

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	C	5BT8	4.7	0	5	66121	11111	4	6		12
3B4/DL98	2.5	80	83	36521	63111	2	3	137	7	5BW8	4.7	60	36	31321	51341	1	4	1236789	9
3B7/1291	2.8	45	34	23561	53111	3	3	36	27	5BW8	4.7	0	56	31321	51341	1	3		13
3BA6	2.8	40	5	51214	31111	3	3	127	5	5CG8	4.7	53	5	53621	43151	3	3	16789	6
3BC5	2.8	15	37	56214	31111	3	3	1567	5	5CG8	4.7	63	5	53621	43151	3	3		2
3BE6	2.8	7	75	51214	31111	4	3	1257	5	5CL8	5.0	7	20	53121	33151	3	3	13789	2
3BE6	2.8	7	25	51214	31111	4	3		6	5CL8	5.0	7	50	53121	33151	3	3		6
3BN4	2.8	18	69	15213	66111	4	2	127	5	5CM8	4.7	7	80	45121	43151	4	3	1236789	6
3BN6	2.8	7	35	15213	13111	3	4	126	7	5CM8	4.7	7	25	45121	43151	4	4		1
3BU8	2.8	25	34	13421	55451	2	4	1679	38	5CQ8	4.7	7	84	45321	41151	3	2	23789	1
3BY6	2.8	7	56	51214	31111	3	3	1257	5	5CQ8	4.7	7	45	45321	41151	3	3		6
3BY6	2.8	7	26	11214	35111	3	3		6	5CR8	4.7	7	100	45121	43151	2	3	1236789	6
3BZ6	2.8	46	92	51214	31111	3	2	127	5	5CR8	4.7	7	35	45121	43151	2	3		1
3C2	2.8	0	16	12166	61614	1	4	C	C	5CU4	5.0	0	15	12141	61111	4	1	1	4
3C4	1.4	60	99	14312	51111	1	3	236	2	5CU4	5.0	0	15	12161	41111	4	1		6
3C6	2.8	7	90	21115	31111	4	3	45	6	5CZ5	4.7	20	30	31521	61641	4	2	1379	9
3C6	2.8	7	90	21351	11111	4	3		3	5DH8	5.0	7	30	54121	43151	3	3	13789	2
3CB6	2.8	55	90	51214	31111	3	2	127	5	5DH8	5.0	7	45	54121	43151	3	3		6
3CE5	2.8	16	5	56214	31111	3	3	1567	5	5EA8	5.0	7	75	45321	41151	1	3	1236789	1
3CF6	2.8	13	10	51214	31111	3	3	127	5	5EA8	5.0	7	88	45321	41151	2	3		6
3CS6	2.8	7	70	51214	31111	2	4	1257	5	5EH8	4.7	7	17	15421	65341	2	3	12378	3
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	5	5EU8	5.0	7	100	45421	15131	2	3	1236789	1
3D6	2.8	29	5	24311	56111	2	3	236	2	5EU8	5.0	7	28	45421	15131	2	3		3
3DE6	2.8	7	28	51214	31111	3	3	127	5	5EW6	5	14	12	51214	31111	3	3	1275	5
3DG4	2.8	0	100	26114	14111	2	1	57	5	5FG7	4.7	35	25	54621	43151	3	3	126789	2
3DG4	2.8	0	95	26114	14111	2	1		5	5FG7	4.7	35	70	54621	43151	3	2		6
3DK6	2.8	7	35	51214	36111	3	3	1267	7	5FV8	4.7	40	70	54121	43151	3	2	1236789	2
3DT6	2.8	10	25	51214	35111	3	4	127	5	5FV8	4.7	7	20	54121	43151	3	3		6
3E5	2.8	7	71	13316	52111	2	3	236	2	5GH8	4.7	7	90	45321	41151	2	3	1236789	6
3E6	2.8	20	89	13316	51111	2	3	46	2	5GH8	4.7	7	38	45321	41151	2	3		1
3EA5	2.8	25	50	51214	31111	2	3	156	5	5GM6	5.0	15	80	51214	36111	4	2	126	5
3ER5	2.8	30	75	15124	16111	3	2	125	5	5J6	4.7	25	35	33215	51111	3	3	567	12
3FH5	2.8	15	15	65214	11111	2	3	267	5	5R4	5.0	0	43	12111	41111	4	1	46	6
3FQ5	2.8	50	70	15214	66111	2	2	125	5	5R4	5.0	0	43	12141	11111	4	1		4
3FY5	2.8	7	80	15214	66111	3	2	124	5	5T4	5.0	0	30	12111	41111	4	1	46	6
3GS8	2.8	30	85	13421	15411	4	3	1236789	38	5T4	5.0	0	30	12141	11111	4	1		4
3LF4	2.8	23	29	24311	56111	2	3	236	2	5T8	4.7	7	84	66121	61531	3	4	123678	9
3Q4/DL95/N18	2.8	35	29	13536	62111	2	3	234	2	5T8	4.7	7	0	66121	61531	4	6		126
3Q5	2.8	25	27	12335	11611	2	3	345	3	5U4/5931	5.0	0	41	12111	41111	4	1	46	6
3S4/DL92/N17	2.8	7	40	13536	62111	2	3	234	2	5U4/5931	5.0	0	41	12141	11111	4	1		4
3V4/DL94/IP11	2.8	30	34	13316	52111	2	3	236	2	5U8	4.7	71	5	35321	41151	3	3	236789	6
4A6	3.8	7	77	12355	31611	1	4	3456	36	5U8	4.7	71	88	35321	41151	3	2		1
4AU6	4.2	7	80	51213	31111	3	3	127	5	5V3	5.0	0	25	12111	41111	3	1	46	6
4AV6	4.2	25	85	51216	64111	3	3	12567	7	5V3	5.0	0	25	12141	11111	3	1		6
4AV6	4.2	0	5	51216	64111	4	6		56	5V4/GZ32	5.0	0	76	12111	31111	4	1	46	6
4BC5	4.2	15	37	56214	31111	3	3	1567	5	5V4/GZ32	5.0	0	76	12131	11111	4	1		4
4BC8	4.2	10	70	35121	35111	2	3	2378	16	5V6	4.7	21	98	12445	11111	4	1	3458	3
4BN6	4.2	7	65	15213	13111	4	4	126	7	5W4	5.0	0	46	12111	41111	4	1	46	6
4BQ7	4.2	7	23	35121	35111	4	3	2378	16	5W4	5.0	0	46	12141	11111	4	1		4
4BS8	4.2	40	85	35121	35111	3	2	2378	16	5X3	5.0	0	60	21411	11111	4	1	23	3
4BU8	4.2	25	34	13421	55451	2	4	12679	38	5X3	5.0	0	60	24111	11111	4	1		2
4BX8	4.2	23	15	35121	35111	2	3	2378	16	5X4	5.0	0	40	11114	12111	4	1	35	5
4BZ6	4.2	46	85	51214	31111	3	2	127	5	5X4	5.0	0	40	11411	12111	4	1		3
4BZ7	4.2	7	27	35121	35111	4	3	2378	16	5X8	4.7	25	52	15321	15341	3	3	12678	9
4BZ8	4.2	7	75	45121	45111	3	2	2378	16	5X8	4.7	25	18	15321	15341	3	3		3
4CB6	4.2	40	90	51214	31111	3	2	127	5	5Y3/6087/6106	5.0	0	55	12111	41111	4	1	46	6
4CS6	4.2	7	55	51214	31111	2	4	1257	5	5Y3/6087/6106	5.0	0	55	12141	11111	4	1		4
4CS6	4.2	7	55	11214	35111	2	4		5	5Y4	5.0	0	57	11114	12111	4	1	35	5
4CX7	4.2	7	43	35121	35161	4	3	2378	16	5Y4	5.0	0	57	11411	12111	4	1		3
4CY5	4.2	7	65	51214	36111	2	3	1256	5	5Z3	5.0	0	35	21411	11111	4	1	23	3
4DE6	4.2	7	9	51214	31111	3	3	127	5	5Z3	5.0	0	35	24111	11111	4	1		2
4DK6	4.2	15	75	51214	31111	2	3	12567	5	5Z4/GZ30	5.0	0	76	12111	31111	4	1	46	6
4DT6	4.2	7	80	51214	33111	3	3	127	5	5Z4/GZ30	5.0	0	76	12131	11111	4	1		4
4ES8	4.2	7	75	45121	45111	2	2	23789	16	6A3	6.3	7	65	23511	11111	4	2	23	2
4EW6	4.2	7	35	51214	31111	3	3	127	5	6A4/LA	6.3	7	73	24531	11111	4	2	234	2
4GS8	4.2	30	85	13421	15411	4	3	1236789	38	6A5	6.3	7	79	12315	11611	4	1	5	3
5A6	5.0	7	30	31112	35661	4	2	37	1	6A6	6.3	17	94	23515	31111	3	3	23456	26
5AM8	4.7	42	100	15321	31611	3	2	1239	6	6A7	6.3	7	78	23345	11111	4	3	23456	2
5AM8	4.7	0	5	15321	31611	4	6		8	6A7	6.3	7	98	24345	11111	4	3		4
5AN8	4.7	50	93	35121	43511	3	2	23689	6	6A8	6.3	7	30	12435	41111	2	4	34568	3
5AN8	4.7	15	94	35121	43511	4	2		1	6A8	6.3	15	35	12435	41111	2	4		6
5A05	4.7	67	97	51214	36111	4	1	1256	5	6AB4/EC92	6.3	7	21	41211	51111	4	3	67	1
5AS4	5.0	0	41	12111	41111	4	1	46	6	6AB5/6N5	6.3	7	87	24141	11111	4	3	2345	2
5AS4	5.0	0	41	12141	11111	4	1		4	6AB5/6N5	6.3	7	87	21141	11111	4	3		2
5AS8	4.7	30	35	35121	61141	2	3	23678	9	6AB7/1853	6.3	40	94	12151	31411	3	2	345	8
5AS8	4.7	7	5	35121	61141	4	6		6	6AC5	6.3	75	20	12415	11111	4	2	58	3
5AT8	4.7	7	30	53121	43151	3	3	13789	2	6AC6	6.3	7	65	12445	11111	4	2	3458	3
5AT8	4.7	40	40	53121	43151														

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	3
6AN6	6.3	0	66	26631	11111	1	3		4	6BM8/ECL82	6.3	7	96	51521	43141	3	3		9
6AN6	6.3	0	66	26311	11111	1	3		3	6BN4	6.3	18	69	15213	66111	4	2	12	5
6AN6	6.3	0	66	23111	11111	1	3		2	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	6BR8	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	6BW8	6.3	60	60	31321	51341	1	4	1236789	9
6AT6/EBC90	6.3	7	25	51216	63111	4	6		56	6BW8	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	5	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	12678	9	6BY8	6.3	7	85	51121	53311	3	3	12389	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	6C4/6135/EC90	6.3	40	98	36216	51111	3	2	67	1
6AW8	6.3	20	80	15321	15331	3	3		3	6C5	6.3	45	27	12315	11111	3	3	58	3
6AX4	6.3	0	78	11113	12111	4	1	35	5	6C6	6.3	15	40	24311	11115	2	4	235C	2
6AX5	6.3	0	90	12513	11111	4	1	358	5	6C7	6.3	20	77	23166	11115	3	3	2456C	2
6AX5	6.3	0	90	12311	11111	4	1		3	6C7	6.3	7	28	23166	11115	4	6		45
6AX7	6.3	7	93	45121	45161	2	4	2378	16	6C8	6.3	24	94	12315	31115	3	3	34568C	36
6AX8	6.3	20	94	35321	41151	4	2	236789	6	6CA4/EZ81	6.3	0	65	46121	64661	1	2	137	17
6AX8	6.3	20	76	35321	41151	4	2		1	6CA5	6.3	19	5	16215	33111	4	2	1576	7
6AZ5	6.3	7	99	61211	11611	2	6	1278	18	6CA7/EL34	6.3	15	95	12435	61111	4	1	158	3
6AZ8	6.3	53	5	43121	55551	2	3	123679	1	6CB5	6.3	10	50	32156	61614	3	1	34C	C
6AZ8	6.3	23	85	11121	11351	3	2		8	6CB6/6676	6.3	35	90	51214	31111	3	2	127	5
6B4	6.3	7	75	12315	11111	4	1	35	3	6CD6	6.3	90	90	12115	11314	2	1	35C	C
6B6	6.3	7	41	12466	11115	2	5	2358C	3	6CE5/6BC5	6.3	16	2	56214	31111	3	3	1567	5
6B6	6.3	7	25	12466	11115	4	6		45	6CF6	6.3	11	10	51214	31111	3	3	127	5
6B7	6.3	78	12	24366	11115	3	3	23456C	2	6CG7	6.3	45	15	35121	35111	3	3	2378	16
6B7	6.3	7	20	24366	11115	4	6		45	6CG8	6.3	63	5	53621	43151	3	3	16789	6
6B8	6.3	26	12	12466	31115	4	3	3458C	3	6CG8	6.3	53	5	53621	43151	3	3		2
6B8	6.3	7	23	12466	31115	4	6		45	6CH7	6.3	20	50	35121	35161	2	3	2378	1
6BA5	6.3	20	62	51213	13111	3	3	1578	5	6CH7	6.3	30	50	35121	35161	2	3		6
6BA6/5749/6660	6.3	40	90	51214	31111	3	2	156	5	6CH8	6.3	28	90	54321	15551	3	2	12678	2
6BA7	6.3	7	80	45121	15141	2	3	2367	9	6CH8	6.3	35	15	11121	11531	2	3		9
6BA7	6.3	7	98	45121	15141	2	2		1	6CJ6/EL81	6.3	12	3	65121	66314	2	2	239	C
6BA8	6.3	7	36	15321	15341	2	3	126789	9	6CK4	6.3	7	80	52614	11111	2	1	1358	5
6BA8	6.3	7	96	15321	15341	2	3		3	6CL5	6.3	95	35	32156	61614	2	1	134C	C
6BC4	6.3</																		

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		6FQ5	6.3	50	70	15214	66111	2	2		5
6CU5	6.3	9	93	15216	34111	3	1	1267	6FQ7	6.3	25	85	45121	45111	3	2	123678	16
6CU6/6BQ6	6.3	7	82	12135	11114	4	1	458C	6FS5	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	356Z	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		1
6D4	6.3	0	78	16211	63111	1	3	7	6GK5	6.3	15	75	15214	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	12678	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	6GY6	6.3	7	65	11214	35111	3	3		5
6DC8/EBF89	6.3	0	85	35121	43611	1	3		6GY8	6.3	7	83	54512	41141	2	3	1236789	269
6DC8/EBF89	6.3	0	85	35121	46311	1	3		6H4	6.3	7	0	12161	11111	4	6	48	4
6DE4	6.3	0	73	16114	12111	2	1	35	6H6/D63	6.3	0	77	12313	11111	1	3	3458	35
6DE6	6.3	7	9	51214	31111	3	3	127	6HC8	6.3	7	60	51521	43141	4	2	12378	6
6DE7	6.3	0	63	45621	45111	3	2	2789	6HC8	6.3	7	90	51521	43141	4	3		9
6DE7	6.3	7	95	45621	45111	3	2		6HF8	6.3	15	60	15421	15341	3	2	1236789	9
6DG6	6.3	7	93	12435	11111	3	1	3458	6HF8	6.3	15	15	15421	15341	4	3		3
6DK6	6.3	15	60	51214	31111	2	3	12567	6HS8	6.3	10	20	13421	15411	3	4	1345	38
6DM4	6.3	0	35	11114	12111	4	1	35	6J4	6.3	15	85	51216	63111	3	2	12	7
6DN6	6.3	71	9	12115	11314	4	1	358C	6J5/L63	6.3	36	15	12315	11111	3	3	58	3
6DN7	6.3	7	15	54154	12111	3	2	123456	6J6/ECC91	6.3	7	50	33215	51111	3	3	567	12
6DN7	6.3	7	98	54154	12111	3	2		6J7/Z63	6.3	7	80	12431	11115	2	4	58C	3
6DQ5	6.3	7	47	52136	61614	3	1	134	6J8	6.3	60	55	12435	41111	2	4	34568C	3
6DQ6	6.3	7	70	12135	11114	4	1	458C	6J8	6.3	60	25	12435	41111	2	3		6
6DR7	6.3	7	75	45521	45111	2	4	32789	6JB8	6.3	25	60	45321	41151	3	3	1236789	61
6DR7	6.3	7	85	45521	45111	2	1		6JC8	6.3	7	65	15321	46541	3	3	123689	6
6DS5	6.3	7	83	51214	36111	4	2	1256	6JC8	6.3	30	70	15321	46541	3	2		9
6DT5	6.3	7	55	31521	61641	3	2	1379	6JH8	6.3	7	60	33421	51441	4	3		89
6DT6	6.3	7	90	51214	35111	3	3	127	6K5	6.3	7	80	12311	11115	4	4	38C	3
6DT8	6.3	43	80	45121	45111	4	2	123678	6K6	6.3	65	30	12435	11111	4	2	3458	3
6DW5	6.3	7	33	31521	61141	2	2	1379	6K7	6.3	28	30	12431	11115	3	3	348C	3
6DZ7	6.3	7	70	52435	41111	4	2	134568	6K8	6.3	7	75	12435	31111	4	3	34568C	3
6DZ8	6.3	7	90	51521	43141	2	3	278	6K8	6.3	7	64	12435	31111	4	3		6
6DZ8	6.3	7	43	51521	43141	2	2		6L5	6.3	45	25	12315	11111	3	3	358	3
6E5	6.3	7	80	24541	11111	4	4	2345	6L6/5881/5932	6.3	25	76	12445	61111	4	1	3458	3
6E5	6.3	7	87	21541	11111	4	4		6L7	6.3	7	73	12435	11115	4	3	348C	3
6E6	6.3	40	80	23515	31111	3	2	23456	6M3	6.3	0	60	62416	16111	2	1	3C	3
6E7	6.3	27	27	24311	11115	3	3	236C	6M5	6.3	25	20	35121	64611	4	2	1237	7
6EA5	6.3	25	50	51214	31111	2	3	156	6N3/EY82	6.3	0	27	66121	66641	4	1	1236789	9
6EA7	6.3	7	94	54154	12111	1	4	123456	6N4	6.3	7	25	51213	66111	4	3	12	5
6EA7	6.3	7	35	54111	12111	1	2		6N6	6.3	65	0	12445	11111	4	2	3458	3
6EA8	6.3	7	85	45321	41151	1	3	1236789	6N7	6.3	20	93	12355	31111	3	3	4568	36
6EA8	6.3	7	95	45321	41151	2	3		6N8/EBF80	6.3	27	72	35121	46611	2	3	123678	6
6EB8	6.3	7	50	15421	15341	2	4	12678	6N8/EBF80	6.3	7	25	35121	46611	4	6		78
6EB8	6.3	7	75	15421	15341	3	2		6P5	6.3	7	74	12315	11111	3	3	358	3
6EH5	6.3	15	95	16215	33111	4	1	1567	6P7	6.3	35	52	12143	35115	3	3	45678C	4
6EH8	6.3	20	13	15421	65341	2	3	12378	6P7	6.3	35	93	12143	35115	3	3		6
6EH8	6.3	7	98	15421	65341	2	3		6Q4/EC80	6.3	7	88	56121	16641	4	2	139	9
6EM5	6.3	7	50	31521	61641	3	2	1367	6Q5/884	6.3	0	70	12311	11111	3	1	38	3
6EM7	6.3	7	65	54154	12111	2	1	1346	6Q7/DH63/6T7	6.3	7	85	62466	11115	2	4	3458C	3
6EM7	6.3	7	65	54154	12111	2	4		6Q7/DH63/6T7	6.3	0	25	62636	11115	1	4		4
6ER5	6.3	40	81	15214	36111	2	2	12567	6Q7/DH63/6T7	6.3	0	25	62663	11115	1	4		5
6ES8/ECC189	6.3	7	60	45121	45111	2	2	23789	6R3/EY81	6.3	0	6	66621	66641	1	2	9C	9
6EU7	6.3	68	65	12115	44511	1	4	456789	6R4/EC81	6.3	7	65	51121	11411	4	2	13	8
6EU8	6.3	7	100	45421	15131	2	3	1236789	6R6	6.3	17	42	12314	11115	4	3	358C	5
6EU8	6.3	7	28	45421	15131	2	3		6R7	6.3	7	0	12466	11115	4	3	458C	3
6EV5	6.3	7	90	51214	36111	3	2	1256	6R7	6.3	7	25	12466	11111	4	6		45
6EV7	6.3	7	35	45121	45161	4	3	2378	6R8	6.3	55	16	66121	61531	3	3	123678	9
6EW6	6.3	7	5	51214	31111	3	3	127	6R8	6.3	7	0	66121	61531	4	6		126
6EX6	6.3	7	60	12115	11314	4	1	358	6S4	6.3	7	50	61621	56641	3	2	26	9
6EY6	6.3	7	64	12435	11111	4	2	3458	6S7	6.3	23	25	12413	11115	3	3	348C	3
6EZ5	6.3	25	100	12435	11111	4	1	3458	6S8	6.3	7	20	61661	32115	4	5	12345C	6
6EZ8	6.3	7	33	15421	66661	3	3	1236789	6S8	6.3	7	20	61661	32115	4	6		134
6EZ8	6.3	75	80	16621	45661	2	2		6SA7	6.3	7	78	12435	11111	4	3	1368	3
6EZ8	6.3	75	80	16621	66451	2	2		6SA7	6.3	7	4						

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	61	7Q7	6.3	7	80	24351	11111	4	3	3456Z	2
6SR7	6.3	7	25	15166	42111	4	6		45	7Q7	6.3	7	54	24351	11111	4	3		3
6SS7	6.3	25	19	12151	31411	3	3	345	8	7R7	6.3	17	62	24663	51111	3	3	23456Z	2
6ST7	6.3	7	0	15166	42111	4	3	2345	6	7R7	6.3	7	25	24663	51111	4	6		34
6ST7	6.3	7	27	15166	42111	4	6		45	7S7	6.3	60	30	24353	51111	2	4	23456Z	2
6SU7/6188	6.3	7	38	54154	12111	4	4	1346	25	7S7	6.3	60	76	24353	51111	2	3		3
6SV7	6.3	35	39	15136	42111	3	3	23456	6	7T7	6.3	50	0	24316	51111	3	3	2367	2
6SV7	6.3	7	0	15136	42111	4	6		5	7V7	6.3	30	10	24316	51111	3	3	2367	2
6SZ7	6.3	7	89	15166	32111	4	4	2345	6	7W7	6.3	14	4	24311	56111	3	3	2346	2
6SZ7	6.3	7	30	15166	32111	4	6		45	7X6	6.3	0	74	23516	31111	4	1	236Z	6
6T4	6.3	35	71	34211	66111	2	2	25	1	7X6	6.3	0	74	21216	11111	4	1		3
6T7/6Q7/DH63	6.3	7	85	12466	11115	2	4	458C	3	7X7	6.3	7	50	24516	51111	4	4	23456Z	2
6T7/6Q7/DH63	6.3	7	30	12466	11115	4	6		45	7X7	6.3	7	0	24516	61111	4	6		56
6T8/6AK8/EABC80	6.3	7	84	66121	61531	3	4	1236Z8	9	7Y4	6.3	0	84	21511	31111	4	1	36Z	6
6T8/6AK8/EABC80	6.3	7	0	66121	61531	4	6		126	7Y4	6.3	0	84	21311	11111	4	1		3
6U4	6.3	0	71	11113	12111	4	1	35	5	7Z4	6.3	0	94	21511	31111	4	1	36Z	6
6U5/6G5	6.3	7	87	24541	11111	4	3	25	2	7Z4	6.3	0	94	21311	11111	4	1		3
6U5/6G5	6.3	7	0	21541	11111	4	1		2	8AU8	9.0	12	75	15321	15331	4	2	12678	9
6U6	6.3	7	94	12435	11111	4	1	3458	3	8AU8	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	236789	6	8AW8	7.5	10	90	15321	15331	3	3		3
6U8/6678/ECF82	6.3	71	88	35321	41151	3	2		1	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	8BH8	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	2389	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	236789	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	11511	2	2		1
6W4	6.3	0	70	11113	12111	4	1	35	5	8CN7	9.0	7	80	66121	15361	3	4	12367	8
6W5	6.3	0	78	12513	11111	4	1	358	5	8CN7	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	5
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	5	8EB8	7.5	7	75	15421	15341	3	2		9
6X5	6.3	0	30	12416	11111	1	2		3	8EM5	7.5	7	50	31521	61641	3	2	1367	9
6X8	6.3	2.5	20	15321	15341	3	3	1267	9	8GN8	7.5	7	80	15421	15341	4	3	126789	3
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	1236789	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	3	9A8/PCC85	9.0	7	97	45121	45111	3	2	123678	16
6Z4/84	6.3	0	83	23111	11111	4	1		2	9AU7*	9.0	40	18	45121	45161	2	3	2378	16
6Z5	12.6	0	81	62513	11111	4	1	345	5	9BR7*	9.0	7	15	45121	55161	4	3	23678	1
6Z5	12.6	0	81	62311	11111	4	1		3	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	267	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	236789	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	11111	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
7AB7	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	236Z	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	10	35	53153	12111	2	2	123456	2
7AH7	6.3	7	54	24416	51111	4	3	2367	2	10EM7	9	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	12346789	9
7AK7	6.3	7	65	24316	51111	4	2	46Z	2	10HF8	9.0	15	35	15421	15341	4	3		3
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	4		6
7B4	6.3	7	90	24111	51111	2	4	26Z	2	12A	5.0	17	30	23511	11111	2	3	23	2
7B5	6.3	7	54	24411	51111	4	2	2367	2	12A*	12.6	7	65	15621	16131	4	2	12	9
7B6	6.3	7	22	24566	61111	2	5	2356Z	2	12A5*	12.6	90	56	24351	61111	2	2	2345	3
7B6	6.3	7	25	24566	61111	4	6		56	12A6	12.6	7	54	12445	11111	4	2	3458	3
7B7	6.3	35	23	24356	51111	3	3	2367	2	12A7	12.6	7	30	23315	11115	3	3	23456C	2
7B8	6.3	48	9	24453	11111	2	4	235Z	2	12A7	12.6	0	30	21113	11111	2	2		5
7B8	6.3	48	92	24453	11111	2	3		3	12A8	12.6	60	0	12435	41111	2	4	3458	3
7C4/1203A	6.3	0	75	21131	11111	1	3	4Z	4	12A8	12.6	60	85	12435	41111	2	3		6
7C5	6.3	30	92	24411	51111	4	1	236Z	2	12AB5	12.6	55	97	31521	61641	4	1		

TUBE TYPE	FIL	GRID PLATE	LEVERS	V	S	LEAK	MERIT	TUBE TYPE	FIL	GRID PLATE	LEVERS	V	S	LEAK	MERIT
12AT6/HBC90	12.6	7 25	51216 63111	4	6		56	12EK6	12.6	7 55	51214 31111	1	3	1256Z	5
12AT7/6679/6201	12.6	20 60	35121 35161	3	3	2378	16	12EL6	12.6	31 100	53126 61111	1	4	156Z	2
12AU6/HF94	12.6	50 5	51214 31111	3	3	127	5	12EL6	12.6	0 60	11123 61111	1	4		5
12AU7/6680/5814	12.6	40 18	45121 45161	2	3	2378	16	12EM6	12.6	0 60	11126 31111	1	4		6
12AV5	12.6	7 82	52113 11311	4	1	1358	5	12EM6	12.6	7 30	51321 31131	1	3	12369	6
12AV6/HBC91	12.6	7 87	51216 63111	4	4	1256	7	12EM6	12.6	0 85	51321 31131	1	4		9
12AV6/HBC91	12.6	7 25	51216 63111	4	6		56	12EN6	12.6	7 94	12435 11111	4	1	3458	3
12AV7/5965/6829	12.6	20 80	35121 35161	4	2	2378	16	12EQ7	12.6	15 40	15121 34411	3	3	123678	7
12AW6	12.6	19 39	51214 31111	3	3	127	5	12EQ7	12.6	0 40	15121 34411	1	3		8
12AX4	12.6	0 78	11113 12111	4	1	35	5	12EW6	12.6	7 94	12435 11111	4	1	3458	3
12AX7/5751/6681	12.6	7 93	45121 45161	2	4	2378	16	12EZ6	12.6	7 100	51213 31111	1	3	127	5
12AY7/6072	12.6	16 98	35121 35161	3	3	2378	16	12F5	12.6	7 94	12131 11115	4	4	8C	4
12AZ7*	12.6	7 20	45121 45161	4	3	2378	16	12F8	12.6	11 89	63321 61511	1	4	12789	3
12B4	12.6	7 77	15621 16131	4	1	12	9	12F8	12.6	7 100	61121 61111	2	6		16
12BA6/HF93	12.6	40 90	51214 31111	3	2	127	5	12FK6	12.6	7 70	51216 63111	1	4	1256	7
12BA7	12.6	7 80	45121 15141	2	2	2367	9	12FK6	12.6	0 45	51216 33111	1	4		5
12BA7	12.6	7 98	45121 15141	2	2		1	12FK6	12.6	0 30	51213 63111	1	4		5
12BD6	12.6	22 20	51214 31111	3	3	127	5	12FM6	12.6	7 85	51216 63111	3	2	1256	7
12BE6/HK90	12.6	7 75	51214 31111	4	3	1257	5	12FM6	12.6	7 5	51216 63111	4	6		56
12BE6/HK90	12.6	7 25	51214 31111	4	3		6	12FQ8	12.6	7 58	45421 45411	4	4	1236789	136
12BF6	12.6	7 0	51216 64111	4	3	1256	7	12FR8	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	16	12FR8	12.6	7 65	51521 33331	1	4		9
12BK5	12.6	44 30	41521 16511	4	2	1268	1	12FX8	12.6	7 75	35321 51351	1	4	1236789	3
12BK6	12.6	7 90	51216 63111	4	4	1256	7	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	67	1
12BL6	12.6	7 60	51213 31111	1	4	1267	5	12G8	12.6	7 95	31321 31561	1	2	2378	6
12BN6	12.6	7 59	15213 13111	4	4	126	7	12G8	12.6	7 54	31521 31561	1	4		1
12BQ6/12CU6	12.6	7 78	12135 11114	4	1	458C	C	12GA6	12.6	7 85	51214 31111	1	4	1267	5
12BR7*	12.6	7 0	45121 55161	4	3	23678	1	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	7	12H4	12.6	52 16	36126 51111	3	3	67	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	7	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	7	12J8	12.6	15 98	51321 31331	1	2	123789	6
12BW4	12.6	0 84	41121 14111	3	1	179	17	12J8	12.6	0 58	51321 31331	1	3		89
12BY7*	12.6	15 55	15121 64361	4	2	123	7	12K5	12.6	98 27	13216 53111	1	3	1267	7
12BZ7	12.6	25 5	35121 35161	2	4	2378	16	12K7	12.6	28 30	12431 11115	3	3	348C	3
12C5/12CU5	12.6	7 98	15216 33111	4	1	1267	7	12K8	12.6	7 81	12435 31111	4	3	468	3
12C8	12.6	26 22	12466 31115	4	3	34568C	3	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	7	12L8	12.6	7 39	51543 21411	4	3	123458	48
12CM6	12.6	25 52	31521 61131	4	2	1379	9	12Q7	12.6	7 85	12466 11115	2	4	3458C	3
12CN5*	12.6	7 75	15216 33111	1	3	126	7	12Q7	12.6	7 25	12466 11115	4	6		45
12CR6	12.6	15 0	16214 35111	4	3	12567	5	12R5	12.6	7 70	15216 34111	2	2	1267	7
12CR6	12.6	0 22	16214 35111	4	6		2	12S8	12.6	7 20	61661 32115	4	5	123456C	6
12CS6	12.6	7 70	51214 31111	2	4	1257	5	12S8	12.6	7 20	61661 32115	4	6		134
12CS6	12.6	7 70	11214 35111	2	4		5	12SA7	12.6	7 78	12435 11111	4	3	1568	3
12CT8	12.6	7 80	45121 43511	2	3	123689	6	12SA7	12.6	7 42	12435 11111	4	3		4
12CT8	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	7	12SF5	12.6	7 93	11513 12111	4	4	23	5
12CU6/12BQ6	12.6	7 82	12135 11114	4	1	458C	C	12SF7	12.6	61 93	15136 42111	3	2	23456	6
12CX6	12.6	7 84	51213 31111	1	3	1267	5	12SF7	12.6	7 20	15136 42111	4	6		5
12D4	12.6	0 70	66164 62111	2	1	3	5	12SG7	12.6	31 17	12156 31411	3	3	3468	8
12DB5	12.6	7 100	31521 66641	3	1	12368	9	12SH7	12.6	50 97	12156 31411	3	2	3468	8
12DE8	12.6	7 78	51321 31311	1	4	1236789	6	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	16	12SL7	12.6	7 28	54154 12111	4	4	1346	25
12DF7*	12.6	11 93	45121 45161	2	4	2378	16	12SN7/B36	12.6	52 16	53153 12111	3	3	1346	25
12DK7	12.6	7 7	51321 33631	1	3	123679	7	12SQ7	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	6	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
12DM4	12.6	0 95	16114 12111	1	1	3	5	12SV7	12.6	21 98	12445 11111	4	1	3458	3
12DM7	12.6	10 93	45121 45161	2	4	2378	16	12SW7	12.6	7 0	15166 42111	4	3	2345	6
12DQ6	12.6	7 77	12135 11114	4	1	458C	C	12SW7	12.6	7 30	15166 42111	4	6		45
12DQ7*	12.6	7 72	15121 64361	4	2	123	7	12SX7	12.6	52 20	53153 12111	3	3	1346	25
12DS7	12.6	7 95	36521 33131	1	4	136789	6	12SY7	12.6	7 72	12431 11111	4	3	1568	3
12DS7	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 61641	3	2	1379	9	12U7*	12.6	14 100	35121 35161	1	4	2378	16
12DT8	12.6	25 90	45121 45161	4	2	381267	16	12V6	12.6	21 98	12445 11111	4	1	3458	3
12DU7	12.6		51321 33631	1		123679	6	12W6	12.6	7 90	12335 11111	4	1	3458	3
12DU7	12.6	0	51321 33631	1			79	12X4	12.6	0 86	51211 31111	4	1	16Z	6
12DV7*	12.6	7 30	13321 35161	1	5	178	6	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	6	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	3	2		6
12DV8	12.6	0 26	11121 11131	1	4		9	13DR7	12.6	0 63	45521 45111	3	2	23789	1
12DW7/7247	12.6	7 93	45121 45161	2	4	2378	6	13DR7	12.6	7 70	45521 45111	2	4		6
12DW7/7247	12.6	40 18	45121 45161	2	3		1	13EM7	12.6	15 65	54154 12111	2	1	1346	25
12DW8	12.6	7 20	45121 45161	1	4	123678	1	14A4	12.6	35 17	24116 51111	2	3	267	2
12DW8	12.6	7 38	45121 45161	1	5		6	14A5	12.6	27 38	24411 51111	3	2	2367	2
12DY8	12.6	7 72	51321 41451	1	2	123678	6	14A7/12B7	12.6</						

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	12115	4	1	358C	C
14F8	12.6	7	50	52411	4	3	134568	36	25DQ6	25	7	70	12135	4	1	458C	C
14GT8/7724	12.6	0	0	14121	1	2	23	2	25E5/PL36	25	7	15	62635	2	2	458	C
14GT8/7724	12.6	0	0	11121	1	2	16	6	25EC6	25	7	0	12115	2	2	358	C
14H7	12.6	7	20	11121	4	4	789	9	25EH5	25	15	0	16215	4	2	1567	7
14J7	12.6	30	14	24316	5	1	2367	2	25F5	25	7	26	15216	4	2	1267	7
14J7	12.6	49	100	24353	5	1	461	2	25L6/KT32	25	7	94	12435	4	1	3458	3
14J7	12.6	40	100	24353	5	1		3	25N6	25	7	5	12445	4	2	458	3
14JG8	12.6	0	5	16121	6	1	1236	26	25S/1B5	2.0	7	10	23665	2	5	234	2
14JG8	12.6	80	85	11121	4	6	189	9	25S/1B5	2.0	7	10	23665	1	1		34
14N7	12.6	35	24	21355	3	3	234567	36	25W4	25	0	70	11113	4	1	35	5
14Q7	12.6	30	100	24351	4	2	4567	2	25W6	25	7	99	12335	4	1	3458	3
14Q7	12.6	11	100	24351	4	2		3	25X6	25	0	75	12513	4	1	3458	5
14R7	12.6	17	62	24663	5	1	234567	2	25X6	25	0	75	12311	4	1		3
14R7	12.6	7	25	24663	5	1		34	25Y5	25	0	85	25113	4	1	2345	5
14S7	12.6	60	30	24353	5	1	23467	2	25Y5	25	0	85	23111	4	1		2
14S7	12.6	60	76	24353	5	1		3	25Z5	25	0	71	25113	4	1	2345	5
14W7	12.6	30	10	24311	5	6	2346	2	25Z5	25	0	71	23111	4	1		2
14X7	12.6	20	60	24516	6	1	23456	2	25Z6	25	0	71	12113	4	1	53	5
14X7	12.6	0	0	24516	6	1		56	25Z6	25	0	71	12311	4	1		3
14Y4	12.6	0	84	21511	3	1	367	6	26	1.4	7	50	23511	4	3	23	2
14Y4	12.6	35	84	21511	3	1		3	26A6	25	7	28	51214	3	3	127	5
15	2.0	25	55	24311	2	4	234C	2	26A7	25	7	78	51543	2	1	123458	48
15A8	12.6	7	80	12553	1	3	13456	C	26BK6	25	7	90	51216	4	4	1256	7
15A8	12.6	7	40	12553	1	3		8	26BK6	25	7	20	51216	6	3		56
15EW6	12.6	7	5	51214	3	3	127	5	26C6	25	7	96	51216	4	2	12567	7
17AVS5GA	12.6	7	30	52113	1	3	1358	5	26C6	25	7	25	51216	4	6		56
17AX4	19	0	78	11113	4	1	35	5	26D6	25	7	84	11214	4	3	256	7
17BQ6	19	56	0	12135	2	2	845C	C	26D6	25	7	44	11214	4	3		6
17C5	12.6	7	100	15216	3	1	1267	7	26E6	25	25	76	12435	4	1	3458	3
17CA5	12.6	19	0	16215	3	1	1567	7	26Z5	25	0	25	11121	3	1	16	6
17D4	12.6	0	70	66164	2	1	3	5	26Z5	25	0	25	31121	2	2		1
17DE4	19	0	73	16114	2	1	35	5	27	2.5	7	66	23511	4	3	234	2
17DQ6	19	7	70	12135	4	1	458C	C	30	2.0	7	77	23511	4	3	23	2
17EW8/HCC85	12.6	7	20	45121	4	3	2378	16	30A5/HL94	25	7	54	15216	2	2	1267	7
17GW6	19	0	70	12135	3	1	458C	C	31	2.0	7	92	23511	4	2	23	2
17H3	19	0	70	11421	2	1	13	3	32	2.0	7	58	24311	4	2	23C	2
17HC8	12.6	7	50	51521	4	2	12378	6	32ET5	35	7	0	15216	4	2	1256	7
17HC8	12.6	15	85	51521	4	3		9	33	2.0	73	65	24531	3	2	234	2
17L6	12.6	7	80	12445	6	1	3458	3	34	8.0	24	0	24311	2	4	23C	2
17W6	12.6	7	25	12335	4	2	3458	3	34GD5	35	15	80	15216	2	2	1267	7
18	12.6	7	5	24421	4	3	2345	2	35/51	25	28	51	24311	3	3	234C	2
18A5	19	7	55	52113	2	2	1358	5	35A5	35	7	80	24311	5	1	2367	2
18DZ8	19	7	20	51521	4	4	278	9	35B5	35	80	38	51213	2	2	1256	5
18DZ8	19	7	50	51521	4	2		6	35C5	35	7	22	15216	3	1	1267	7
18FW6	19	20	70	56214	3	1	1567	5	35DZ8	35	75	100	51521	4	1	12378	6
18FX6	19	7	25	51214	3	1	1257	5	35DZ8	35	45	100	51521	2	3		9
18FX6	19	7	95	51214	3	1		6	35EH5	35	7	35	16215	4	2	1567	7
18FY6	19	20	25	51216	2	4	1256	7	35GL6	35	7	60	15213	6	1	125	7
18FY6	19	0	100	51216	2	6		56	35HB8	35	15	75	51421	2	2	1236789	7
				(Diodes Good = 60)					35HB8	35	15	75	51421	2	3		
19	2.0	50	71	23553	1	3	2345	25	35L6	35	7	10	12335	4	2	3458	3
19AU4	19	0	10	11113	2	2	35	5	35W4/HY90	35	0	70	11213	6	1	57	5
19BG6	19	85	82	12115	4	1	358C	C	35Y4	35	0	71	23111	4	1	27	2
19C8	19	7	40	66121	6	5	123678	9	35Z3	35	0	71	23111	4	1	27	2
19C8	19	7	0	66121	6	5		126	35Z4	35	0	71	12113	4	1	58	5
19CL8	19	15	95	53121	3	2	13789	2	35Z5	35	0	71	12613	4	1	58	5
19CL8	19	15	80	53121	3	3		6	35Z6	35	0	72	12513	4	1	3458	5
19EA8	19	7	85	45321	4	1	1236789	1	35Z6	35	0	72	12311	4	1		3
19EA8	19	7	90	45321	4	1		6	36	6.3	7	91	24311	4	3	234C	2
19EZ8	19	10	30	15412	3	3	1236789	368	36AM3	35	0	70	11214	6	1	57	5
19HV8	19	35	70	54121	4	3	123678	2	37	6.3	26	39	23511	3	3	234	2
19HV8	19	70	80	54121	3	2		6	38	6.3	7	67	24411	4	2	234C	2
19J6	19	15	35	33215	5	1	567	12	39/44	6.3	21	64	24311	3	3	234C	2
19T8	19	7	84	66121	6	5	123678	9	41	6.3	80	65	24351	3	2	2345	2
19T8	19	0	0	66121	6	5		126	42	6.3	30	65	24351	4	2	2345	2
19V8	19	7	81	46121	5	6	236789	1	43	6.3	20	30	23351	3	2	2345	2
19V8	19	7	0	46121	5	6		279	44/39	6.3	21	64	24311	3	3	234C	2
19X8	19	25	52	15321	3	3	1267	9	45	2.5	7	44	23511	4	2	23	2
19X8	19	25	18	15321	3	3		3	45Z3	50	0	78	23111	6	1	24	2
20	3.8	46	56	23511	2	3	23	2	45Z5	50	0	70	12613	4	1	58	5
20EQ7	19	7	60	15121	3	3	1236	7	46	2.5	7	60	23531	4	2	234	2
20EQ7	19	0	30	15121	4	6		8	47	2.5	7	54	23541	4	2	234	2
21A6/PL81	19	61	93	65121	2	1	239	C	48	25	80	15	23551	4	2	2345	2
21EX6	19	7	65	12115	4	1	358	C	49	2.0	7	66	23531	4	2	234	2
22DE4	19	0	73	16114	2	1	35	5	50	7.5	25	20	23511	4	2	23	2
24A	2.5	7	85	24311	4	3	234C	2	50A5	50	7	66	24311	5	1	2367	2
25A6	25	7	32	12335	4	2	3458	3	50B5	50	7	98	51213	3	1	1256	5
25A7	25																

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	5692/6SN7	6.3	52	16	53153	12111	3	3	1346	25
53	2.5	16	10	24515	41111	2	4	23456	5693/6SJ7	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		5725/6AS6	6.3	22	67	51213	35111	3	3	1257	5
56	2.5	7	74	23511	11111	4	3	234	5726/6AL5/6663	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	2346	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	13458	5751/12AX7/6681	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	1
75	6.3	7	25	23661	11115	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	24511	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	21311	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		6073/0A2/150C2	117	0	10	21616	66111	1	3	1	1
84/6Z4	6.3	0	83	25311	11111	4	1	234	6074/0B2/108C1	0	0	67	41666	66111	2	3	1	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	11115	3	3	2345C	6112	6.3	7	53	45216	16611	2	4	24	1
85	6.3	7	25	23661	11115	4	6		6112	6.3	7	45	66261	15411	2	4	57	8
85A2/0G3	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
108C1/0B2/6074	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	1	6186/6AG5	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	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	56	6211	12.6	7	35	45121	45161			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
150C2/0A2/6073	117	0	10	21616	66111	1	3	1	6360	12.6	7	67	51521	43461	3	2	1237	68
150C3/0D3/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	6626/0A2/150C2	117	0	10	21616	66111	1	3	1	1
407A	35	40	95	21546	45111	2	2	234678	6627/0B2/108C2	0	0	67	41666	66111	2	3	1	1
407A	35	50	95	21546	45111	2	2		6669/6A05/6005	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	6678/6U8/ECF82	6.3	71	5	35321	41151	3	3	236789	6
484/485	2.8	17	61	24511	11111	2	3	34	6678/6U8/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	25	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	1257	27
866/866A	2.5	0	70	21111	11113	4	1	C	6922/E88CC	6.3	13	60	45121	45111	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	21351	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
1267/0A4/PLI267	Z	0	50	13114	13111	4	2	7	7056	12.6	13	13	51214	31111	3	3	127	5
1267/0A4/PLI267	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	53111	3	3	36	7059	12.6	35	100	15321	41111	3	2	123679	6
1293	1.4	20	61	23111	51111	3	3	6	7060	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										

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	6
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	6
7724/14GT8	12.6	0	0	14121	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	1
7724/14GT8	12.6	7	20	11121	11541	4	4	189	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	6
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	3
9003	6.3	7	65	56214	31111	3	3	1567	5	EF80/6BX6	6.3	7	88	15621	14311	2	3	12789	7
9006	6.3	0	55	41216	16111	1	2	12	1	EF85/6BY7	6.3	10	90	15621	14311	4	3	12689	7
B36/12SN7	12.6	52	16	53153	12111	3	3	1346	25	EF86/7Z79	6.3	7	95	31121	41151	4	3	389	6
B65/6SN7	6.3	52	16	53153	12111	3	3	1346	25	EF89/6DA6	6.3	7	15	15121	14311	3	3	239	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	5
B309/ECC81	12.6	20	60	35121	35161	3	3	2378	16	EF94/6AU6	6.3	50	5	51213	31111	2	3	127	5
CK510AX	.625	7		25313	15111	2	5		5	EF95/6AK5/5654	6.3	15	60	51213	36111	2	3	1256	5
CK510AX	.625	7		25313	35111	2	5		6	EF804	6.3	50	50	11121	14351	3	3	3789	7
CK512AX	.625	7	100	33251	11111	2	5	12	1	EH90/6CS7	6.3	95	77	41521	45111	2	2	3789	6
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	EK90/6BE6	6.3	7	75	51214	31111	4	3	1257	5
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	EL34/6CA7	6.3	15	95	12435	61111	4	1	158	3
CK5875	1.25	10	25	43152	11111	2	4	124	1	EL36/6CM5	6.3	7	15	62635	11114	2	2	458	C
CK5886	1.25	7	20	43211	15111	2	5	127	1	EL37/5881/6L6	6.3	79	65	62435	11111	4	1	358	3
CK6029	1.25	40	65	41521	11111	1	3	13	1	EL38/6CN6	6.3	7	80	62435	11111	4	1	1458	C
D63/6H6	6.3	0	77	12313	11111	1	3	3458	35	EL81/6CJ6	6.3	12	3	65121	66314	2	2	239	C
D77/DD6/6AL5	6.3	0	60	13211	13111	1	3	1257	2	EL84/6BQ5	6.3	35	95	65121	14131	4	1	237	7
D77/DD6/6AL5	6.3	0	48	13211	13111	1	3		7	EL86/6CW5	6.3	7	95	65121	64631	3	2	2379	7
D152/6AL5/D77	6.3	0	60	13211	13111	1	3	1257	2	EL90/6AQ5/N727	6.3	67	97	51214	36111	4	1	1256	5
D152/6AL5/D77	6.3	0	48	13211	13111	1	3		7	EL95/6DL5	6.3	7	92	51214	36111	3	2	126	5
DA90/1A3/1D13	1.4	7	21	26116	61111	4	6	23	2	EM35	6.3	0	80	62414	41111	4	3	456	3
DAF91/1S5/ZD17	1.4	20	65	11633	52111	2	4	3456	5	EM35	6.3	0	80	62194	11111	4	3		3
DAF91/1S5/ZD17	1.4	7	29	11633	52111	4	6		3	EM80/6BR5	6.3	0	54	11621	61641	3	3	179	7
DAF92/1U5	1.4	25	50	13361	52111	2	4	2346	2	EM80/6BR5	6.3	0	54	11621	61641	3	3		7
DAF92/1U5	1.4	7	10	13361	52111	4	6		4	EM81/6DA5	6.3	7	25	51621	61641	4	5	1279	9
DAF96/1AH5	1.4	27	97	16334	52111	1	5	3456	5	EM81/6DA5	6.3	7	75	51621	61641	4	5		9
DAF96/1AH5	1.4	0	65	16334	52111	1	4		3	EM84/6FG6	6.3	7	75	56121	44641	4	4	13679	9
DC90	1.4	37	97	14615	62111	1	3	5	2	EM84/6FG6	6.3	7	75	56121	43641	4	4		9
DCC90/3A5*	2.8	15	84	23565	31111	2	3	35	6	EN91/2D21	6.3	0	58	61213	43111	2	1	1256	6
DCC90/3A5*	2.8	15	63	23565	11111	2	3		2	EQ80/6BE7	6.3	65	92	33121	45631	1	4	136	6
DD6/6AL5/D77	6.3	0	60	13211	13111	1	3	1257	7	EY81/6R3	6.3	0	6	66621	66641	1	2	9C	9
DD6/6AL5/D77	6.3	0	48	13211	13111	1	3		2	EY82/6N3	6.3	0	27	66121	66641	4	1	1236789	9
DF62/1AD4	1.25	7	5	33152	11111	2	4	24	7	EZ80/6V4	6.3	0	79	51121	13111	4	1	137	7
DF91/1T4/W17	1.4	7	85	13311	52111	4	3	236	2	EZ80/6V4	6.3	0	79	31121	11111	4	1		1
DF92/1L4/IF2	1.4	7	92	13311	52111	4	3	236	2	EZ81/6CA4	6.3	0	60	46121	64661	1	2	137	17
DF96	1.4	50	95	14366	52111	1	4	36	2	EZ90/6X4/U78	6.3	0	86	51211	31111	4	1	167	6
DF97	1.4	7	75	14311	52111	2	4	346	2	EZ90/6X4/U78	6.3	0	86	31211	11111	4	1	46	1
DH63/607/6T7	6.3	7	85	62466	11115	2	4	3458C	3	GZ30/5Z4	5.0	0	76	12111	31111	4	1	46	6
DH63/607/6T7	6.3	0	25	62636	11115	1	4		4	GZ30/5Z4	5.0	0	76	12131	11111	4	1	46	6
DH63/607/6T7	6.3	0	25	62663	11115	1	4		5	GZ32/5V4	5.0	0	76	12111	31111	4	1	46	6
DH77/6AT6	6.3	7	78	51216	63111	4	4	1256	7	GZ32/5V4	5.0	0	76	12131	11111	4	1	46	6
DH77/6AT6	6.3	7	25	51216	63111	4	6		56	GZ33	5.0	0	66	12111	41111	2	1	46	6
DK91/1R5/X17	1.4	7	70	13316	12111	2	4	234	2	GZ33	5.0	0	66	12141	11111	2	1	46	6
DK91/1R5/X17	1.4	7	24	13316	12111	2	4		3	GZ34/5AR4	5.0	0	30	12111	41111	4	1	46	6
DK96/1AB6	1.4	40	20	14353	52111	1	5	23456	2	GZ34/5AR4	5.0	0	30	12141	11111	4	1	8C	4
DL35/N14/1C5	1.4	29	41	12335	11111	2	3	35	3	H63/6F5	6.3	7	94	12131	11115	4	4		4
DL92/3S4/N17	2.8	7	40	13536	62111	2	3	234	2	HBC90/12AT6	12.6	7	78	51216	63111	4	4	1256	7
DL93/3A4	2.8	70	90	13356	62111	2	2	234	2	HBC90/12AT6	12.6	7	25	51216	63111	4	6		56
DL94/3V4	2.8	30	34	13316	52111	2	3	236	2	HBC91/12AV6	12.6	7	87	51216	63111	4	4	1256	56
DL95/3Q4	2.8	35	29	13536	62111	2	3	234	2	HBC91/12AV6	12.6	7	25	51216	63111	4	6		16
DL96	1.4	60	99	14312	51111	1	3	236	2	HCC85/17EW8	12.6	7	20	45121	45111	3	3	2378	16
DL98/3B4	2.8	80	83	36521	63111	2	3	137	7	HD14/DAC32	1.4	12	98	12316	11115	2	5	35C	3
DM70/1N3	1.4	100	70	56112	11411	2	5		8	HD14/DAC32	1.4	7	20	12316	11115	4	6		5
DM70/1N3	1.4	0	70	56112	11411	1	5		8	HF93/12BA6	12.6	40	90	51214	31111	3	2	127	5
DP61/EF95/6AK5	6.3	15	60	51213	36111	2	3	1256	5	HF94/12AU6	12.6	50	5	51214	31111	3	3	127	5
DY86/DY87/1S2A	1.4	0	31	12616	16613	2	4	C	C	HK90/12BE6	12.6	7	75	51214	31111	4	3	1257	5
DY87/1S2/DY86	1.4	0	31	12616	16613	2	4	C	C	HK90/12BE6	12.6	7	25	51214	31111	4	3		6
E80CY/7643	6.3	10	75	45321	41151	3	3	123789	6	HL92/50C5	5.0	7	97	15216	33111	4	1	1267	7
E80CF/7643	6.3	10	90	45321	41151	2	2		1	HL94/30A5	2.5	7	54	15216	34111	2	2	1267	7
E88CC/6922	6.3	13	60	45121	45111	2	2	2378	16	HM04/EK90	6.3	7	75	51214	31111	4	3	1257	5
EAA91/6AL5	6.3	0	60	13211	13111	1	3	1257	7	HY90/35W4	3.5	0	70	11213	61111	4	1	57	5
EAA91/6AL5	6.3	0	48	13211	13111	1	3		2	KRI/1V	6.3	0	29	23111	11111	2	2	23	2
EABC80/6AK8	6.3	10	77	66121	61531	2	4	123678	9	KR25/2A5	2.5	7	44	24451	11111	4	1	2345	2
EABC80/6AK8	6.3	7	95	66121	61531	2	6		126	KT32/25L6	2.5	7	94	12435	11111	4	1	3458	



INTER-CHANGEABILITY CHART



TUBE	EQUIVALENT	TUBE	EQUIVALENT	TUBE	EQUIVALENT
0A2	6073/150C2/6676/6626	6AU6	6136/EF94	9A08	PCC85
0A3	VR-75	6AV6	EBC91	12AC5	UF41
0A4	PL1267/1267	6BA6	5749/6660/EF93/PM04	12AJ7	HCH81
0B2	6074/108C1/6627	6BC5	6CE5	12AT6	HBC90
0B3	VR-90	6BE6	5750/EK90/HM04	12AT7	6679/6201/ECC81/B152/B309
0C3	VR105	6BE7	EQ80	12AU6	HF94
0D3	VR-150/150C3	6BH6	6661/6265	12AU7	6680/5814/ECC82/6189
0G3	5TV85-10/85A2	6BJ6	6662	12AV6	HBC91
1A3	DA90/1D13	6BL8	ECF80	12AV7	5965/6829
1AB6	DK96	6BM8	ECL82	12AX7	5751/6681/ECC83/7025
1AC6	DK92	6BN5	EL85	12AY7	12DT7
1AH5	DAF96	6BQ5	EL84/6267/EF86/Z729	12B7	6072
1B3-GT	8016	6BQ6	6CU6	12BA6	14A7
1B4P	951	6BR5	EM80	12BE6	HF93
1B5	25S	6BT4	EM80	12BQ6	HK90
1C1	X17/DK91/1R5	6BY4	EZ40	12C5	12CU6
1C5	DL35/N14	6BY6	7077	12CU5	12CU5
1D13	DA90/1A3	6BY7	5915/7036	12CU6	12C5
1F2	1L4/DF92	6BX6	EF85	12DT7	12BQ6
1F3	DF91/1T4/W17	6C4	EF80	12DW7	7025/12AX7/5751/6681/ECC83
1FD9	ZD17/DAF91/1S5	6CA4	6135/EC90	12S7	7247
1H5	HD14/DAC32	6CA7	EZ81	12SN7	UAF42
1J3	1K3	6CE5	EZ81	14A7	B26
1K3	1J3	6CJ5	EL34	14AF7	12B7
1L4	DF92/1F2	6CJ6	6BC5	1723	XXD
1P10	DL92/3S4/N17	6CK5	EF41	19D8	PY81
1P11	DL94/3V4	6CL6	EL81	21A6	UCH81
1R4	1294	6CM5	EL41	25E5	PL81
1R5	DK91/X17/1C1	6CN6	EL41	25L6	PL36
1S2-A	DY87/DY86	6CQ6	6677	25S	KT32
1S5	DAF91/ZD17/1FD9	6CS6	EL36	30A5	1B5
1T4	DF91/W17/1F3	6CT7	EL38	35	HL94
1U5	DAF92	6CU6	EF92	35W4	51
1V	KR-1	6CU7	EH90	39	HY90
2A3	5930	6CV7	EAF42	44	44
2A5	KR-25	6CW5	6BQ6	50C5	39
2C21	1642	6DA5	ECH42	51	HL92
2C22	7196	6DA6	EBC41	84	35
2C51	5670	6DC8	EL86	85A2	624
2D21	5727/EN91	6DJ8	EM81	108C1	OG3/5TV85-10
2S	4S/G-2	6DL5	EF89	113HY	OB2/6074/6627
2X2-A	879	6DS8	EBF89	115HY	123HY
2Z2	G84/684	6F5	ECC88	117L7	145HY
3A4	DL93	6FG6	EL95	123HY	M7
3A5	DCC90	6G5	ECH83	128A	113HY
3B4	DL98	6H6	H63	145HY	2523
3B7	1291	6J5	EM84	150C2	115HY
3DG4	Z-2669	6J6	6U5	150C3	OA2/6073/6676/6626
3Q4	DL95/N18	6J7	D63	182B	OD3/VR150
3S4	DL92/N17/1P10	6L6	L63	183B	482B
3V4	DL94/1P11	6N3	ECC91	408A	483
4S	DL94/1P11	6N5	Z63	482B	6028
5AR4	2S/G2	6N8	5881/5932/EL37	483	182B
5TV85-10	GZ34	6Q4	EY82	484	183B
5U4	GZ34	6Q5	6AB5	485	RIT
5V4	5931	6Q7	EBF80	684	RIR
5Y3	GZ32	6R3	EC80	807	2Z2
5Z4	6087/6106	6R4	884	866	5933/QE06140
6A4	GZ30	6S2	DH63/6T7	879	866A
6AB4	LA	6SJ7	EY81	884	2X2A
6AB5	EC92	6SK7	EC81	951	6Q5
6AB7	6N5	6SL7	EY86	1201	1B4P
6AB8	1853	6SN7	5693	1203A	7E5
6AC7	ECL80	6SU7	6137	1232	7C4
6AC7	1852/6134	6T7	5691	2050	7G7
6AG5	6186	6T8	5692/ECC33/B65/65W7	2051	2051
6AJ8	ECH81	6U5	6188	2523	128A
6AK5	5654/EF95/DP61/PM05	6U8	6Q7/DH63	5654	6AK5/EF95/DP61
6AK8	EABC80/6T8	6V4	6AK8/EABC80	5670	PM05
6AL5	5726/6663/EB91/DD6/D77/D152/EAA91	6X2	6G5	5691	2C51
6AM5	EL91	6X4	6678/ECF82	5692	6SL7
6AM6	EF91	6Z4	EZ80	5693	6SN7/ECC33/B65
6AQ4	EC91	7AN7	EY51	5725	6SJ7
6AQ5	6669/6005/EL90/N727	7C4	6202/EZ90/U78/V2M70	5726	6AS6
6QA8	ECC85	7E5	84		6AL5/6663/EB91/EAA91
6AR6	6098	7G7	PCC84		
6AS6	5725	9A8	1203A		
6AT6	EBC90/DH77	9AK8	1201		
			1232		
			PCF80		
			PABC80		

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	HD14/1H5	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	1L4/1F2	EN91	2D21/5727
5965	12AV7/6829	DH63	6Q7/6T7	EQ80	6BE7
6005	6AQ5/6669/EL90/ N727	DH77	6AT6/EBC90	EY51	6X2
6028	408A	DK91	1R5/X17/1C1	EY81	6R3
6072	12AY7	DK92	1AC6	EY82	6N3
6073	OA2/150C2/6676/6626	DK96	1AB6	EY86	6S2
6074	OB2/108C1/6627	DL35	N14/1C5	EZ35	U147
6087	5Y3/6106	DL92	3S4/N17/IP10	EZ40	6BT4
6098	6AR6	DL93	3A4	EZ80	6V4
6106	5Y3/6087	DL94	3V4/1P11	EZ81	6CA4
6134	6AC7/1852	DL95	3Q4/N18	EZ90	6X4/U78/6202/V2M70
6135	6C4/EC90	DL98	3B4	G2	4S/2S
6136	6AU6/EF94	DP61	EF95/6AK5/PM05/ 5654	G84	2Z2/684
6137	6SK7	DY86	DY87/1S2A	GZ30	5Z4
6186	6AG5	DY87	1S2/DY86	GZ32	5V4
6188	6SU7	E88CC	6922	GZ34	5AR4
6189	12AU7/ECC82/6680/ 5814	E180F	6688	H63	6F5
6201	12AT7/6679/ECC81/ B152/B309	EAA91	6AL5/5726/EB91/ 6663	HBC90	12AT6
6202	6X4/EZ90/U78/ V2M70	EABC80	6AK8/6T8	HBC91	12AV6
6265	6BH6/6661	EAF42	6CT7	HCH81	12AJ7
6267	EL84/6BQ5	EB91	6AL5/DD6/D77/D152/ 5727/6663/EAA91	HD14	DAC32/1H5
6281	CK574	EBC41	6CV7	HF93	12BA6
6626	OA2/150C2/6073/ 6676	EBC90	6AT6/DH77	HF94	12AU6
6627	OB2/108C2/6074	EBC91	6AV6	HK90	12BE6
6660	6BA6/5749/EF93/ PM04	EBC91	6N8	HL92	50C5
6661	6BH6/6265	EBC91	6Q4	HL94	30A5
6662	6BJ6	EBC91	6R4	HMO4	EK90/6BE6/5750
6663	6AL5/5726/EB91/EAA91	EBC91	6C4/6135	HY90	35W4
6669	6AQ5/6005/EL90/N727	EBC91	6AQ4	KR-1	1V
6676	OA2/150C2/6073/6626	EBC91	6AB4	KR-25	2A5
6677	6CL6	EBC91	65W7/65N7/B65	KT32	25L6
6678	6U8/ECF82	EBC91	12AT7/B152/B309/ 6679/6201	LA	6A4
6679	12AT7/ECC81/6201/ B152/B309	EBC91	12AU7/6680/5814/ 6189	L63	6J5
6680	12AU7/6189/5814/ECC82	EBC91	12AX7/5751/6681/ 12DT7	M7	117L7
6681	12AX7/5751/12DT7/7025/ ECC83	EBC91	6AQ8	N14	DL35/1C5
6688	E180F	EBC91	6DJ8	N17	DL92/3S4/IP10
6829	5965/12AV7	EBC91	6J6	N18	3Q4/DL95
6922	E88CC	EBC91	6BL8	N727	6AQ5/EL90/6669/ 6005
7025	12AX7/12DT7/5751/ 6681/ECC83	EBC91	6U8/6678	PABC80	9AK8
1267	OA4/PL1267	EBC91	6CU7	PCC84	7AN7
1291	3B7	EBC91	6AJ8	PCC85	9AQ8
1294	1R4	EBC91	6DS8	PCF80	9A8
1642	2C21	EBC91	6AB8	PL36	25E5
1852	6AC7/6134	EBC91	6BM8	PL81	21A6
1853	6AB7	EBC91	6CJ5	PL1267	OA4/1267
7036	6BY6/5915	EBC91	6BX6	PM04	6BA6/EF93/57491 6660
7077	6BY4	EBC91	6BY7	PM05	DP61/EF95/6AK5/ 5654
7196	2C22	EBC91	Z729/6267/EL84/ 6BQ5	PY81	17Z3
7247	12DW7	EBC91	6DA6	QE06140	5933/807
8016	1B3	EBC91	6AM6	U78	6X4/EZ90/6202/V2M70
B36	12SN7	EBC91	6CQ6	U147	EZ35
B65	6SN7/ECC33	EBC91	6BA6/PM04/5749/ 6660	UAF42	12S7
B152	ECC81/12AT7/B309/ 6679/6201	EBC91	6AU6/6136	UCH81	19D8
B309	ECC81/12AT7/6679/ 6201/B152	EBC91	6AK5/5654/DP61/ PM05	UF41	12AC5
CK574	6281	EBC91	6CS7	V2M70	6X4/EZ90/6202/U78
D63	6H6	EBC91	6BE6/HM04/5750	VR-75	OA3
D77	DD6/6AL5/EB91/D152/ 6663/5726	EBC91	6CA7	VR90	OB3
		EBC91	6CM5	VR105	OC3
		EBC91	5881/6L6/5932	VR150	OD3/150C3
		EBC91	6CN6	W17	DF91/IT4/IF3
		EBC91	6CK5	X17	DK91/1R5/1C1
		EBC91		XXD	14AF7
		EBC91		Z63	6J7
		EBC91		Z729	EL84/6BQ5/EF86/6267
		EBC91		Z2669	3DG4
		EBC91		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.

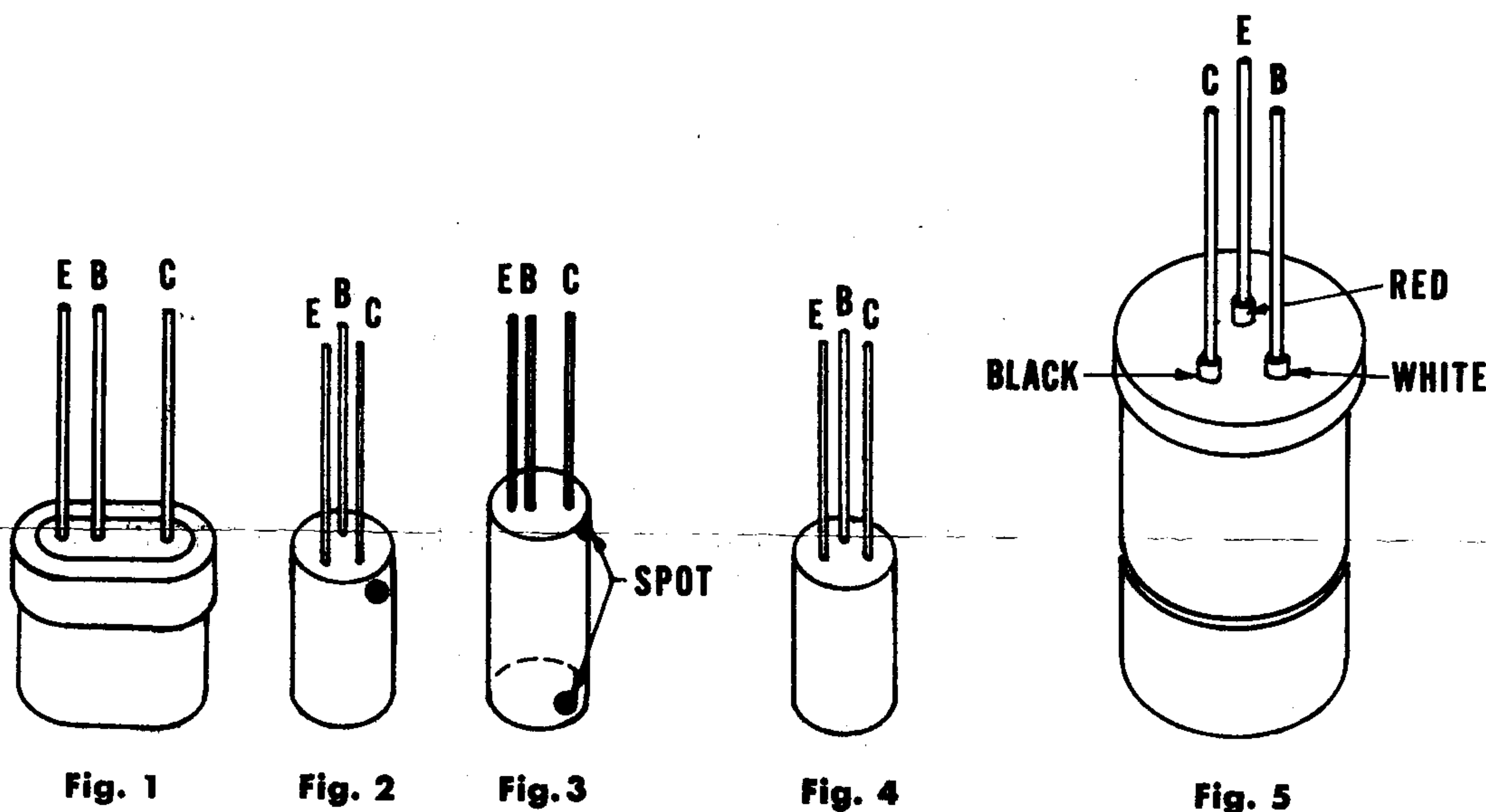
TRANSISTOR TEST DATA SHEET

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.

<u>NO.</u>	<u>FIG.</u>	<u>TYPE</u>	<u>BETA</u>	<u>NO.</u>	<u>FIG.</u>	<u>TYPE</u>	<u>BETA</u>
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

<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

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