12141	11111	4	1	80
DL35/N14/1C5	1.4	29	41	12335	11111	2	3	234	2	H63/6F5	6.3	7	94	12131	11115	4	4	1256
DL92/3S4/N17	2.8	7	40	13536	62111	2	3	234	2	HBC90/12AT6	12.6	7	78	51216	63111	4	4	56
DL93/3A4	2.8	70	90	13356	62111	2	2	234	2	HBC90/12AT6	12.6	7	87	51216	63111	4	4	1256
DL94/3V4	2.8	30	34	13316	52111	2	3	236	2	HBC91/12AV6	12.6	7	87	51216	63111	4	4	56
DL95/3Q4	2.8	35	29	13536	62111	2	3	234	2	HBC91/12AV6	12.6	7	25	51216	63111	4	6	2378
DL96	1.4	60	99	14312	51111	1	3	236	2	HCC85/17EW8	12.6	7	20	45121	45111	3	3	35C
DL98/3B4	2.8	80	83	36521	63111	2	3	137	7	HD14/DAC32	1.4	12	98	12316	11115	4	6	5
DM70/1N3	1.4	100	70	56112	11411	2	5	1	8	HD14/DAC32	1.4	7	20	12316	11115	4	6	127
DM70/1N3	1.4	0	70	56112	11411	1	5	1	8	HF93/12BA6	12.6	40	90	51214	31111	3	2	127
DP61/EF95/6AK5	6.3	15	60	51213	36111	2	3	1256	5	HF94/12AU6	12.6	50	5	51214	31111	3	3	1257
DY86/DY87/1S2A	1.4	0	31	12616	16613	2	4	C	C	HK90/12BE6	12.6	7	75	51214	31111	4	3	1267
DY87/1S2/DY86	1.4	0	31	12616	16613	2	4	C	C	HK90/12BE6	12.6	7	75	51214	31111	4	3	1267
E80C7/7																		



INTER-CHANGEABILITY CHART



TUBE	EQUIVALENT
0A2	6073/150C2/6676/6626
0A3	VR-75
0A4	PL1267/1267
0B2	6074/108C1/6627
0B3	VR-90
0C3	VR105
0D3	VR-150/150C3
0G3	5TV85-10/85A2
1A3	DA90/1D13
1AB6	DK96
1AC6	DK92
1AH5	DAF96
1B3-GT	8016
1B4P	951
1B5	25S
1C1	X17/DK91/1R5
1C5	DL35/N14
1D13	DA90/1A3
1F2	1L4/DF92
1F3	DF91/1T4/W17
1FD9	ZD17/DAF91/1S5
1H5	HD14/DAC32
1J3	IK3
1K3	1J3
1L4	DF92/1F2
1P10	DL92/3S4/N17
1P11	DL94/3V4
1R4	1294
1R5	DK91/X17/1C1
1S2-A	DY87/DY86
1S5	DAF91/ZD17/1FD9
1T4	DF91/W17/1F3
1U5	DAF92
1V	KR-1
2A3	5930
2A5	KR-25
2C21	1642
2C22	7196
2C51	5670
2D21	5727/EN91
2S	4S/G-2
2X2-A	879
2Z2	G84/684
3A4	DL93
3A5	DCC90
3B4	DL98
3B7	1291
3D64	Z-2669
3Q4	DL95/N18
3S4	DL92/N17/1P10
3V4	DL94/1P11
4S	2S/G2
5AR4	GZ34
5TV85-10	OG3/85A2
5U4	5931
5V4	GZ32
5Y3	6087/6106
5Z4	GZ30
6A4	LA
6AB4	EC92
6AB5	6N5
6AB7	1853
6AB8	ECL80
6AC7	1852/6134
6AG5	6186
6AJ8	ECH81
6AK5	5654/EF95/DP61/PM05
6AK8	EABC80/6T8
6AL5	5726/6663/EB91/DD6/ D77/D152/EA91
6AM5	EL91
6AM6	EF91
6AQ4	EC91
6AQ5	6669/6005/EL90/N727
6QA8	ECC85
6AR6	6098
6AS6	5725
6AT6	EBC90/DH77

TUBE	EQUIVALENT
6AU6	6136/EF94
6AV6	EBC91
6BA6	5749/6660/EF93/PM04
6BC5	6CE5
6BE6	5750/EK90/HM04
6BE7	EQ80
6BH6	6661/6265
6BJ6	6662
6BL8	ECF80
6BM8	ECL82
6BN5	EL85
6BQ5	EL84/6267/EF86/Z729
6BQ6	6CU6
6BR5	EM80
6BT4	EZ40
6BY4	7077
6BY6	5915/7036
6BY7	EF85
6BX6	EF80
6C4	6135/EC90
6CA4	EZ81
6CA7	EL34
6CE5	6BC5
6CJ5	EF41
6CJ6	EL81
6CK5	EL41
6CL6	6677
6CM5	EL36
6CN6	EL38
6CQ6	EF92
6CS6	EH90
6CT7	EAF42
6CU6	6BQ6
6CU7	ECH42
6CV7	EBC41
6CW5	EL86
6DA5	EM81
6DA6	EF89
6DC8	EBF89
6DJ8	ECC88
6DL5	EL95
6DS8	ECH83
6F5	H63
6FG6	EM84
6G5	6U5
6H6	D63
6J5	L63
6J6	ECC91
6J7	Z63
6L6	5881/5932/EL37
6N3	EY82
6N5	6AB5
6N8	EBF80
6Q4	EC80
6Q5	884
6Q7	DH63/6T7
6R3	EY81
6R4	EC81
6S2	EY86
6SJ7	5693
6SK7	6137
6SL7	5691
6SN7	5692/ECC33/B65/65W7
6SU7	6188
6T7	6Q7/DH63
6T8	6AK8/EABC80
6U5	6G5
6U8	6678/ECF82
6V4	EZ80
6X2	EY51
6X4	6202/EZ90/U78/V2M70
6Z4	84
7AN7	PCC84
7C4	1203A
7E5	1201
7G7	1232
9A8	PCF80
9AK8	PABC80

TUBE	EQUIVALENT
9A08	PCC85
12AC5	UF41
12AJ7	HCH81
12AT6	HBC90
12AT7	6679/6201/ECC81/B152/ B309
12AU6	HF94
12AU7	6680/5814/ECC82/6189
12AV6	HBC91
12AV7	5965/6829
12AX7	5751/6681/ECC83/7025
12AY7	12DT7
12B7	6072
12BA6	14A7
12BE6	HF93
12BQ6	HK90
12C5	12CU6
12CU5	12CU5
12CU6	12C5
12DT7	12BQ6
12DW7	7025/12AX7/5751/6681/ ECC83
12S7	7247
12SN7	UAF42
14A7	B36
14AF7	12B7
1723	XXD
19D8	PY81
21A6	UCH81
25E5	PL81
25L6	PL36
25S	KT32
30A5	1R5
35	HL94
35W4	51
39	HY90
44	44
50C5	39
51	HL92
51	35
51	6Z4
55A2	OG3/5TV85-10
108C1	CB2/6074/6627
113HY	123HY
115HY	145HY
117L7	M7
123HY	113HY
128A	2523
145HY	115HY
150C2	0A2/6073/6676/6626
150C3	0D3/VR150
182B	482B
183B	483
183B	6028
183B	182B
183B	183B
484	RIT
485	RIR
684	2Z2
807	5933/QE06140
866	866A
879	2X2A
884	6Q5
951	1B4P
1201	7E5
1203A	7C4
1232	7G7
2050	2051
2051	2050
2523	128A
5654	6AK5/EF95/DP61 PM05
5670	2C51
5691	6SL7
5692	6SN7/ECC33/B65
5693	6SJ7
5725	6AS6
5726	6AL5/6663/EB91/ EA91

TUBE	EQUIVALENT	TUBE	EQUIVALENT	TUBE	EQUIVALENT
5727	2D21/EN91	D152	6AL5/D77/DD6/EB91/ 6663/5726	EL81	6CJ6
5749	6BA6/6660/EF93/ PM04	DA90	1A3/ID13	EL84	6BQ5/6267/EF86/Z729
5750	6BE6/EK90/HM04	DAC32	HD14/IH5	EL85	6BN5
5751	12AX7/6681/ECC83/ 12DT7/7025	DAF91	1S5/ZD17/IFD9	EL86	6CW5
5814	12AU7/6189/6680/ ECC82	DAF92	1U5	EL90	6AQ5/N727/6669/6005
5881	6L6-G/5932/EL37	DAF96	1AH5	EL91	6AM5
5915	6BY6/7036	DCC90	3A5	EL95	6DL5
5930	2A3	DD6	6AL5/D77/D152/5726/ 6663/EB91/EAA91	EM80	6BR5
5931	5U4	DF62	1AD4	EM81	6DA5
5932	6L6/5881/EL37	DF91	1T4/W17/IF3	EM84	6FG6
5933	807/QE06140	DF92	1L4/IF2	EN91	2D21/5727
5965	12AV7/6829	DF92	6QT/6T7	EQ80	6BE7
6005	6AQ5/6669/EL90/ N727	DH63	6AT6/EBC90	EY51	6X2
6028	408A	DH77	1R5/X17/1C1	EY81	6R3
6072	12AY7	DK91	1AC6	EY82	6N3
6073	OA2/150C2/6676/6626	DK92	1AB6	EY86	6S2
6074	CB2/108C1/6627	DK96	1AB6	EZ35	U147
6087	5Y3/6106	DL35	N14/1C5	EZ40	6BT4
6098	6AR6	DL92	3S4/N17/IP10	EZ80	6V4
6106	5Y3/6087	DL93	3A4	EZ81	6CA4
6134	6AC7/1852	DL94	3V4/1P11	EZ90	6X4/U78/6202/V2M70
6135	6C4/EC90	DL95	3Q4/N18	G2	4S/2S
6136	6AU6/EF94	DL98	3B4	G84	2Z2/684
6137	6SK7	DP61	EF95/6AK5/PM05/ 5654	GZ30	5Z4
6186	6AG5	DY86	DY87/1S2A	GZ32	5V4
6188	6SU7	DY87	1S2/DY86	GZ34	5AR4
6189	12AU7/ECC82/6680/ 5814	E88CC	6922	H63	6F5
6201	12AT7/6679/ECC81/ B152/B309	E180F	6688	HBC90	12AT6
6202	6X4/EZ90/U78/ V2M70	EAA91	6AL5/5726/EB91/ 6663	HBC91	12AV6
6265	6BH6/6661	EABC80	6AK8/6T8	HCH81	12AJ7
6267	EL84/6BQ5	EAF42	6CT7	HD14	DAC32/IH5
6281	CK574	EB91	6AL5/DD6/D77/D152/ 5727/6663/EAA91	HF93	12BA6
6626	OA2/150C2/6073/ 6676	EBC41	6CV7	HF94	12AU6
6627	CB2/108C2/6074	EBC90	6AT6/DH77	HK90	12BE6
6660	6BA6/5749/EF93/ PM04	EBC91	6AV6	HL92	50C5
6661	6BH6/6265	EBCF80	6N8	HL94	30A5
6662	6BJ6	EC80	6Q4	HMO4	EK90/6BE6/5750
6663	6AL5/5726/EB91/EAA91	EC81	6R4	HY90	35W4
6669	6AQ5/6005/EL90/N727	EC90	6C4/6135	KR-1	1V
6676	OA2/150C2/6073/6626	EC91	6AQ4	KR-25	2A5
6677	6CL6	ED92	6AB4	KT32	25L6
6678	6U8/ECF82	ECC33	65W7/65N7/B65	LA	6A4
6679	12AT7/ECC81/6201/ B152/B309	ECC81	12AT7/B152/B309/ 6679/6201	L63	6J5
6680	12AU7/6189/5814/ECC82	ECC82	12AU7/6680/5814/ 6189	M7	117L7
6681	12AX7/5751/12DT7/7025/ ECC83	ECC83	12AX7/5751/6681/ 12DT7	NI4	DL35/1C5
6688	E180F	ECC85	6AQ8	NI7	DL92/3S4/IP10
6829	5965/12AV7	ECC88	6DJ8	NI8	3Q4/DL95
6922	E88CC	ECC91	6J6	N727	6AQ5/EL90/6669/ 6005
7025	12AX7/12DT7/5751/ 6681/ECC83	ECF80	6BL8	PABC80	9AK8
1267	OA4/PL1267	ECF82	6U8/6678	PCC84	7AN7
1291	3B7	ECH42	6CU7	PCC85	9AQ8
1294	1R4	ECH81	6AJ8	PCF80	9A8
1642	2C21	ECH83	6DS8	PL36	25E5
1852	6AC7/6134	ECL80	6AB8	PL81	21A6
1853	6AB7	ECL83	6BMR	PL1267	OA4/1267
7036	6BY6/5915	EF41	6CJ5	PM04	6BA6/EF93/57491 6660
7077	6BY4	EF80	6BX6	PM05	DP61/EF95/6AK5/ 5654
7196	2C22	EF85	6BY7	PY81	17Z3
7247	12DW7	EF86	Z729/6267/EL84/ 6BQ5	QE06140	5933/807
8016	1B3	EF89	6DA6	U78	6X4/EZ90/6202/V2M70
836	12SN7	EF91	6AM6	U147	EZ35
865	6SN7/ECC33	EF92	6CQ6	UAF42	12S7
8152	ECC81/12AT7/B309/ 6679/6201	EF93	6BA6/PM04/5749/ 6660	UCH81	19D8
B309	ECC81/12AT7/6679/ 6201/B152	EF94	6AU6/6136	UF41	12AC5
CK574	6281	EF95	6AK5/5654/DP61/ PM05	V2M70	6X4/EZ90/6202/U78
D63	6H6	EH90	6CS7	VR-75	OA3
D77	DD6/6AL5/EB91/D152/ 6663/5726	EK90	6BE6/HM04/5750	VR90	OB3
		EL34	6CA7	VR105	OC3
		EL36	6CM5	VR150	OD3/150C3
		EL37	5881/6L6/5932	W17	DF91/IT4/IF3
		EL38	6CN6	X17	DK91/1R5/1C1
		EL41	6CK5	XXD	14AF7
				Z63	6J7
				Z729	EL84/6BQ5/EF86/6267
				Z2669	3DG4
				ZD17	DAF91/1S5/IFD9

MODEL 666 INSTRUCTIONS ADDENDA

When depressing push-buttons underlined on roll chart (cathodes) for cathode-heater leakage testing, note that the reading obtained before pressing down the H-K leakage push-button can normally be infinite, or short, or anything between with no significance whatsoever attaching to the reading. While in very many cases a short or near-short reading will obtain, it is equally normal in other cases for an infinite reading to occur (particularly when checking the cathode of light-duty diodes where the plate levers are set to position 6). The leakage reading when depressing underlined push-buttons is significant only when the H-K leakage button is depressed as well as the underlined push-button from the 1 to 9 & C bank.

I.E. 1094 Electronic Inst. Co., Inc., Brooklyn 11, New York

IMPORTANT FORMAT CHANGE IN 666-05 ROLL CHART

In order to insert additional tubes in our new 666-05 Roll Chart, we are saving space in the following manner:

Whereas previously, twin or triple section tubes having identical chart information, except for merit test, occupied two or three lines on the chart, now these tubes will occupy only one line. However, the merit column will contain two or three numbers instead of the usual single number. Each of these numbers signifies an individual merit test.

EXAMPLE: 12AT7 — twin triode

In the merit column, you will find the entry 16 (one and six).

Press button 1 to read merit of first triode.

Press button 6 to read merit of second triode.

MODEL 666 ADDENDA

Difficulties may be encountered unless the GRID control knob is set on the shaft properly. There is a switch on the GRID control which is actuated at maximum counter-clockwise rotation of the potentiometer element. This point is at 7 on the dial. The arc between 7 and 0 on the dial is allotted to actuation of this switch. That is to say, when turning the knob counter-clockwise you will "hit" the switch at 7 on the dial; turning further counter-clockwise actuates the switch and brings the knob to 0 on the dial. On the roll chart, a GRID control setting of 0 means that the GRID control has been turned counter-clockwise past the point of switch actuation. A setting of 7 means that the GRID control has been turned counter-clockwise up to, but not past, the point of switch actuation. To set the knob properly on the GRID control shaft, turn the shaft counter-clockwise until it is up to, but not past, the point of switch actuation. Then fasten the knob on the shaft tightly so that it points to 7 on the dial.

I.E. 1326 Electronic Instrument Co., Inc., 33-00 Northern Blvd., L.I.C. 1, N.Y.

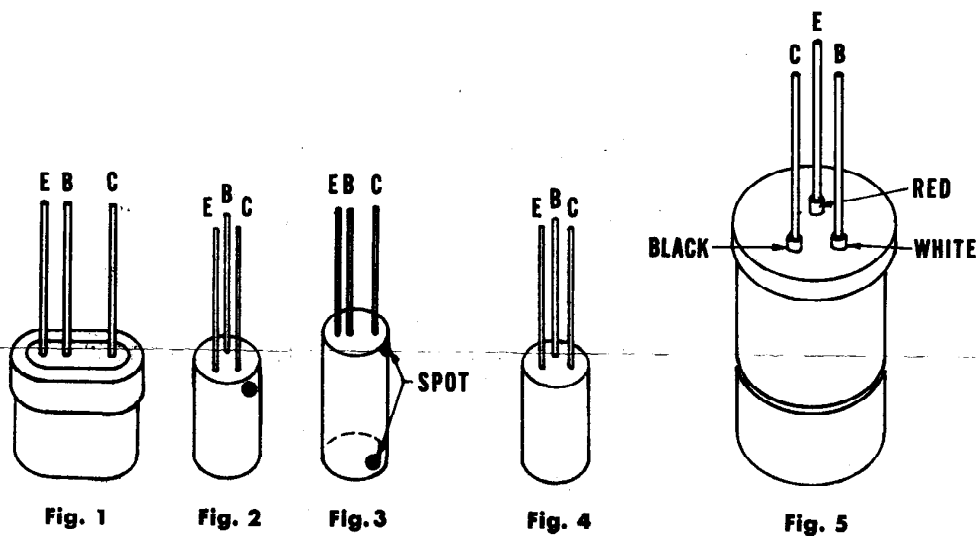
TRANSISTOR TEST DATA SHEET

The figure of merit to be measured is the common emitter current amplification ratio. Various symbols denoting this quantity include β (beta), α_{cb} (alpha cb), h_{21} , and h_{fe} . This quantity (which we will refer to as beta) is related to the common base current amplification ratio (α_{ce}) by the following relationships:

$$\beta = \frac{\alpha_{ce}}{1 - \alpha_{ce}} \quad \alpha_{ce} = \frac{\beta}{1 + \beta}$$

Either quantity may be specified by the manufacturer, depending upon the use for which the transistor is intended. In either case, present manufacturing tolerances are very

broad; a glance at the following tables will illustrate this point. Therefore, even if a transistor falls outside of the indicated range, it may still be useable. This decision is left to the individual. Furthermore, many types have only a nominal value; that is, no information on the allowable deviation has been made public by the manufacturer. In these cases, a reasonable lower limit might be in the order of one-half of the nominal value. Where no data is shown, the information is not available. Where the beta is shown in parentheses, the data was taken on the basis of a small sampling and is not necessarily a nominal value. In all cases, considerable latitude should be given before deciding that a transistor is defective.



* Indicates that the I_{ceo} reading may exceed the normal " I_{ceo} GOOD" range.

NO.	FIG.	TYPE	BETA	NO.	FIG.	TYPE	BETA
2N34	1	PNP	40	2N80	3	PNP	
2N35	1	NPN	40	2N81	1	PNP	20-66
2N36	3	PNP	45	2N82	1	PNP	20-60
2N37	3	PNP	30	2N94	1	NPN	40
2N38	3	PNP	15	2N94A	1	NPN	19
2N38A	3	PNP	18	2N97	1	NPN	6-19
2N41	4	PNP	40	2N97A	1	NPN	57
2N43	1,4	PNP	33-50	2N98	1	NPN	19-100
2N43A	1	PNP	30-65	2N98A	1	NPN	24-100
2N44	1,4	PNP	15-22	2N99	1	NPN	19-100
2N45	1,4	PNP	9-12	2N100	1	NPN	100-140
2N47	2	PNP	40	2N103	1	NPN	1.5-6
2N48	2	PNP	30	2N104	1	PNP	32-44
2N49	2	PNP	40	2N105	2	PNP	45-55
2N63	1	PNP	22	2N106	1	PNP	25
2N64	1	PNP	45	2N107	1	PNP	19
2N65	1	PNP	90	2N108	3	PNP	
2N76	1	PNP	9-100	2N109	1	PNP	70
2N77	4	PNP	55	2N111	1	PNP	40
2N78	1	NPN	20-50	2N112	1	PNP	40
2N79	1	PNP	46	2N113	1	PNP	45

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<u>NO.</u>	<u>FIG.</u>	<u>TYPE</u>	<u>BETA</u>	<u>NO.</u>	<u>FIG.</u>	<u>TYPE</u>	<u>BETA</u>
2N114	1	PNP	65	2N204	4	PNP	50-120
2N123	1	PNP	30-50	2N205	4	PNP	15-35
2N124	1	NPN	12-24	2N215	1	PNP	32-44
2N125	1	NPN	24-48	2N217	1	PNP	70
2N126	1	NPN	48-100	200	1	NPN	9
2N127	1	NPN	100-140	201	1	NPN	19
2N130	3	PNP	22	202	1	NPN	49
2N131	3	PNP	45	206	3	NPN	35
2N132	3	PNP	90	207	3	NPN	19
2N133	3	PNP	25	208	3	NPN	19
2N135	1	PNP	20	300	1	PNP	9-19
2N136	1	PNP	40	301	1	PNP	19-49
2N137	1	PNP	60	302	1	PNP	49-55
2N138	3	PNP	140	310	1	PNP	(90)
2N139	1	PNP	45-48	350	1	PNP	
2N140	1	PNP	45	352	1	PNP	35-55
2N145	1	NPN	(6)	353	1	PNP	(28)
2N146	1	NPN	(20)	354	1	PNP	(68)
2N147	1	NPN	(33)	880	1	NPN	
2N148	1	NPN		903	1	NPN	9-19
2N148A	1	NPN		904	1	NPN	19-39
2N149	1	NPN		904A	1	NPN	19
2N149A	1	NPN		905	1	NPN	39
2N150	1	NPN		951	1	NPN	9-140
2N150A	1	NPN		952	1	NPN	9-140
2N156	5	PNP	40*	953	1	NPN	9-140
2N158	5	PNP	40*	CK-721	3	PNP	45
2N160	1	NPN	13	CK-722	3	PNP	22
2N160A	1	NPN	13	CK-725	3	PNP	90
2N161	1	NPN	28	CK-727	3	PNP	25
2N161A	1	NPN	28	CK-760	1	PNP	40
2N162	1	NPN	40	CK-761	1	PNP	45
2N162A	1	NPN	39	GT-14	1	PNP	20-34
2N163	1	NPN	50	GT-20	1	PNP	35-45
2N163A	1	NPN	50	GT-34	1	PNP	10-19
2N167	1	NPN		GT-66	1	PNP	100
2N168	1	NPN	20	GT-81	1	PNP	50-65
2N168A	1	NPN	40	GT-83	1	PNP	35-45
2N169	1	NPN	7-40	GT-87	1	PNP	20-34
2N169A	1	NPN	30	GT-88	1	PNP	50-90
2N170	1	NPN	7-20	GT-109	1	PNP	120
2N172	1	NPN	(11)	GT-122	1	PNP	50-90
2N175	1	PNP	65	GT-760	1	PNP	40
2N180	3	PNP	60	GT-761	1	PNP	70
2N181	3	PNP	60	GT-762	1	PNP	140
2N186	1	PNP	24	GT-763	1	PNP	140
2N186A	1	PNP	24	HD-398	3	NPN	30
2N187	1	PNP	36	HD-399	3	NPN	30
2N187A	1	PNP	36	HD-401	3	NPN	30
2N188	1	PNP	54	HD-402	3	PNP	70
2N188A	1	PNP	54	HD-441	3	PNP	70
2N189	1	PNP	24	HD-454	3	PNP	19-65
2N190	1	PNP	36	OC-70	3	PNP	30
2N191	1	PNP	54	OC-71	3	PNP	47
2N192	1	PNP	75	OC-72	3	PNP	50
2N195	4	PNP	100-140	TS-161	3	PNP	19-100
2N196	4	PNP	50-65	TS-162	3	PNP	9-19
2N197	4	PNP	40-50	TS-163	3	PNP	19-32
2N198	4	PNP	30-40	TS-164	3	PNP	32-62
2N199	4	PNP	15-25	TS-165	3	PNP	62-90
2N200	4	PNP	30-60	TS-166	3	PNP	25