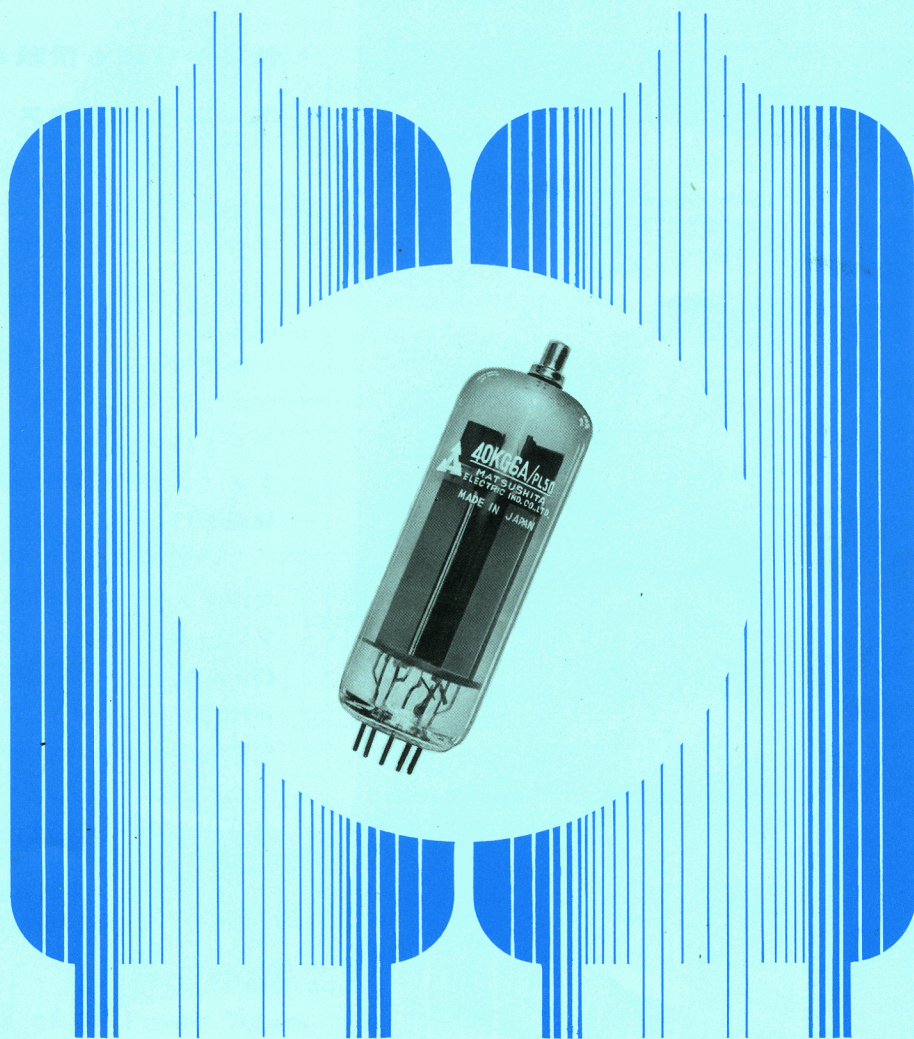


# マツシタ 受信用真空管 MATSUSHITA RECEIVING TUBES



松下電子工業株式会社  
MATSUSHITA ELECTRONICS CORPORATION





皆様から最も信頼されている

### エレクトロニクス メーカー

松下電子工業は、松下電器産業グループの一環として1952年に創設されて以来、電子管、ブラウン管、半導体および照明用光源などの生産・販売を通じて電子産業に活躍しております。

松下電子工業は、世界に誇りうる最も近代的な専門工場を有し、徹底した品質管理のもと膨大なエレクトロニクス素子を生産するとともに、技術者は絶えまない研究と開発を行なっております。

このように優れた環境と技術から生まれたナショナル受信管は、高感度、高品質のフレーム・グリッド・チューブ、300mA・450mA・600mAシリーズなどを網羅し、各種テレビ、ラジオ、アンプなどに使用され、他の電子部品と共に皆様から大変ご好評をいただき、今日も続々と最高品質の製品を送り出しています。



## MATSUSHITA ELECTRONICS CORPORATION

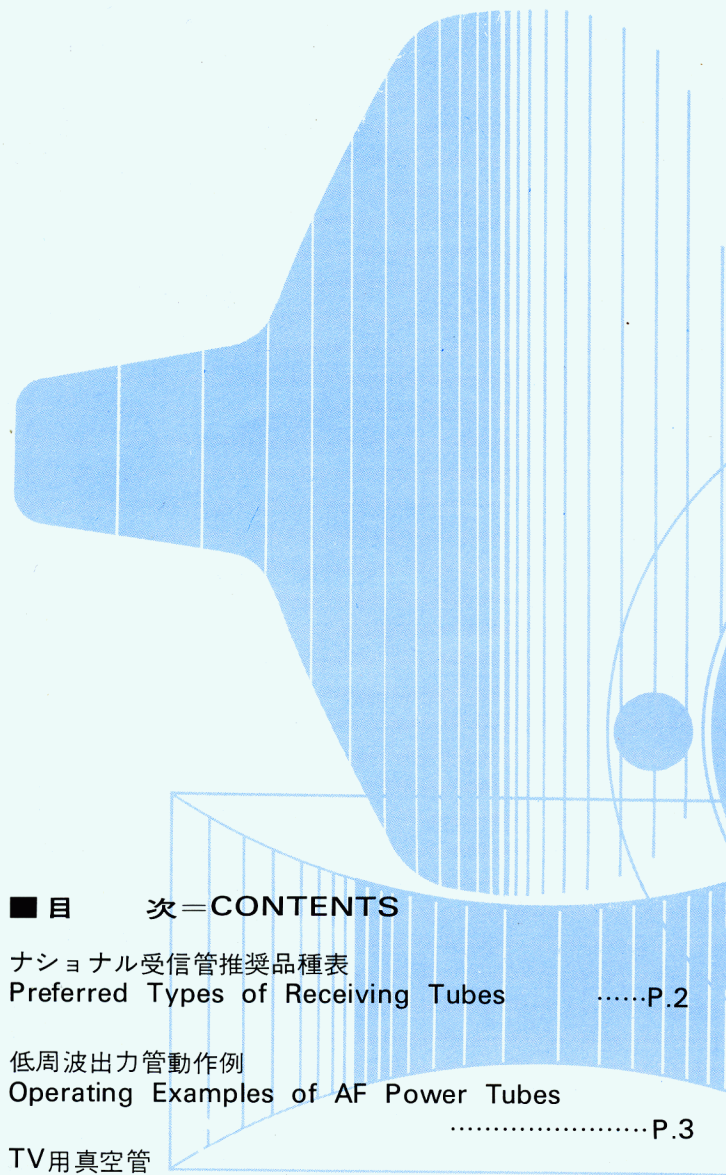
### Reliable Leader in Electronics

Since its establishment in 1952, Matsushita Electronics Corporation has been engaged in wide-range production as well as sales of electronics, including electronic tubes cathode ray tubes, semiconductor devices as well as lighting sources. The products of Matsushita Electronics Corporation are sold and served under the trade marks of PANASONIC (U.S.A. and Canada) and NATIONAL (the other part of the world). The most advanced factories with the world's top level facilities and continuous research activities are turning out reliable products in large quantities.

Matsushita's receiving tubes are available in unique high sensitivity high performance frame grid tube execution as well as in various heater series of 300mA, 450mA, 600mA, etc.

These tubes have been used for various applications including TV receivers, radio sets, etc. together with other high quality electronic components by Matsushita.

Matsushita Electronics Corporation is always pleased to serve you with such superior quality receiving tubes as well as other electronic products.



### ■ 目 次=CONTENTS

ナショナル受信管推奨品種表 Preferred Types of Receiving Tubes	.....P.2
低周波出力管動作例 Operating Examples of AF Power Tubes	.....P.3
TV用真空管 Tubes for TV Sets	..... P.4—P.15
AM/FMラジオ用真空管 Tubes for AM/FM Radio Sets	.....P.16&P.17
Hi-Fi用真空管、その他の真空管 Tubes for Hi-Fi Sets, Other Applications	.....P.18&P.19
外形図 Outline Drawings	.....P.20&P.21



テレビ球

TUBES for TV SETS

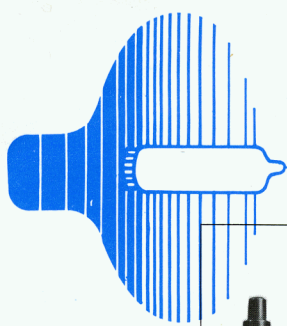
用途		白黒テレビ用				カラーテレビ用		用途	
Application		Black & White TV Receiver				Colour TV Receiver		Application	
		真空管式 Tube System				真空管式 Tube System (300mA)			
		トランスレス Transformerless			トランス付 With Transformer				
		300mA	450mA	600mA	6.3V	300mA	450mA		
チューナー	高周波増幅	4GK5 4HA5	3GK5 3HA5	2GK5 2HA5	6GK5 6HA5	4GK5 4HA5	3GK5 3HA5	RF AMP.	TUNER
	発振・混合	7GS7 8GJ7	5GS7 5GJ7	4GS7 4GJ7	6GS7 6GJ7	7GS7 8GJ7	5GS7 5GJ7	OSC., MIXER	
映像	中間周波増幅	6EH7 6EJ7	4EH7 4EJ7	3EH7 3EJ7	6EH7 6EJ7	6EH7 6EJ7	4EH7 4EJ7	IF AMP.	VIDEO
	増幅	11LY6 12BY7A 15DQ8	8LS6 10DX8 11MS8	12BY7A	6DX8 12BY7A	11LY6 12BY7A 15DQ8	8LS6 10DX8	AMP.	
音声	中間周波増幅	6BX6 9GH8A	6GH8A	5GH8A	6BX6 6GH8A	6BX6		IF AMP.	SOUND
	検波	6DT6A	4DT6A		6DT6A	6DT6A	4DT6A	DET.	
	増幅・出力	14GW8 16A8	11BM8	8B8	6BM8 6GW8	16A8	11BM8	AMP. OUTPUT	
同期分離 増幅・AGC	6AB8 9GH8A 15DQ8	6GH8A 10DX8	4BL8 5GH8A	6AB8 6GH8A	6JX8 9GH8A 12FQ7 15DQ8	6GH8A 8FQ7 10DX8		SYNC. SEPA- RATOR AMP. AGC	
垂直発振 偏向出力	発振	18GV8	11MS8		6GV8	9GH8A 12FQ7	6GH8A 8FQ7	OSC.	VERT. BEF.
	出力	18GV8	11MS8		6GV8	15CW5	10CW5	OUTPUT	
水平発振・AFC 偏向出力	発振・AFC	8A8 9JW8	6GH8A 6LX8	4BL8 5GH8A	6BL8 6GH8A	12FQ7	8FQ7	OSC., AFC	HORIZ. DEF.
	出力	25E5 29KQ6	21KQ6 38HE7	12B-B14 12G-B3	6CM5	29KQ6 40KG6A	21KQ6	OUTPUT	
ダンパー		17Z3 30AE3	20AQ3 38HE7	16AQ3	6AL3 6R3	30AE3 42EC4	20AQ3	DAMPER.	
高圧整流		1BK2 1S2 1S2A 1X2B	1BK2 1S2 1S2A 1X2B	1BK2 1S2 1S2A 1X2B	1BK2 1S2 1S2A 1X2B	3A3 3CU3 3CU3A 3CV3 3CV3A	3A3 3CU3 3CU3A 3CV3 3CV3A	EHT RECT.	
シャント・レギュレータ						6BK4B 6BK4C	6BK4B 6BK4C	SHUNT REGULATOR	
フォーカス・整流						1X2B	1X2B	FOCUS RECT.	
カラー回路						6AL5 6BX6 9AQ8 9GH8A 12BH7A 15DQ8	4EJ7 6GH8A	COLOUR CIRCUIT	



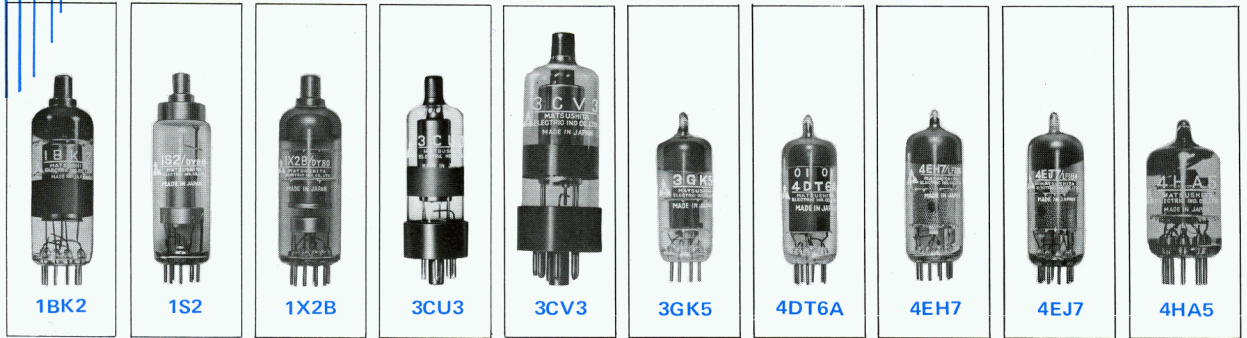
品 種 Type	動作別 Classification by operation	接 続 Con- nection	特 性											Pf (W)	品 種 Type
			E <sub>b</sub> (V)	E <sub>c2</sub> (V)	E <sub>c1</sub> (V)	I <sub>b</sub> (mA)	I <sub>b sig</sub> (mA)	I <sub>c2</sub> (mA)	I <sub>c2 sig</sub> (mA)	E <sub>sig</sub> (rms) (V)	R <sub>L</sub> (kΩ)	P <sub>o</sub> (w)	K. F (%)		
*6 A Q 5	A <sub>1</sub> S	Triode Connect.	250	250	-12.5	45	47	4.5	7	8.8	5	4.5	8	2.84	*6 A Q 5
	AB <sub>1</sub> PP		250	250	-15	35 × 2	39.5 × 2	2.5 × 2	6.5 × 2	10.6	10	10	5		
	A <sub>1</sub> S		250		-17.5	31	34			12.4	3	1.1	9		
	AB <sub>1</sub> PP		250		-22.5	16 × 2	22.5 × 2			15.9	7	3.1	4		
*6 A R 5	A <sub>1</sub> S	Triode Connect.	250	250	-18	32	33	5.5	10	12.7	7.6	3.4	11	2.52	*6 A R 5
	AB <sub>1</sub> PP		250	250	-25	17.5 × 2	27 × 2	4 × 2	8.5 × 2	17.7	11	7.5	5		
	A <sub>1</sub> S		250		-22.5	25	26			15.9	4	0.9	6		
	AB <sub>1</sub> PP		250		-27.5	14 × 2	17.5 × 2			19.4	9	2.3	3		
*6 B M 8 16 A 8 *50 B M 8	A <sub>1</sub> S	Triode Connect.	272	$R_{g2} = \frac{272}{2200}\Omega$	650Ω*	28	27	6.5	10.8	9.5	8	3.5	10	4.91 4.8 5.0	*6 B M 8 16 A 8 *50 B M 8
	AB <sub>1</sub> PP		250	200	220Ω*	28 × 2	31 × 2	5.8 × 2	13 × 2	12.5	10	10.5	4.8		
	A <sub>1</sub> S		200		-17	35	36			12	3	1.5	8		
	AB <sub>1</sub> PP		200		-19	20 × 2	33 × 2			13.4	4	4	4		
*6 B Q 5	A <sub>1</sub> S	Triode Connect.	250	250	-7.3	48	49.5	5.5	10.8	4.3	5.2	5.7	10	4.79	*6 B Q 5
	AB <sub>1</sub> PP		300	300	130Ω*	36 × 2	46 × 2	4 × 2	11 × 2	10	8	17	4		
	B <sub>1</sub> PP		300	300	-14.7	7.5 × 2	46 × 2	0.8 × 2	11 × 2	10	8	17	4		
	A <sub>1</sub> S		250		270Ω*	34	36			6.7	3.5	1.95	9		
*6 C A 7	AB <sub>1</sub> PP	Triode Connect.	Ebb 375	470Ω▲	130Ω*	75 × 2	95 × 2	11.5 × 2	22.5 × 2	21	3.4	35	5	9.45	*6 C A 7
	B <sub>1</sub> PP		Ebb 800	750Ω▲	-39	25 × 2	91 × 2	3 × 2	19 × 2	23.4	11	100	5		
	A <sub>1</sub> S		Ebb 375		270Ω*	70	73			18.9	3	6	8		
	AB <sub>1</sub> PP		Ebb 400		270Ω*	65 × 2	71 × 2			22	5	16.5	3		
6 C M 5 25 E 5	B <sub>1</sub> PP	Triode Connect.	300	150	-29	18 × 2	100 × 2	0.5 × 2	19 × 2	20	3.5	44.5	7.2	7.88 7.5	6 C M 5 25 E 5
	B <sub>1</sub> PP		250		-45	20 × 2	70 × 2			32	3	16.4	4		
*6 C W 5 10 C W 5 15 C W 5	A <sub>1</sub> S	Triode Connect.	170	170Ω▲	-12.5	70	70	5	22	7	2.4	5.6	10	4.79 4.77 4.5	*6 C W 5 10 C W 5 15 C W 5
	AB <sub>1</sub> PP		250	200	150Ω*	50 × 2	55 × 2	2 × 2	13 × 2	13	5.5	18.5	4.5		
	P		300		120Ω*	66	64			5.4	1	4.5	9.3		
	A <sub>1</sub> S		170		-15.1	50	62			10.8	1.2	2.1	10		
*6 G W 8 14 G W 8 *6 H - B 26 *50 H - B 26	AB <sub>1</sub> PP	Triode Connect.	170		270Ω*	32.5 × 2	36 × 2			13.4	3.5	3.9	3.8	4.16 4.35 7.88 7.5	*6 G W 8 14 G W 8 *6 H - B 26 *50 H - B 26
	A <sub>1</sub> S		250	250	170Ω*	36	38	5.5	12.5	3.2	7	4	10		
	AB <sub>1</sub> PP		300	300	132Ω*	31 × 2	37 × 2	5 × 2	10.6 × 2	8.7	9.1	14.3	5		
	A <sub>1</sub> S		130	130	-12	123	132	8.5	26	8.5	0.8	8	11		
15M-P19	AB <sub>1</sub> PP	Triode Connect.	300	150	-26	29 × 2	112 × 2	0.8 × 2	22 × 2	18.5	3.2	47	4.5	4.5	15M-P19
	A <sub>1</sub> S		100	100	-6.7	43	43	3	13.5	6.7	2.4	2.1	12		
	AB <sub>1</sub> PP		100	100	-9	23 × 2	42 × 2	2 × 2	12 × 2	6.4	3	4.3	4		
	A <sub>1</sub> S		100		-8	35	36			5.6	1.5	0.5	5		
*50 C 5	AB <sub>1</sub> PP	Triode Connect.	100	110	-8	49	50	4	8.5	5.7	2.5	2.3	10	7.5	*50 C 5
	A <sub>1</sub> S		100	100	-9	26 × 2	35 × 2	2.5 × 2	11 × 2	6.4	3	3.3	4		
	AB <sub>1</sub> PP		100		-7.5	40	41			5.3	1	0.4	4		
	A <sub>1</sub> S		100		-11.5	15 × 2	20 × 2			8.1	3	1	2		
*30 A 5	AB <sub>1</sub> PP	Triode Connect.	100	100	-6.7	43	43	3	11	4.3	2.4	1.9	10	4.5	*30 A 5
	A <sub>1</sub> S		100	100	-9	23 × 2	42 × 2	2 × 2	12 × 2	6.4	3	4.3	4		
	AB <sub>1</sub> PP		100		-8	35	36			5.6	1.5	0.5	5		
	A <sub>1</sub> S		100		-11.5	14 × 2	19 × 2			8.1	4	1.2	2		
*30M-P27	AB <sub>1</sub> PP	Triode Connect.	130	110	-9	64	64	2.5	17	6.4	1.6	4	12	4.5	*30M-P27
	A <sub>1</sub> S		130	110	-9	65 × 2	64.7 × 2	2.5 × 2	8.5 × 2	6.4	3.2	8.25	8		
	AB <sub>1</sub> PP		110	110	-7.5	40	41	3	7	5.3	2.5	1.5	10		
	A <sub>1</sub> S		100	100	-9	24 × 2	31 × 2	2 × 2	10 × 2	6.4	3	2.5	4		
35 C 5	AB <sub>1</sub> PP	Triode Connect.	100		-7.5	34	35			5.3	1	0.3	4	5.25	35 C 5
	A <sub>1</sub> S		100		-11.5	14 × 2	17 × 2			8.1	3	0.7	2		
	AB <sub>1</sub> PP		100		-9	24 × 2	31 × 2	2 × 2	10 × 2	6.4	3	2.5	4		
	A <sub>1</sub> S		100		-7.5	40	41			5.3	1	0.3	4		
*35 E H 5 *50 E H 5	AB <sub>1</sub> PP	Triode Connect.	110	115	62Ω*	42	42	11.5	14.5	2.1	3	1.4	7	5.25 7.5	*35 E H 5 *50 E H 5
	A <sub>1</sub> S		140	120	68Ω*	23.5 × 2	26.5 × 2	5.5 × 2	8.85 × 2	6.67	6	3.8	5		
	AB <sub>1</sub> PP		250	250	-7.3	48	49.5	5.5	10.8	4.3	5.2	5.7	10		
	A <sub>1</sub> S		400	300	-15	7.5 × 2	52.5 × 2	0.8 × 2	12.5 × 2	10.5	8	24	4		
*7189	AB <sub>1</sub> PP	Triode Connect.	250		270Ω*	34	36			6.7	3.5	1.95	9	4.79	*7189
	A <sub>1</sub> S		250		270Ω*	24 × 2	26 × 2			10	10	5.2	2.5		
	B <sub>1</sub> PP		400	300	-15	7.5 × 2	52.5 × 2	0.8 × 2	12.5 × 2	10.5	8	24	4		
	AB <sub>1</sub> PP		300		270Ω*	24 × 2	26 × 2			10	10	5.2	2.5		

\* Cathode Reactance





# TV用真空管

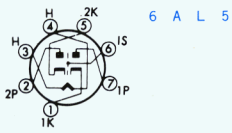


品 種			ベース	外形	カソード	ヒ ー タ		構 造	用 途	電 極 間 静 電 容 量 (外部シールドなし)		
Type			Base Con- nec- tions	Outline Draw- ing	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF		
Matsushita	European	●			Type	Ef(V)	If(mA)			C <sub>pg</sub> (Approx.)	C <sub>in</sub> (Approx.)	C <sub>out</sub> (Approx.)
1 B K 2		NT	9Y	21-7	Filament	1.4	550	Diode	HV Rect.	Cp-f 1.2	—	—
1 S 2	DY86	NT	9DT	21-31	Cathode	1.4	550	Diode	HV Rect.	Cp-k 1.55	—	—
1 S 2 A	DY87	NT	9DT	21-31	Cathode	1.4	550	Diode	HV Rect.	Cp-k 1.55	—	—
1 X 2 B		NT	9Y	21-7	Filament	1.25	200	Diode	HV Rect.	Cp-f 1.0	—	—
⊙2 G K 5		MT	7FP	18-2	Cathode	2.3	600	Triode ×	RF Amp.	0.52 △	5.0 △	3.5 △
⊙2 H A 5	XC900	MT	7GM	18-1	Cathode	2.2	600	Triode ×	RF Amp.	0.35 △	4.5 △	3.0 △
3 A 3		GT	8EZ	29-16A	Cathode	3.15	220	Diode	HV Rect.	Cp-k 1.5	—	—
3 C U 3		GT	8MK	29-02	Filament	3.15	280	Diode	HV Rect.	Cp-f is 1.5	—	—
3 C U 3 A		GT	8MK	29-02	Filament	3.15	280	Diode	HV Rect.	Cp-f is 1.5	—	—
3 C V 3		GT	8EZ	29-16A	Cathode	3.15	250	Diode	HV Rect.	Cp-k 1.6	—	—
3 C V 3 A		GT	8EZ	29-16A	Cathode	3.15	250	Diode	HV Rect.	Cp-k 1.6	—	—
3 D T 6 A		MT	7EN	18-2	Cathode	3.15	600	Pentode #	FM Det.	0.02 △	5.8 △	—
⊙3 E H 7	XF183	NT	9AQ	21-12	Cathode	3.4	600	Pentode <sup>b</sup>	RF, IF Amp.	0.0055	9.5	3.0
⊙3 E J 7	XF184	NT	9AQ	21-12	Cathode	3.4	600	Pentode #	RF, IF Amp.	0.0055	10.0	3.0
⊙3 G K 5		MT	7FP	18-2	Cathode	2.8	450	Triode ×	RF Amp.	0.52 △	5.0 △	3.5 △
⊙3 H A 5	LC900	MT	7GM	18-1	Cathode	2.7	450	Triode ×	RF Amp.	0.35 △	4.5 △	3.0 △
4 A B 8	LCL80	NT	9AT	21-3	Cathode	4.2	450	Triode ◊ Pentode #	AF Amp. Sync. Separator Power Amp.	0.9 max. 0.2	2.1 4.3	0.8 4.8
4 B L 8	XCF80	NT	9DC	21-2	Cathode	4.5	600	Triode ◊ Pentode #	Sync. Separator Osc. AF, RF Amp.	1.5 max. 0.025	2.5 5.2	1.8 3.4
4 D T 6 A		MT	7EN	18-2	Cathode	4.2	450	Pentode #	FM Det.	0.02 △	5.8	—
⊙4 E H 7	LF183	NT	9AQ	21-12	Cathode	4.4	450	Pentode <sup>b</sup>	RF, IF Amp.	0.0055	9.5	3.0
⊙4 E J 7	LF184	NT	9AQ	21-12	Cathode	4.4	450	Pentode #	RF, IF Amp.	0.0055	10.0	3.0
⊙4 G J 7	XCF801	NT	9QA	21-20	Cathode	4.1	600	Triode ◊ Pentode #	Osc. Mixer	1.8 △ max. 0.012 △	3.3 △ 6.2 △	1.7 △ 3.7 △
⊙4 G K 5		MT	7FP	18-2	Cathode	4.0	300	Triode ×	RF Amp.	0.52 △	5.0 △	3.5 △
⊙4 G S 7		NT	9GF	21-2	Cathode	4.0	600	Triode ◊ Pentode #	Osc. Mixer	2.0 0.012	2.4 6.0	1.25 3.6
⊙4 H A 5	PC900	MT	7GM	18-1	Cathode	3.9	300	Triode ×	RF Amp.	0.35 △	4.5 △	3.0 △
⊙4 R-HH15		NT	9AJ =9DE	21-2	Cathode	4.0	600	Twin-Triode ◊	RF Amp.	(Unit 1) 0.9 △ (Unit 2) 0.9 △	3.8 △ 6.3 △	1.3 △ 2.4 △

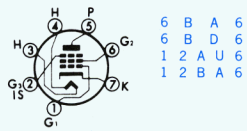
★...Tentative Data    ⊙...Frame Grid Tube    ●...(MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    #...Sharp-Cutoff  
<sup>b</sup>...Remote-Cutoff    ◊...Semi Remote-Cutoff    ×...High-μ    ◊...Medium-μ    †...Low-μ    ◆...Design Maximum Value  
 △...With External Shield    □...Absolute Maximum Value



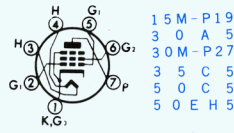
# TUBES for TV SETS



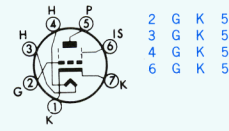
6BT



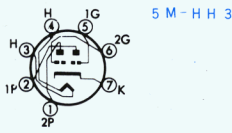
7BK



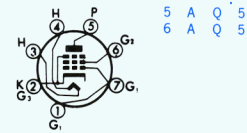
7CV



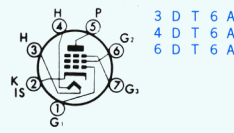
7FP



7BF



7BZ



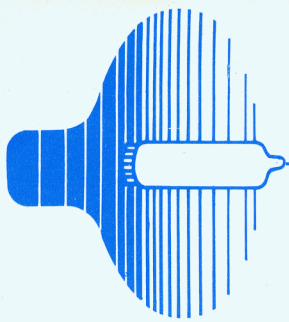
7EN

最大定格(設計中心値)				特 性									備 考	品 種	
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type	
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ik(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> (V)	Rk(Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μU)	rp(kΩ)		Po(w)	Matsushita
Epx=24kV◇		ib=44mA◇		Max. DC output current=0.88mA◇										1 B K 2	
ePx=27kV□		ib=40mA		Max. DC output current=0.8mA										1 S 2	
ePx=27kV□		ib=40mA		Max. DC output current=0.8mA										1 S 2 A	
ePx=22kV□		ib=45mA◇		Max. DC output current=0.5mA◇										1 X 2 B	
200◇	—	2.5◇	22◇	135	—	-1		11.5	—	78	15000	5.4	—	2 G K 5◎	
200◇	—	2.2◇	20◇	135	—	-1		11.5	—	76	14500	—	—	2 H A 5◎	
ePx=30kV◇		ib=88mA◇		Max. DC output current=1.7mA										3 A 3	
Epx=33kV◇		ib=100mA◇		Max. DC output current=2.0mA◇										3 C U 3	
Epx=33kV◇		ib=100mA◇		Max. DC output current=2.0mA◇ X線放射量25mR/Hmax										3 C U 3 A	
ePx=35kV◇		ib=100mA		Max. DC output current=1.9mA◇										3 C V 3	
ePx=35kV◇		ib=100mA		Max. DC output current=1.9mA◇ X線放射量25mR/Hmax										3 C V 3 A	
330◇	Ecc <sub>2</sub> =330V◇	1.7◇	—	150	100	560		155	1.8	—	1350	150	—	Ec <sub>3</sub> =0, Gm(g <sub>s-p</sub> )=515μU	3 D T 6 A
250	250	2.5	20	200	90	-2		12	4.5	—	12500	500	—	Ec <sub>3</sub> =0	3 E H 7◎
250	250	2.5	25	200	200	-2.5		10	4.1	—	15000	380	—	Ec <sub>3</sub> =0	3 E J 7◎
200◇	—	2.5◇	22◇	135	—	-1		11.5	—	78	15000	5.4	—		3 G K 5◎
200◇	—	2.2◇	20◇	135	—	-1		11.5	—	76	14500	—	—		3 H A 5◎
200	—	1.0	8	100	—	0		8	—	20	1900	—	—		4 A B 8
400	250	3.5	25	200	200	-8		17.5	3.3	—	3300	150	1.4	Ec <sub>3</sub> =0 RL=11kΩ	
250	—	1.5	14	100	—	-2		14	—	20	5000	—	—		4 B L 8
250	175	1.7	14	170	170	-2		10	2.8	—	6200	400	—		
330◇	Ecc <sub>2</sub> =330V◇	1.7◇	—	150	100	560		1.55	1.8	—	1350	150	—	Ec <sub>3</sub> =0 Gm(g <sub>s-p</sub> )=515μU	4 D T 6 A
250	250	2.5	20	200	90	-2		12	4.5	—	12500	500	—	Ec <sub>3</sub> =0	4 E H 7◎
250	250	2.5	25	200	200	-2.5		10	4.1	—	15000	380	—	Ec <sub>3</sub> =0	4 E J 7◎
125	—	1.5	20	100	—	-3		15	—	20	9000	—	—		4 G J 7◎
250	250	2.0	18	170	120	-1.4		10	3	—	11000	min350	—		
200◇	—	2.5◇	22◇	135	—	-1		11.5	—	78	15000	5.4	—		4 G K 5◎
125	—	1.5	15	100	—	-3		14	—	17	5500	—	—		4 G S 7◎
250	150	2.0	18	170	150	-1.2		10	3.3	—	12000	min350	—		
200◇	—	2.2◇	20◇	135	—	-1		11.5	—	76	14500	—	—		4 H A 5◎
165◇	—	1.7	22◇	90	—	143		7	—	44	8000	—	—		4 R-HH15◎

LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.

(ベース接続中の記号(LC)は、とくに指定する接続方法以外に使用してはなりません。)





# TV用真空管

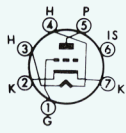


品 種			ベース	外形	カソード	ヒータ		構造	用途	電極間静電容量 (外部シールドなし)		
Type			Base Con- nec- tions	Outline Draw- ings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF		
Matsushita	European	●			Type	Ef(V)	If(mA)			Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)
5 A Q 5		MT	7BZ	18-3	Cathode	4.7	600	Beam Power Tube	Power Amp.	0.4	8.0	8.5
5 G H 8 A		NT	9MP	21-2	Cathode	6.3	365	Triode ◊ Pentode #	Sync. Separator Osc. Amp.	2.0 0.012	2.4 5.8	1.1 3.5
◎ 5 G J 7	LCF801	NT	9QA	21-20	Cathode	5.6	450	Triode ◊ Pentode #	Osc. Mixer	1.8 ▲ max. 0.012 ▲	3.3 ▲ 6.2 ▲	1.7 ▲ 3.7 ▲
◎ 5 G S 7		NT	9GF	21-2	Cathode	5.4	450	Triode ◊ Pentode #	Osc. Mixer	2.0 0.012	2.4 6.0	1.25 3.6
5 H G 8	LCF86	NT	9MP	21-2	Cathode	5.3	450	Triode ◊ Pentode #	Osc. Mixer	2.0 0.012	2.4 5.8	1.25 3.5
5 M - HH3		MT	7BF	18-2	Cathode	4.7	600	Twin-Triode ◊	Osc., Mixer	1.3	2.4	0.4
6 A B 8	ECL80	NT	9AT	21-3	Cathode	6.3	300	Triode ◊ Pentode #	AF Amp. Sync. Separator Power Amp.	0.9 max. 0.2	2.1 4.3	0.8 4.8
6 A L 3	EY88	NT	9CB	21-11	Cathode	6.3	1.55A	Diode	Damper	Cp-all 8.6	Ck-f 2.0	—
6 A L 5	EAA91	MT	6BT	18-1	Cathode	6.3	300	Twin-Diode	Det.	C <sub>1,P-2,P</sub> 0.068	Cp-all 2.5	Ck-all 3.4
6 B K 4 B		GT	8GC	38-19 38-29A	Cathode	6.3	200	Beam Triode	HV Shunt Regulator	0.03	2.6	1.0
6 B K 4 C		GT	8GC	38-19 38-29A	Cathode	6.3	200	Beam Triode	HV Shunt Regulator	0.03	2.6	1.0
6 B L 8	ECF80	NT	9DC	21-2	Cathode	6.3	430	Triode ◊ Pentode #	AF, RF Amp. Sync. Separator	1.5 max. 0.025	2.5 5.2	1.8 3.4
6 B X 6	EF80	NT	9AQ	21-3	Cathode	6.3	300	Pentode #	RF, IF Amp.	0.007	6.9	3.1
6 C M 5	EL36	GT	8GT	29-12A	Cathode	6.3	1.25A	Beam Power Tube	Horiz. Def. Power Amp.	max. 1.1	17.5	8.0
6 C W 5	EL86	NT	9CV	21-4	Cathode	6.3	760	Beam Power Tube	Vert. Def. Power Amp.	max. 0.6	13	6.8
◎ 6 D J 8	ECC88	NT	9AJ =9DE	21-2	Cathode	6.3	365	Twin-Triode ◊	RF Amp.	(Unit 1) 1.4 ▲ (Unit 2) 1.4 ▲	3.3 ▲ 6.0 ▲	2.5 ▲ 3.2 ▲
6 D T 6 A		MT	7EN	18-2	Cathode	6.3	300	Pentode #	FM Det.	0.02 ▲	5.8 ▲	—
6 D X 8	ECL84	NT	9HX	21-3	Cathode	6.3	720	Triode × Pentode #	Sync. Separator Video Amp.	2.7 max. 0.1	3.8 8.7	2.3 4.2
6 E C 4	EY500	Mag Noval	9-14	38-02	Cathode	6.3	2.1A	Diode	Damper	Cp-K 13	Ck-f 3.7	—
◎ 6 E H 7	EF183	NT	9AQ	21-12	Cathode	6.3	300	Pentode <sup>b</sup>	RF, IF Amp.	0.0055	9.5	3.0
◎ 6 E J 7	EF184	NT	9AQ	21-12	Cathode	6.3	300	Pentode #	RF, IF Amp.	0.0055	10.0	3.0
6 F Q 7		NT	9LP	21-3	Cathode	6.3	600	Twin-Triode ◊	Horiz & Vert. Osc.	(Unit 1) 3.6 (Unit 2) 3.8	2.4 2.4	0.34 0.26
6 G H 8 A		NT	9DC	21-2	Cathode	6.3	450	Triode ◊ Pentode #	Sync. Separator Osc. Amp.	1.7 max. 0.02	3.0 5.0	1.4 2.6

★ ...Tentative Data    ◎ ...Frame Grid Tube    ● ... (MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    # ...Sharp-Cutoff  
<sup>b</sup> ...Remote-Cutoff    ○ ...Semi Remote-Cutoff    × ...High-μ    ◊ ...Medium-μ    † ...Low-μ    ◆ ...Design Maximum Value  
▲ ...With External Shield    □ ...Absolute Maximum Value

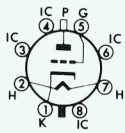


# TUBES for TV SETS



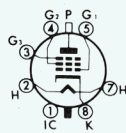
2 H A 5  
3 H A 5  
4 H A 5  
6 H A 5

7GM



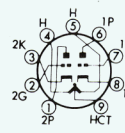
6 B K 4  
6 B K 4 B  
6 B K 4 C

8GC



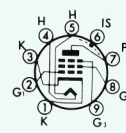
5 0 J Y 6

8MG



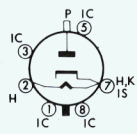
1 2 A T 7  
1 2 B H 7 A

9A



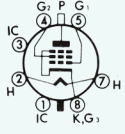
3 E H 7  
3 E J 7  
4 E H 7  
4 E J 7  
6 B X 6  
6 E H 7  
6 E J 7

9AQ



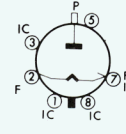
3 A 3  
3 C V 3  
3 C V 3 A

8EZ



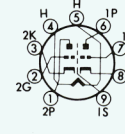
6 C M 5  
1 2 G B 3  
1 2 G B 7  
2 5 E 5

8GT



3 C U 3  
3 C U 3 A

8MK



4 R H H 15  
6 A Q 8  
6 D J 8  
6 D T 8  
6 R H H 15  
7 D J 8  
9 A Q 8  
1 2 D T 8  
1 7 W E 8

9AJ=9DE

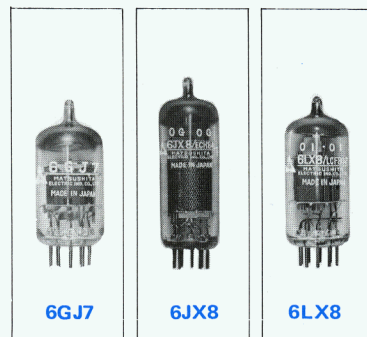
最大定格 (設計中心値)				条 件 特 性									備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type
E <sub>b</sub> (V)	E <sub>c<sub>2</sub></sub> (V)	P <sub>p</sub> (w)	I <sub>k</sub> (mA)	E <sub>b</sub> (V)	E <sub>c<sub>2</sub></sub> (V)	E <sub>c<sub>1</sub></sub> , R <sub>k</sub> (V/Ω)	I <sub>b</sub> (mA)	I <sub>c<sub>2</sub></sub> (mA)	μ	G <sub>m</sub> (μ $\bar{U}$ )	r <sub>p</sub> (kΩ)	Po(w)		Matsushita
275◇	275◇	12◇	—	250	250	-12.5	45	4.5	—	4100	52	4.5	R <sub>L</sub> = 5kΩ	5 A Q 5
125	—	1.5	15	100	—	-3	14	—	17	5700	—	—		5 G H 8 A
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		
125	—	1.5	20	100	—	-3	15	—	20	9000	—	—		5 G J 7◎
250	250	2.0	18	170	120	-1.4	10	3	—	11000	min350	—		
125	—	1.5	15	100	—	-3	14	—	17	5500	—	—		5 G S 7◎
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		
125	—	1.5	15	100	—	-3	14	—	17	5700	—	—		5 H G 8
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		
220□	—	1.65□	25□	100	—	-1	11	—	38	7500	5.1	—		5 M - H H 3
200	—	1.0	8	100	—	0	8	—	20	1900	—	—		6 A B 8
400	250	3.5	25	200	200	-8	17.5	3.3	—	3300	150	1.4	E <sub>c<sub>2</sub></sub> = 0 R <sub>L</sub> = 11kΩ	6 A L 3
e <sub>px</sub> = 7.5kV◇ P <sub>p</sub> = 5W		I <sub>b</sub> = 220mA e <sub>hk</sub> = 6.6 kV		Maximum DC output current = 9mA										6 A L 5
e <sub>px</sub> = 330V		I <sub>b</sub> = 54mA												6 A L 5
E <sub>bb</sub> = 60kV◇	E <sub>c</sub> = -135◇	40◇	I <sub>b</sub> = 1.6◇	—	—	—	—	—	2000	—	—	—		6 B K 4 B
E <sub>bb</sub> = 60kV◇	E <sub>c</sub> = -135◇	40◇	I <sub>b</sub> = 1.6◇	—	—	—	—	—	2000	X線放射量0.5mR/H max				6 B K 4 C
250	—	1.5	14	100	—	-2	14	—	20	5000	—	—		6 B L 8
250	175	1.7	14	170	170	-2	10	2.8	—	6200	400	—		
300	300	2.5	15	170	170	-2	10	2.5	—	7400	500	—	E <sub>c<sub>3</sub></sub> = 0	6 B X 6
250 (e <sub>p</sub> = 7kV)	250	12.0	200	100	100	-8.2	100	7	—	14000	5	—		6 C M 5
250	250	12.0	100	170	170	-12.5	70	3.5	—	11000	26	5.1	R <sub>L</sub> = 2kΩ	6 C W 5
130	—	1.8	25	90	—	-1.3	15	—	33	12500	—	—		6 D J 8◎
330◇	E <sub>c<sub>2</sub></sub> = 330◇	1.7◇	—	150	100	560	1.55	1.8	—	1350	150	—	E <sub>c<sub>2</sub></sub> = 0V, G <sub>m</sub> (g <sub>2-p</sub> ) = 515μ $\bar{U}$	6 D T 6 A
250	—	1.0	12	200	—	-1.7	3	—	65	3000	—	—		6 D X 8
250	250	4.0	40	170	170	-2.1	18	3	—	11000	min100	—		
—	e <sub>hk</sub> = 6.3kV	11□	I <sub>b</sub> = 440	—	—	—	—	—	—	—	—	—		6 E C 4
250	250	2.5	20	200	90	-2	12	4.5	—	12500	500	—	E <sub>c<sub>3</sub></sub> = 0V	6 E H 7◎
330	250	2.5	25	200	200	-2.5	10	4.1	—	15000	380	—	E <sub>c<sub>3</sub></sub> = 0V	6 E J 7◎
330◇	—	4.0◇	22◇	250	—	-8	9	—	20	2600	7.7	—		6 F Q 7
330	—	2.5	—	125	—	-1	13.5	—	46	8500	5.4	—		6 G H 8 A
350	330	2.5	20	125	125	-1	12	4	—	7500	200	—		

LC. . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.  
〔ベース接続中の記号 (LC) は、とくに指定する接続方法似外に使用してはなりません。〕





# TV用真空管

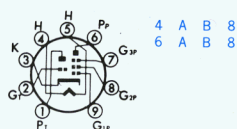


品 種		ベース	外形	カソード	ヒ ー タ		構 造	用 途	電 極 間 静 電 容 量 (外部シールドなし)			
Type		Base Con- nec- tions	Outline Draw- ings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF			
Matsushita	European			Type	Ef(V)	If(mA)			Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)	
◎6 G J 7	ECF801	NT	9QA	21-20	Cathode	6.3	410	Triode ◇ Pentode #	Osc. Mixer	1.8 <sup>▲</sup> max. 0.012 <sup>▲</sup>	3.3 <sup>▲</sup> 6.2 <sup>▲</sup>	1.7 <sup>▲</sup> 3.7 <sup>▲</sup>
◎6 G K 5		MT	7FP	18-2	Cathode	6.3	180	Triode ×	RF Amp.	0.52 <sup>▲</sup>	5.0 <sup>▲</sup>	3.5 <sup>▲</sup>
6 G K 6		NT	9GK	21-4	Cathode	6.3	760	Power Pentode	Power Amp Vert. Def	max. 0.14	10.0	7.0
◎6 G S 7		NT	9GF	21-2	Cathode	6.3	365	Triode ◇ Pentode #	Osc. Mixer	2.0 0.012	2.4 6.0	1.25 3.6
6 G V 8	ECL85	NT	9LY	21-4	Cathode	6.3	900	Triode × Beam Power Tube	Vert. Def. Osc. Video Amp Power Amp	— —	— —	— —
◎6 H A 5	EC900	MT	7GM	18-1	Cathode	6.3	180	Triode ×	RF Amp.	0.35 <sup>▲</sup>	4.5 <sup>▲</sup>	3.0 <sup>▲</sup>
◎6 H G 8	ECF86	NT	9MP	21-2	Cathode	6.3	365	Triode ◇ Pentode #	Osc. Mixer	2.0 0.012	2.4 5.8	1.1 3.5
6 J X 8	ECH84	NT	10-54	21-3	Cathode	6.3	300	Triode Heptode ◇	Sync. Amp. Sync. Separator	1.1 0.009	3.0 —	— —
6 K G 6 A	EL509	Mag- Noval	9RJ	38-01	Cathode	6.3	2.0A	Beam Power Tube	Horiz. Def. Power Amp.	2.5	—	—
6 K Z 8		NT	9FZ	21-2	Cathode	6.3	450	Triode ◇ Pentode #	Osc. Mixer	1.6 <sup>▲</sup> max. 0.01 <sup>▲</sup>	3.2 <sup>▲</sup> 5.5 <sup>▲</sup>	1.8 <sup>▲</sup> 3.4 <sup>▲</sup>
6 L N 8	LCF80	NT	9DC	21-2	Cathode	6.0	450	Triode ◇ Pentode #	Sync. Separator, Osc. RF Amp., conv.	1.5 max. 0.025	2.5 5.2	1.8 3.4
6 L X 8	LCF802	NT	9DC	21-2	Cathode	6.0	450	Triode × Pentode #	Sync. Separator Horiz. Osc.	1.5 0.06	2.4 5.4	Cg-f max. 0.1 Cg-f max. 0.1
6 R 3	EY81	NT	9CB	21-8	Cathode	6.3	810	Diode	Damper	Cp-all 6.4	Ck-f 2.8	—
◎6 R-HH15		NT	9AJ =9DE	21-2	Cathode	6.3	365	Twin-Triode ◇	RF Amp.	(Unit 1) 0.9 <sup>▲</sup> (Unit 2) 0.9 <sup>▲</sup>	3.8 <sup>▲</sup> 6.3 <sup>▲</sup>	1.3 <sup>▲</sup> 2.4 <sup>▲</sup>
◎6 Y 9	EFL200	Decal 10pin	10-55	21-4	Cathode	6.3	800	Duplex-Pentode #	Video Amp. Sync. Separator, Amp.	(Unit 1) 0.105 (Unit 2) 0.14	12.0 10.0	7.0 7.0
◎7 D J 8	PCC88	NT	9AJ =9DE	21-2	Cathode	7.0	300	Twin-Triode ◇	RF Amp.	(Unit 1) 1.4 <sup>▲</sup> (Unit 2) 1.4 <sup>▲</sup>	3.3 <sup>▲</sup> 6.0 <sup>▲</sup>	2.5 <sup>▲</sup> 3.7 <sup>▲</sup>
◎7 G S 7		NT	9GF	21-2	Cathode	7.6	300	Triode ◇ Pentode #	Osc. Mixer	2.0 0.012	2.4 6.0	1.25 3.6

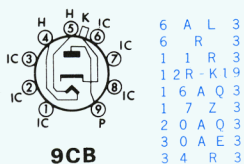
★ ...Tentative Data    ◎ ...Frame Grid Tube    ● ... (MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    # ...Sharp-Cutoff  
 b ...Sharp-Cutoff    ○ ...Semi Remote-Cutoff    × ...High- $\mu$     ◇ ...Medium- $\mu$     † ...Low- $\mu$     ◆ ...Design Maximum Value  
 ▲ ...With External Shield    □ ...Absolute Maximum Value



# TUBES for TV SETS



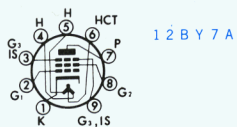
9AT



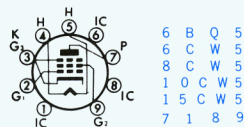
9CB



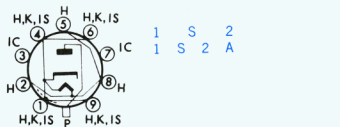
9DC



9BF



9CV



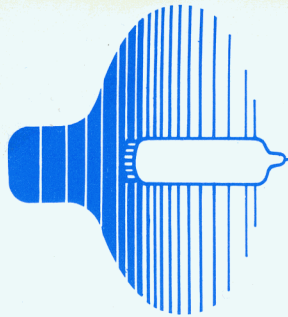
9DT

最大定格(設計中心値) Maximum Ratings (Design-Center Value)				条 件 特 性 Typical Operation and Characteristics									備 考 Remarks	品 種 Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ik(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> , Rk(V) (Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μU)	rp(kΩ)	Po(w)	Remarks	Matsushita
125	—	1.5	20	100	—	-3	15	—	20	9000	—	—		
250	250	2.0	18	170	120	-1.4	10	3	—	11000	min350	—		6 G K 5 <sup>⊙</sup>
200 <sup>⊙</sup>	—	2.5 <sup>⊙</sup>	22 <sup>⊙</sup>	135	—	-1	11.5	—	78	15000	5.4	—		6 G K 6
330	330	13.2	65	250	250	-7.3	48	5.5	—	11300	38	5.7	R <sub>L</sub> =5.2kΩ	6 G S 7
125	—	1.5	15	100	—	-3	14	—	17	5500	—	—		6 G V 8
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		6 H A 5 <sup>⊙</sup>
250	—	0.5	15	100	—	-0.85	5	—	60	5500	11	—		6 H G 8 <sup>⊙</sup>
250	250	7.0	75	170	170	-15	41	2.5	—	7300	26	—		6 J X 8
200 <sup>⊙</sup>	—	2.2 <sup>⊙</sup>	20 <sup>⊙</sup>	135	—	-1	11.5	—	76	14500	—	—		6 K G 6 A
125	—	1.5	15	100	—	-3	14	—	17	5700	—	—		6 K Z 8
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		6 L N 8
250	—	1.3	10	50	—	0	3	—	50	3700	—	—		6 L X 8
250	Ec <sub>2</sub> + = 250	1.7	12.5	135	Ec <sub>2</sub> + = 14	0	1.7	Ic <sub>2</sub> + = =0.9	—	2200	—	—	Ec <sub>3</sub> =0V	6 R 3
(ep=8kV) <sup>⊙</sup>	275	40	500	50	175	-10	800	70	—	—	—	—		6 R - HH15 <sup>⊙</sup>
330	—	2.5	—	125	—	-1	13.5	—	46	8500	5.4	—		6 Y 9 <sup>⊙</sup>
330	Ecc <sub>2</sub> 330	2.5	—	125	125	-1	12	—	—	7500	200	—		7 D J 8 <sup>⊙</sup>
250	—	1.5	14	100	—	-2	14	—	20	5000	—	—		7 G S 7 <sup>⊙</sup>
250	175	1.7	14	170	170	-2	10	2.8	—	6200	400	—		
250	—	1.4	10	200	—	-2	3.5	—	70	3500	—	—		
250	250	1.2	15	100	100	-1	6	1.7	—	5500	400	—		
epx=5kV Pp=3.5W		Ib=150mA ehk=5kV		—	—	—	—	—	—	—	—	—		
165 <sup>⊙</sup>	—	1.7 <sup>⊙</sup>	22 <sup>⊙</sup>	90	—	143	7	—	44	8000	—	—		
250	250	5.1	60	170	170	-2.7	30	7.2	—	22000	32	—		
250	250	1.5	15	150	150	-2.1	10	3	—	8500	160	—		
130	—	1.8	25	90	—	-1.3	15	—	33	12500	—	—		
125	—	1.5	15	100	—	-3	14	—	17	5500	—	—		
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		

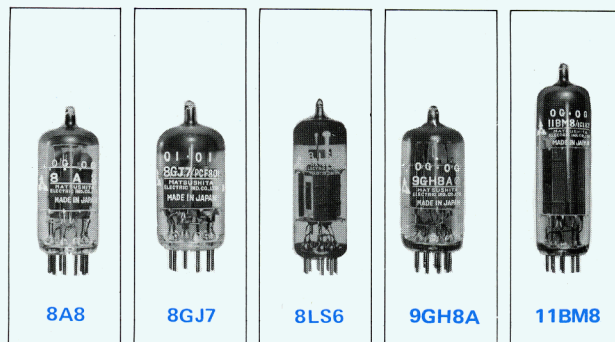
LC. . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.

[ベース接続中の記号(LC)は、とくに指定する接続方法似外に使用してはなりません。]





# TV用真空管

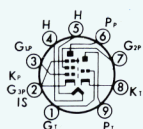


品 種		ベース	外形	カソード	ヒ ー タ		構 造	用 途	電極間静電容量 (外部シールドなし)				
Type		Base Con- nec- tions	Outline Draw- ings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF				
Matsushita	European			Type	Ef(V)	If(mA)			Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)		
◎7	H G 8	PCF86	NT	9MP	21-2	Cathode	7.2	300	Triode ◇ Pentode #	Osc. Mixer	2.0 0.012	2.4 5.8	1.1 3.5
8	A 8		NT	9DC	21-2	Cathode	8.4	300	Triode ◇ Pentode #	Sync. Separator, Osc. RF Amp.	1.5 max. 0.025	2.5 5.2	1.8 3.4
8	B 8	XCL82	NT	9EX	21-4	Cathode	8.0	600	Triode × Power Pentode	AF Amp. Vert. Def., Power Amp.	4.4 max. 0.3	2.7 9.3	4.3 8.0
8	C W 5	X L 8 6	NT	9CV	21-4	Cathode	8.0	600	Beam Power Tube	Vert. Def., Power Amp.	max. 0.6	13.0	6.8
8	F Q 7		NT	9LP	21-3	Cathode	8.4	450	Twin-Triode ◇	Horiz. & Vert. Osc.	(Unit 1) 3.6 (Unit 2) 3.8	2.4 2.4	0.34 0.26
◎8	G J 7	PCF801	NT	9QA	21-20	Cathode	8.0	300	Triode ◇ Pentode #	Osc. Mixer	1.8 <sup>△</sup> max. 0.012 <sup>△</sup>	3.3 <sup>△</sup> 6.2 <sup>△</sup>	1.7 <sup>△</sup> 3.7 <sup>△</sup>
8	L S 6		NT	9GK	21-3	Cathode	7.7	450	Pentode #	Video Amp.	0.075	7.2	4.2
9	A 8	PCF80	NT	9DC	21-2	Cathode	9.0	300	Triode ◇ Pentode #	Sync. Separator, Osc. RF, IF Amp.	1.5 max. 0.025	2.5 5.2	1.8 3.4
9	A Q 8	PCC85	NT	9AJ =9DE	21-2	Cathode	9.0	300	Twin-Triode ◇	Osc., Mixer	1.5	3.0	1.2
9	G H 8 A		NT	9DC	21-2	Cathode	9.45	300	Triode ◇ Pentode #	Sync. Separator Horiz. Osc.	1.7 max. 0.02	3.0 5.0	1.4 2.6
9	J W 8	PCF802	NT	9DC	21-2	Cathode	9.0	300	Triode × Pentode #	Sync. Separator Horiz. Osc.	1.5 0.06	2.4 5.4	Cg-f max. 0.1 Cg-f max. 0.1
10	C W 5	L L 8 6	NT	9CV	21-4	Cathode	10.6	450	Beam Power Tube	Vert. Def., Power Amp.	max. 0.6	13.0	6.8
10	D X 8	LCL84	NT	9HX	21-3	Cathode	10.2	450	Triode × Pentode #	Sync. Separator Video Amp.	2.7 max. 0.1	3.8 8.7	2.3 4.2
10	G K 6		NT	9GK	21-4	Cathode	10.6	450	Power Pentode	Power Amp. Video Amp.	max. 0.14	10.0	7.0
10	G V 8	LCL85	NT	9LY	21-4	Cathode	10.6	450	Triode × Beam Power Tube	Vert. Def., Osc. Vert. Def., Power Amp.	— —	— —	— —
11	B M 8	LCL82	NT	9EX	21-4	Cathode	10.7	450	Triode × Power Pentode	AF Amp. Vert. Def., Power Amp.	4.4 max. 0.3	2.7 9.3	4.3 8.0

★ ...Tentative Data    ◎ ...Frame Grid Tube    ● ... (MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    #...Sharp-Cutoff  
 b ...Remote-Cutoff    ○ ...Semi Remote-Cutoff    × ...High-μ    ◇ ...Medium-μ    † ...Low-μ    ◆ ...Design Maximum Value  
 △ ...With External Shield    □ ...Absolute Maximum Value

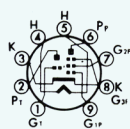


# TUBES for TV SETS



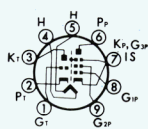
6 B M 8  
8 B B 8  
1 1 B M 8  
1 6 A 8  
5 0 B M 8

9EX



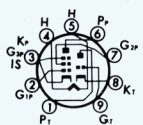
4 G S 7  
5 G S 7  
6 G S 7  
7 G S 7

9GF



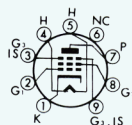
6 D X 8  
1 0 D X 8  
1 5 D Q 8

9HX



6 K Z 8  
9 K Z 8

9FZ



6 G K 6  
8 L S 6  
1 0 G K 6  
1 6 G K 6  
1 1 L Y 6

9GK

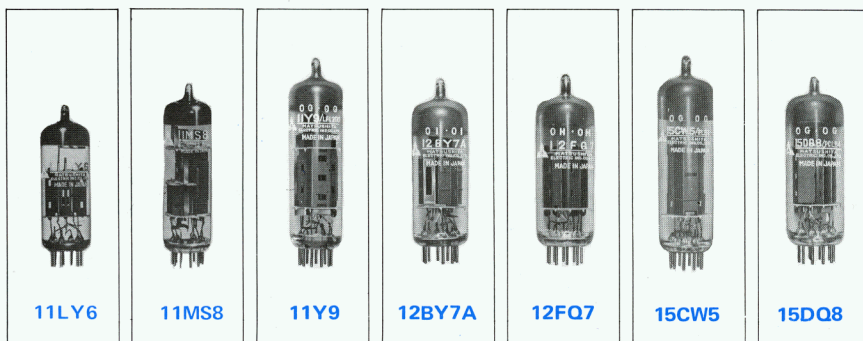
最大定格(設計中心値)				条 件 特 性										備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics										Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ik(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> , Rk (V)(Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μV)	rp(kΩ)	Po(w)	Matsushita		
125	—	1.5	15	100	—	-3	14	—	17	5700	—	—			
250	150	2.0	18	170	150	-1.2	10	3.3	—	12000	min350	—		7 H G 8	
250	—	1.5	14	100	—	-2	14	—	20	5500	—	—		8 A 8	
250	175	1.7	14	170	170	-2	10	2.8	—	6200	400	—		8 B 8	
250	—	1.0	15	100	—	0	3.5	—	70	2200	—	—		8 C W 5	
250	250	Vert. Out5 AF Out 7	50	170	170	-11.5	41	9	—	7500	16	3.2		8 C W 5	
250	250	12.0	100	170	170	-12.5	70	3.5	—	11000	26	5.1	PL=2kΩ	8 C W 5	
330◇	—	4.0◇	22◇	250	—	-8	9	—	20	2600	7.7	—		8 F Q 7	
125	—	1.5	20	100	—	-3	15	—	20	9000	—	—		8 G J 7	
250	250	2.0	18	170	120	-1.4	10	3	—	11000	min350	—		8 G J 7	
180◇	180◇	5◇	—	110	110	65	14	3.2	36	11000	54	—		8 L S 6	
250	—	1.5	14	100	—	-2	14	—	20	5000	—	—		9 A 8	
250	175	1.7	14	170	170	-2	10	2.8	—	6200	400	—		9 A Q 8	
250	—	2.5	15	170	—	-1.5	10	—	50	6200	—	—		9 A Q 8	
330	—	2.5	—	125	—	-1	13.5	—	46	8500	5.4	—		9 G H 8 A	
350	330	2.5	20	125	125	-1	12	4	—	7500	200	—		9 G H 8 A	
250	—	1.4	10	200	—	-2	3.5	—	70	3500	—	—		9 J W 8	
250	250	1.2	15	100	100	-1	6	1.7	—	5500	400	—		9 J W 8	
250	250	12.0	100	170	170	-12.5	70	3.5	—	11000	26	5.1	RL=2kΩ	10 C W 5	
250	—	1.0	12	200	—	-1.7	3	—	65	3000	—	—		10 D X 8	
250	250	4.0	40	170	170	-2.1	18	3	—	11000	min100	—		10 D X 8	
330	330	13.2	65	250	250	-7.3	48	5.5	—	11300	38	5.7	RL=5.2kΩ	10 G K 6	
250	—	0.5	15	100	—	-0.85	5	—	60	5500	11	—		10 G V 8	
250	250	7.0	75	170	170	-15	41	2.5	—	7300	26	—		10 G V 8	
250	—	1.0	15	100	—	0	3.5	—	70	2200	—	—		11 B M 8	
250	250	Vert. Out5 AF Out 7	50	170	170	-11.5	41	9	—	7500	16	3.2	RL=3.25kΩ	11 B M 8	

LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.  
〔ベース接続中の記号(LC)は、とくに指定する接続方法似外に使用してはなりません。〕





# TV用真空管

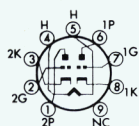


品 種			ベース	外形	カソード	ヒータ		構造	用途	電極間静電容量 (外部シールドなし)		
Type			Base Connections	Outline Drawings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF		
Matsushita	European	●			Type	Ef(V)	If(mA)			C <sub>pg</sub> (Approx.)	C <sub>in</sub> (Approx.)	C <sub>out</sub> (Approx.)
1 1 L Y 6		NT	9GK	21-3	Cathode	11.0	300	Pentode #	Video Amp.	0.075	9.5	3.8
1 1 M S 8		NT	9LY	21-4	Cathode	11.6	450	Triode × Pentode	Vert. Def. Osc. Vert. Def. Amp.	1.8 max. 0.6	2.9 14.5	2.2 8.0
1 1 R 3	L Y 8 1	NT	9CB	21-8	Cathode	11.3	450	Diode	Damper	Cp-all 6.4	ck-f 2.8	—
⊙1 1 Y 9	LFL200	Decal 10pin	10-55	21-4	Cathode	11.0	450	Duplex Pentode #	Video Amp. Sync. Separator, Amp.	(Unit 1) 0.105 (Unit 2) 0.14	12.0 10.0	7.0 11.0
1 2 A T 7	ECC81	NT	9A	21-2	Cathode	6.3 12.6	300 150	Twin-Triode ×	RF Amp.	(Unit 1)1.5 (Unit 2)1.5	2.2 2.2	0.5 0.4
1 2 B -B14		Mag- noval	9NH	29-51	Cathode	12.6	600	Beam Power Tube	Horiz. Def. Power Amp.	max. 1.4	17.5	7.7
1 2 B H 7 A		NT	9A	21-3	Cathode	6.3 12.6	600 300	Twin-Triode ◇	Vert. Def. Amp.	(Unit 1)2.6 (Unit 2)2.6	3.2 3.2	0.5 0.4
1 2 B Y 7 A		NT	9BF	21-3	Cathode	6.3 12.6	600 330	Pentode #	Video Amp.	0.063	10.2	3.5
1 2 F Q 7		NT	9LP	21-3	Cathode	12.6	300	Twin-Triode ◇	Horiz & Vert. Osc.	(Unit 1)3.6 (Unit 2)3.8	2.4 2.4	0.34 0.26
1 2 G -B 3		GT	8GT	29-12A	Cathode	12.6	600	Beam Power Tube	Horiz. Def. Power Amp.	max. 1.1	17.5	7.7
1 2 G -B 7		GT	8GT	38-32	Cathode	12.6	600	Beam Power Tube	Horiz. Def. Power Amp.	max. 1.4	17.5	7.7
1 2 R -K19		NT	9CB	21-11	Cathode	12.6	600	Diode	Damper	Cp-all 8.5	Ck-f 3.0	—
1 4 G W 8	PCL 86	NT	9LZ	21-4	Cathode	14.5	300	Triode × Pentode	AF Pre-Amp. Power Amp.	1.4 max. 0.4	2.3 10.0	2.5 10.0
1 5 C W 5	P L 8 4	NT	9CV	21-4	Cathode	15.0	300	Beam Power Tube	Vert. Def., Power Amp.	max. 0.6	13.0	6.8
1 5 D Q 8	PCL 84	NT	9HX	21-3	Cathode	15.0	300	Triode × Pentode #	Sync. Separator Video Amp.	2.7 max. 0.1	3.8 8.7	2.3 4.2
15M -P19		MT	7CV	18-3	Cathode	15.0	300	Beam Power Tube	Power Amp.	0.3	12.0	5.2
1 6 A 8	PCL 82	NT	9EX	21-4	Cathode	16.0	300	Triode × Power Pentode	AF Amp. Vert. Def., Power Amp.	4.4 max. 0.3	2.7 9.3	4.3 8.0
1 6 A Q 3	X Y 8 8	NT	9CB	21-11	Cathode	16.4	600	Diode	Damper	Cp-all 8.6	Ck-f 2.0	—
1 6 G K 6		NT	9GK	21-4	Cathode	16.0	300	Power Pentode	Power Amp. Video Amp.	max. 0.14	10.0	7.0
⊙1 6 Y 9	PFL200	Decal 10pin	10-55	21-4	Cathode	16.5	300	Duplex-Pentode #	Video Amp. Sync. Separator, Amp.	(Unit 1) 0.105 (Unit 2) 0.14	12.0 10.0	7.0 11.0
1 7 A 8		NT	9DC	21-2	Cathode	16.8	150	Triode ◇ Pentode #	Sync. Separator, Osc. RF, IF Amp.	1.5 max. 0.025	2.5 5.2	1.8 3.4

★ ...Tentative Data   ⊙ ...Frame Grid Tube   ● ... (MT...7-pin Miniature Tube)   NT...9-pin Miniature Tube   # ...Sharp-Cutoff  
 b ...Remote-Cutoff   ○ ...Semi Remote-Cutoff   × ...High-μ   ◇ ...Medium-μ   † ...Low-μ   ◆ ...Design Maximum Value  
 △ ...With External Shield   □ ...Absolute Maximum Value

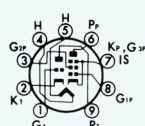


# TUBES for TV SETS



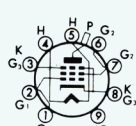
6 F Q 7  
8 F Q 7  
1 2 F Q 7

9LP



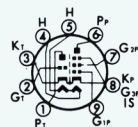
6 G W 8  
1 4 G W 8

9LZ



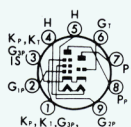
12B-B14

9NH



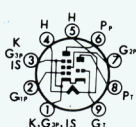
6 G V 8  
1 0 G V 8  
1 8 G V 8  
1 1 M S 8

9LY



6 H G 8  
7 H G 8  
5 G H 8 A  
5 H G 8

9MP



4 G J 7  
5 G J 7  
6 G J 7  
8 G J 7

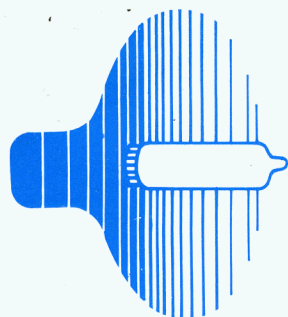
9QA

最大定格(設計中心値)				条 件 特 性									備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	I <sub>k</sub> (mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> , Rk (V) (Ω)	I <sub>b</sub> (mA)	I <sub>c<sub>2</sub></sub> (mA)	μ	Gm(μV)	rp(kΩ)	Po(w)		Matsushita
330	190	6.5	—	250	180	100	26	5.75	—	11000	89	—	1 1 L Y 6	
250	—	0.5	15	100	—	-0.85	5	—	60	5500	11	—	1 1 M S 8	
250	200	6.0	70	120	110	-10	50	3	—	8500	13	—	1 1 M S 8	
epx=5kV Pp=3.5W		I <sub>b</sub> =150mA ehk=5kV		—	—	—	—	—	—	—	—	—	1 1 R 3	
250	250	5.1	60	170	170	-2.7	30	7.2	—	22000	32	—	1 1 Y 9 <sup>⊙</sup>	
250	250	1.5	15	150	150	-2.1	10	3	—	8500	160	—	1 1 Y 9 <sup>⊙</sup>	
300	—	2.5	—	250	—	200	10	—	60	5500	10.9	—	1 2 A T 7	
700 (ep=7kV)	250	13.0	100	100	100	-7.7	100	7	—	14000	5.3	—	12B-B14	
300	—	3.5	20	250	—	-10.5	11.5	—	16.5	3100	5.3	—	12BH7A	
300	190	6.5	—	250	180	100	26	5.75	—	11000	93	—	12BY7A	
330	—	4.0	22	250	—	-8	9	—	20	2600	7.7	—	12FQ7	
600 (ep=6.6kV)	220	11.0	165	100	100	-7.7	100	7	—	14000	5.3	—	12G-B3	
770 (ep=7.7kV)	275	16.5	220	100	100	-7.7	100	7	—	14000	5.3	—	12G-B7	
epx=5.5kV		6.5	I <sub>b</sub> =200	—	—	—	—	—	—	—	—	—	12R-K19	
300	—	0.5	4	250	—	-1.9	1.2	—	100	1600	—	—	14GW8	
300	300	9.0	55	250	250	-7	36	6	—	10000	48	4	R <sub>L</sub> =7kΩ	
250	250	12.0	100	170	170	-12.5	70	3.5	—	11000	26	5.1	R <sub>L</sub> =2kΩ	
250	—	1.0	12	200	—	-1.7	3	—	65	3000	—	—	15DQ8	
250	250	4.0	40	170	170	-2.1	18	3	—	11000	min100	—	15DQ8	
165	165	8.25	110	100	100	-6.7	43	3	—	9200	22	2.1	R <sub>L</sub> =2.4kΩ	
250	—	1.0	15	100	—	9	3.5	—	70	2200	—	—	16A8	
250	250	Vert. Out...5 AF Out...7	50	170	170	-11.5	41	9	—	7500	16	3.2	R <sub>L</sub> =3.25kΩ	
epx=7.5kV Po=5W		I <sub>b</sub> =220mA ehk=6.6kV		—	—	—	—	—	—	—	—	—	16AQ3	
330	330	13.2	65	250	250	-7.3	48	5.5	—	11300	38	5.7	R <sub>L</sub> =5.2kΩ	
250	250	5.1	60	170	170	-2.7	30	7.2	—	22000	32	—	16GK6	
250	250	1.5	15	150	150	-2.1	10	3	—	8500	160	—	16Y9 <sup>⊙</sup>	
250	—	1.5	14	100	—	-2	14	—	20	5000	—	—	17A8	
250	175	1.7	14	170	170	-2	10	2.8	—	6200	400	—	17A8	

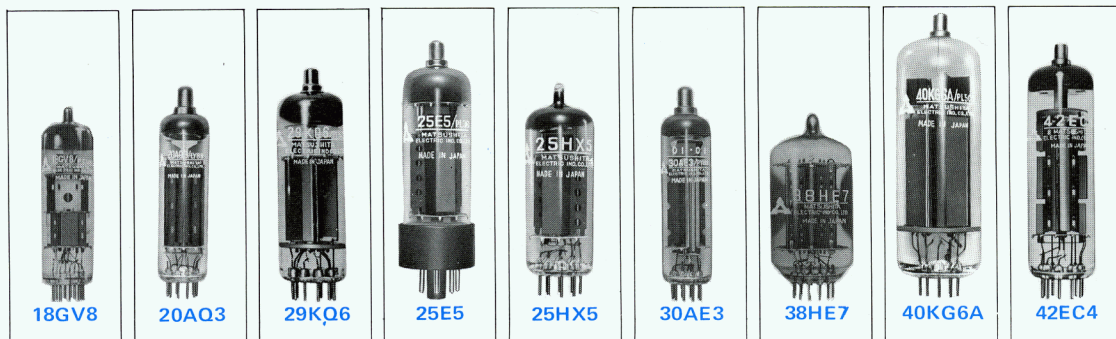
LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.

(ベース接続中の記号(LC)は、とくに指定する接続方法以外に使用してはなりません。)





# TV用真空管

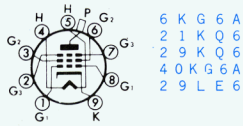


品 種		ベース	外形	カソード	ヒータ		構造	用途	電極間静電容量 (外部シールドなし)			
Type		Base Connections	Outline Drawings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF			
Matsushita	European			Type	Ef(V)	If(mA)			Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)	
1 7 Z 3	P Y 8 1	NT	9CB	21-8	Cathode	17.0	300	Diode	Damper	Cp-all 6.4	Ck-f 2.8	—
1 8 G V 8	P C L 8 5	NT	9LY	21-4	Cathode	18.0	300	Triode <sup>x</sup> Beam Power Tube	Vert. Def., Osc. Vert. Def., Power Amp.	—	—	—
2 0 A Q 3	L Y 8 8	NT	9CB	21-11	Cathode	20.2	450	Diode	Damper	Cp-all 8.6	Ck-f 2.0	—
2 1 K Q 6	L L 5 2 1	Mag- noval	9RJ	29-01	Cathode	21.5	450	Beam Power Tube	Horiz. Def. Power Amp.	1.5	27.0	11.0
2 5 E 5	P L 3 6	GT	8GT	29- 12A	Cathode	25.0	300	Beam Power Tube	Horiz. Def. Power Amp.	max. 1.1	17.5	8.0
2 5 H X 5		Mag- noval	9SB	29-44	Cathode	25.0	300	Beam Power Tube	Vert. Def., Power Amp.	max. 1.1	17.3	7.7
2 9 K Q 6	P L 5 2 1	Mag- noval	9RJ	29-01	Cathode	29.0	300	Beam Power Tube	Horiz. Def. Power Amp.	1.5	27.0	11.0
2 9 L E 6		Mag- noval	9RJ	29-01	Cathode	29.0	300	Beam Power Tube	Horiz. Def. Power Amp.	1.5	27.0	11.0
3 0 A E 3	P Y 8 8	NT	9CB	21-11	Cathode	30.0	300	Diode	Damper	Cp-all 8.6	Ck-f 2.0	—
3 4 R 3		NT	9CB	21-8	Cathode	34.0	150	Diode	Damper	Cp-all 6.4	Ck-f 2.8	—
3 8 H E 7		Duo- decar	12FS	38-57	Cathode	37.8	450	Diode Beam Power Tube	Damper Horiz. Def., Amp.	Cp-(h+k) 7.0	Ck-(p+h) 8.0	Ch-k 1.6
4 0 K G 6 A	P L 5 0 9	Mag- noval	9RJ	38-01	Cathode	40.	300	Beam Power Tube	Horiz. Def. Power Amp.	2.5	—	—
4 2 E C 4	P Y 5 0 0	Mag- noval	9-14	38-02	Cathode	42.	300	Diode	Damper	Cp-k 13	Ck-f 3.7	—
5 0 J Y 6		GT	8MG	29- 12A	Cathode	50.0	150	Beam Power Tube	Vert. Def. Power Amp.	1.1	17.5	8.0

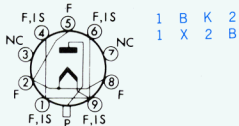
★...Tentative Data    ○...Frame Grid Tube    ●...(MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    #...Sharp-Cutoff  
 b...Remote-Cutoff    ○...Semi Remote Cutoff    ×...High- $\mu$     ◇...Medium- $\mu$     †...Low- $\mu$     ◆...Design Maximum Value  
 △...With External Shield    □...Absolute Maximum Value



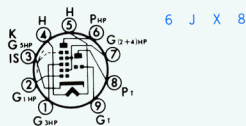
# TUBES for TV SETS



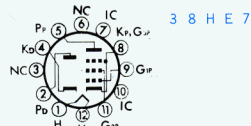
9RJ



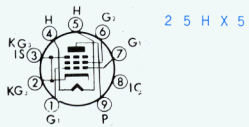
9Y



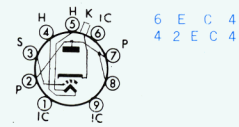
10-54



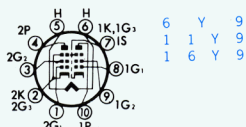
12FS



9SB



9-14



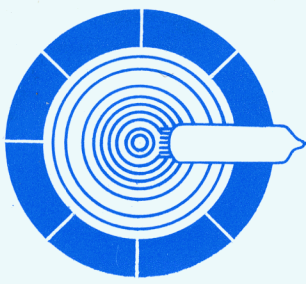
10-55

最大定格(設計中心値)				条件		特性							備考	品種			
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics												Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	I <sub>k</sub> (mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>2</sub> · Rk (V) (Ω)	I <sub>b</sub> (mA)	I <sub>c<sub>2</sub></sub> (mA)	μ	Gm(μV)	rp(kΩ)	Po(w)	Matsushita				
epx = 5kV Pp = 3.5W	—	I <sub>b</sub> = 150mA ehk = 5kV	—	—	—	—	—	—	—	—	—	—	—	1 7 Z 3			
250	—	0.5 15	15	100	—	-0.85	5	—	60	5500	11	—	—	1 8 G V 8			
250	250	7.0 75	75	170	170	-15	41	2.5	—	7300	26	—	—	2 0 A Q 3			
epx = 7.5kV Pp = 5W	—	I <sub>b</sub> = 220mA ehk = 6.6kV	—	—	—	—	—	—	—	—	—	—	—	2 0 A Q 3			
275 (ep = 6.5kV)	275	17.0	275	40	Ecc <sub>2</sub> = 135	0	450	35	—	—	—	—	—	Separated G <sub>2</sub> type as snivets countermeasure Ec <sub>2</sub> = 0, Rg <sub>2</sub> = 820Ω	2 1 K Q 6		
250 (ep = 7kV)	250	12.0 200	200	100	100	-8.2	100	7	—	14000	5	—	—	2 5 E 5			
400	300	14.0	220	100	100	-8.2	100	7	—	14000	5	—	—	2 5 H X 5			
275 (ep = 6.5kV)	275	17.0	275	40	Ecc <sub>2</sub> = 135	0	450	35	—	—	—	—	—	Separated G <sub>2</sub> type as snivets countermeasure Ec <sub>2</sub> = 0, Rg <sub>2</sub> = 820Ω	2 9 K Q 6		
275 (ep = 6.5kV)	275	20.0 275	275	40	Ecc <sub>2</sub> = 135	0	450	35	—	—	—	—	—	Separated G <sub>2</sub> type as snivets countermeasure Ec <sub>2</sub> = 0, Rg <sub>2</sub> = 820Ω	2 9 L E 6		
epx = 7.5kV Pp = 5W	—	I <sub>b</sub> = 220mA ehk = 6.6kV	—	—	—	—	—	—	—	—	—	—	—	3 0 A E 3			
epx = 5kV Pp = 3.5W	—	I <sub>b</sub> = 150mA ehk = 5kV	—	—	—	—	—	—	—	—	—	—	—	3 4 R 3			
epx = 4.2kV 500 (ep = 5kV)	—	I <sub>b</sub> = 1200mA I <sub>b</sub> = 200mA	21	—	—	—	350	—	—	—	—	—	—	3 8 H E 7			
500 (ep = 5kV)	150	10	230	130	130	-22	60	2.8	4.2	8800	6.2	—	—	4 0 K G 6 A			
275 (ep = 8kV)	275	40	500	50	175	-10	800	70	—	—	—	—	—	4 2 E C 4			
epx = 7kV ehk = 6.3kV	11	I <sub>b</sub> = 440	—	—	—	—	—	—	—	—	—	—	—	4 2 E C 4			
275 (ep = 7kV)	275	13.0	220	100	100	-8.2	100	7	—	14000	5	—	—	Separated G <sub>2</sub> type as snivets countermeasure Ec <sub>2</sub> = 0	5 0 J Y 6		

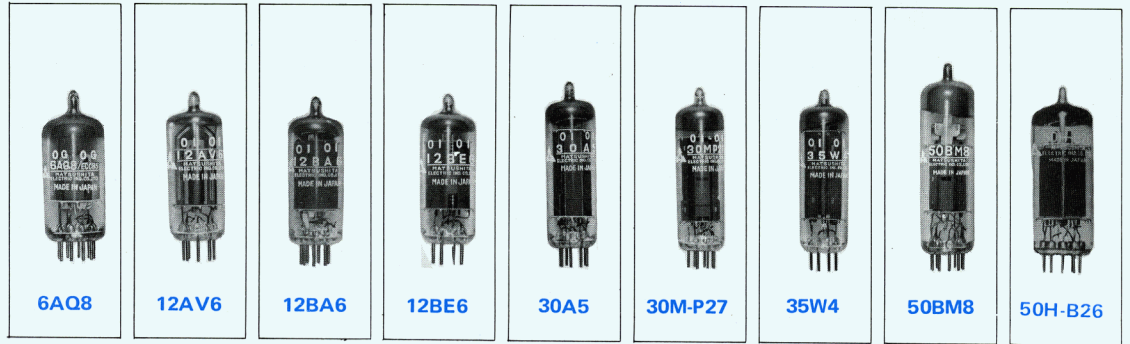
LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.

(ベース接続中の記号(LC)は、とくに指定する接続方法似外に使用してはなりません。)





# AM/FMラジオ用真空管

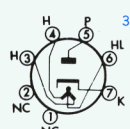


品 種			ベース	外形	カソード	ヒ ー タ		構 造	用 途	電 極 間 静 電 容 量 (外部シールドなし)		
Type			Base Connections	Outline Drawings	Filament Data			Classification by Construction	Application	Without External Shield Capacitances in pF		
Matsushita	European	●			Type	Ef(V)	If(mA)			C <sub>pg</sub> (Approx.)	C <sub>in</sub> (Approx.)	C <sub>out</sub> (Approx.)
6 A Q 5	E L 9 0	MT	7BZ	18-3	Cathode	6.3	450	Beam Power Tube	Power Amp.	0.4	8.0	8.5
6 A Q 8	E C C 8 5	NT	<sup>9AJ</sup> <sub>=9DE</sub>	21-2	Cathode	6.3	435	Twin-Triode ×	RF Amp., Conv.	1.5	3.0	1.2
6 A R 5		MT	6CC	18-3	Cathode	6.3	400	Power Pentode	Power Amp.	—	—	—
6 A V 6	E B C 9 1	MT	7BT	18-2	Cathode	6.3	300	Twin-Diode Triode ×	Det. AF Amp.	— 2.0	— 2.2	— 0.8
6 B A 6	E F 9 3	MT	7BK	18-2	Cathode	6.3	300	Pentode <sup>b</sup>	RF Amp.	0.0035	5.5	5.0
6 B D 6		MT	7BK	18-2	Cathode	6.3	300	Pentode <sup>b</sup>	RF Amp.	0.005	4.3	5.0
6 B E 6	E K 9 0	MT	7CH	18-2	Cathode	6.3	300	Heptode	Conv.	C <sub>g<sub>2</sub>-P</sub> max. 0.3	C <sub>g<sub>2</sub>-all 7</sub>	C <sub>g<sub>2</sub>-all 5.5</sub> C <sub>p-all 8</sub>
6 B M 8	E C L 8 2	NT	9EX	21-4	Cathode	6.3	780	Triode × Power Pentode	AF Amp. Power Amp.	4.4 max. 0.3	2.7 9.3	4.3 8.0
6 D T 8		NT	<sup>9AJ</sup> <sub>=9DE</sub>	21-2	Cathode	6.3	300	Twin-Triode ×	FM RF Amp. Osc., Mixer	1.6 <sup>△</sup>	2.7 <sup>△</sup>	2.6 <sup>△</sup>
6 X 4	E Z 9 0	MT	5BS	21-3	Cathode	6.3	600	Twin-Diode	FW Rect.	—	—	—
1 2 A V 6	H B C 9 1	MT	7BT	18-2	Cathode	12.6	150	Twin-Diode Triode ×	Det. AF Amp.	— 2.0	— 2.2	— 0.8
1 2 B A 6	H F 9 3	MT	7BK	18-2	Cathode	12.6	150	Pentode	RF Amp.	0.0035	5.5	5.0
1 2 B E 6	H K 9 0	MT	7CH	18-2	Cathode	12.6	150	Heptode	Conv.	C <sub>g<sub>2</sub>-P</sub> max. 0.3	C <sub>g<sub>2</sub>-all 7</sub>	C <sub>g<sub>2</sub>-all 5.5</sub> C <sub>p-all 8</sub>
1 2 D T 8		NT	<sup>9AJ</sup> <sub>=9DE</sub>	21-2	Cathode	12.6	150	Twin-Triode ×	FM RF Amp. Osc., Mixer	1.6 <sup>△</sup>	2.7 <sup>△</sup>	2.6 <sup>△</sup>
1 7 E W 8	H C C 8 5	NT	<sup>9AJ</sup> <sub>=9DE</sub>	21-2	Cathode	17.5	150	Twin-Triode ×	RF Amp., Conv.	1.5	3	1.2
3 0 A 5	H L 9 4	MT	7CV	18-3	Cathode	30	150	Beam Power Tube	Power Amp.	0.3	12	5.8
3 0 M - P 2 7		MT	7CV	18-3	Cathode	30	150	Beam Power Tube	Power Amp.	0.32	12.5	5.8
3 5 C 5		MT	7CV	18-3	Cathode	35	150	Beam Power Tube	Power Amp.	0.6	12	9
3 5 W 4	H Y 9 0	MT	5BQ	18-3	Cathode	35	150	Diode	FW Rect.	—	—	—
5 0 B M 8		NT	9EX	21-4	Cathode	50	100	Triode Pentode ×	AF Amp. Vert. Def. Power Amp.	4.4 max. 0.3	2.7 9.3	4.3 8.0
5 0 C 5	H L 9 2	NT	7CV	18-3	Cathode	50	150	Beam Power Tube	Power Amp.	0.6	13	8.5
5 0 E H 5		MT	7CV	18-3	Cathode	50	150	Power Pentode	Power Amp.	0.65	17	9
5 0 H - B 2 6		Mag-noval	10-53	29-44	Cathode	50	150	Beam Power Tube	Power Amp.	max. 1.1	17.3	7.7

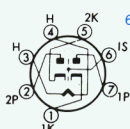
★ ...Tentative Data    ○ ...Frame Grid Tube    ● ...(MT...7-pin Miniature Tube    NT...9-pin Miniature Tube)    # ...Sharp-Cutoff  
 b ...Remote-Cutoff    ○ ...Semi Remote-Cutoff    × ...High-μ    ◇ ...Medium-μ    † ...Low-μ    ◆ ...Design Maximum Value  
 △ ...With External Shield    □ ...Absolute Maximum Value



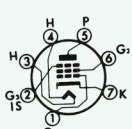
# TUBES for AM/FM RADIO SETS



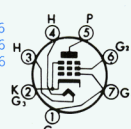
5BQ



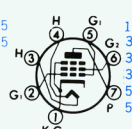
6BT



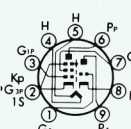
7BK



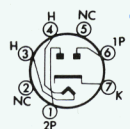
7BZ



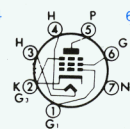
7CV



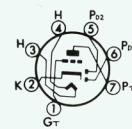
9EX



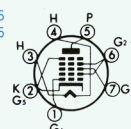
5BS



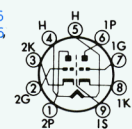
6CC



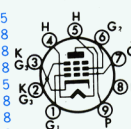
7BT



7CH



9AJ-9DE

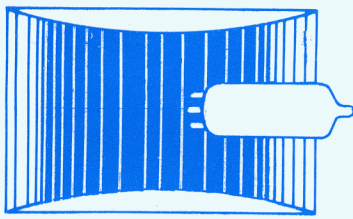


10-53

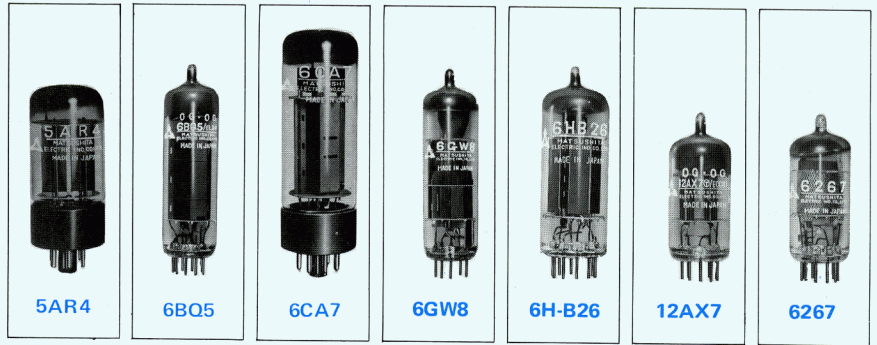
最大定格(設計中心値)				条 件 特 性									備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ib(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> , Rk(V)(Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μU)	rp(kΩ)	Po(w)		Matsushita
275◇	275◇	12◇	—	250	250	-12.5	45	4.5	—	4100	52	4.5	R <sub>L</sub> =5kΩ	6 A Q 5
300	—	2.5	15	250	—	-2.3	10	—	57	5900	—	—	—	6 A Q 8
250	250	8.5	—	250	250	—	32	5.5	—	2300	68	3.4	R <sub>L</sub> =7.6kΩ	6 A R 5
—	—	—	Ib=1	10	—	—	2	—	—	—	—	—	—	6 A V 6
330	—	0.55	—	250	—	-2	1.2	—	100	1600	62.5	—	—	6 A V 6
330◇	330◇	3.4◇	—	250	100	68	11	4.2	—	4400	1MΩ	—	Ec <sub>3</sub> =0V	6 B A 6
300	125	3	14	250	100	-3	9	3	—	2000	800	—	Ec <sub>3</sub> =0V	6 B D 6
330	Ecc <sub>2</sub> + <sub>4</sub> =330	1.1	15.5	250	100	10Vrms	2.9	Ic <sub>2</sub> + <sub>4</sub> =6.8	—	Gc=470	1MΩ	—	Ec <sub>3</sub> =-1.5, Rg <sub>1</sub> =20kΩ, Ic <sub>1</sub> =0.5mA	6 B E 6
300	—	1	15	100	—	0	3.5	—	70	2200	—	—	—	6 B M 8
300	300	Vert. Out AF Out 5/7	50	170	170	-11.5	41	9	—	7500	16	3.2	R <sub>L</sub> =3.25kΩ	6 B M 8
300	—	2.5	—	250	—	200	10	—	60	5500	10.9	—	—	6 D T 8
epx=1250V◇				ib=245mA◇				Maximum DC output current=90mA						6 X 4
—	—	—	Ib=1	10	—	—	2	—	—	—	—	—	—	1 2 A V 6
330	—	0.55	—	250	—	-2	1.2	—	100	1600	62.5	—	—	1 2 A V 6
330◇	330◇	3.4◇	—	250	100	68	11	4.2	—	4400	1MΩ	—	Ec <sub>3</sub> =0V	1 2 B A 6
330	Ecc <sub>2</sub> + <sub>4</sub> =330	1.1	15.5	250	100	10Vrms	2.9	Ic <sub>2</sub> + <sub>4</sub> =6.8	—	Gc=475	1MΩ	—	Ec <sub>3</sub> =-1.5, Rg <sub>1</sub> =20kΩ, Ic <sub>1</sub> =0.5mA	1 2 B E 6
300	—	2.5	—	250	—	200	10	—	60	5500	10.9	—	—	1 2 D T 8
250	—	2.5	15	170	—	-1.5	10	—	50	6200	—	—	—	1 7 E W 8
150	150	—	100	100	100	-6.7	43	3	—	9200	22	1.9	R <sub>L</sub> =2.4kΩ	3 0 A 5
165◇	165◇	10◇	110◇	130	110	-9	64	2.5	—	10000	20	4	R <sub>L</sub> =1.6kΩ	30M-P27
150◇	130◇	5.2◇	—	110	110	-7.5	40	3	—	5800	13	1.5	R <sub>L</sub> =2.5kΩ	3 5 C 5
epλ=330V				ib=600mA				Max DC output current=100mA						3 5 W 4
250	—	1	15	100	—	0	3.5	—	70	2200	—	—	—	5 0 B M 8
250	250	7	50	170	170	-11.5	41	9	—	7500	16	3.2	R <sub>L</sub> =3.25kΩ	5 0 B M 8
150◇	130◇	7◇	—	120	110	-8	49	4	—	7500	—	2.3	R <sub>L</sub> =2.5kΩ	5 0 C 5
150◇	130◇	5.5◇	—	—	115	62	42	11.5	—	14600	11	1.4	R <sub>L</sub> =3kΩ	5 0 E H 5
350	300	18	220◇	130	130	-12	123	8.5	—	15000	4	8	R <sub>L</sub> =0.8kΩ	50H-B26

LC. . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.  
 (ベース接続中の記号(LC)は、とくに指定する接続方法似外に使用してはなりません。)





# Hi-Fi用真空管



品 種			ベース	外形	カソード	ヒータ		構造	用途	電極間静電容量 (外部シールドなし) Without External Shield Capacitances in pF		
Type			Base Conne- ctions	Outline Draw- ings	Filament Data			Classification by Construction	Application	Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)
Matsushita	European	●			Type	Ef(V)	If(mA)					
5 A R 4	G Z 3 4	GT	5DA	32-1	Cathode	5.0	1.9A	Twin-Diode	FW Rect.	—	—	—
6 A U 6		MT	7BK	18-2	Cathode	6.3	300	Pentode#	AF, RF Amp.*	0.0035	5.5	5
6 B Q 5	E L 8 4	NT	9CV	21-4	Cathode	6.3	760	Power Pentode	Power Amp.	max. 0.5	10.8	6.5
6 C A 4	E Z 8 1	NT	9M	21-4	Cathode	6.3	1.0A	Twin-Diode	FW Rect.	—	—	—
6 C A 7	E L 3 4	GT	8EP	32-2	Cathode	6.3	1.5A	Power Pentode	Power Amp.	max. 1.1	15.2	8.4
6 G W 8	E C L 8 6	NT	9LZ	21-4	Cathode	6.3	660	Triode × Power Pentode	AF Pre-Amp. Power Amp.	1.4 max. 0.4	2.3 10	2.5 10
6 H - B 2 6		Magneval	10-53	29-44	Cathode	6.3	1.25A	Beam Power Tube	Power Amp.	max. 1.1	17.3	7.7
1 2 A U 7	E C C 8 2	NT	9A	21-2	Cathode	6.3 12.6	300 150	Twin-Triode ◇	AF Amp.	(Unit 1)1.5 (Unit 2)1.5	1.8 1.8	0.37 0.25
1 2 A X 7	E C C 8 3	NT	9A	21-2	Cathode	6.3 12.6	300 150	Twin-Triode ×	AF Amp.	(Unit 1)1.6 (Unit 2)1.6	1.6 1.6	0.46 0.34
6 2 6 7	E F 8 6	NT	9BJ =9CQ	21-2	Cathode	6.3	200	Pentode	AF Amp.	max. 0.05	4	5
7 1 8 9		NT	9CV	21-4	Cathode	6.3	760	Power Pentode	Power Amp.	max. 0.5	10.8	6.5
P F 8 6	P F 8 6	NT	9BJ =9CQ	21-2	Cathode	4.5	300	Pentode	AF Amp.	max. 0.05	4	5

★ ...Tentative Data    ⊙ ...Frame Grid Tube    ● ... (MT...7-pin Miniature Tube    NT...9-pin Miniature Tube) # ...Sharp-Cutoff  
 b ...Remote-Cutoff    ○ ...Semi Remote-Cutoff    × ...High-μ    ◇ ...Medium-μ    † ...Low-μ    ◆ ...Design Maximum Value  
 △ ...With external Shield    □ ...Absolute Maximum Value

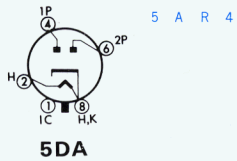
## その他の真空管

品 種			ベース	外形	カソード	ヒータ		構造	用途	電極間静電容量 (外部シールドなし) Without External Shield Capacitances in pF		
Type			Base Conne- ctions	Outline Draw- ings	Filament Data			Classification by Construction	Application	Cpg (Approx.)	Cin (Approx.)	Cout (Approx.)
Matsushita	European	●			Type	Ef(V)	If(mA)					
6 A K 5	F F 9 5	MT	7BD	18-1	Cathode	6.3	175	Pentode #	RF Amp.	max. 0.03	4.0	2.1
6 3 6 0	QQE03/12	NT	9PW	21-4	Cathode	6.3 12.6	820 410	Twin BeamPower Tube	RF Power Amp (C.C.S)	max. 0.1	6.2	2.6
S 2 0 0 1		GT	特殊	38-22B	Cathode	6.3	1.0A	Beam Power Tube	RF Power Amp (C.C.S)	max. 0.24	13.5	8.5

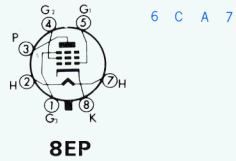
★ ...Tentative Data    ⊙ ...Frame Grid Tube    ● ... (MT...7-pin Miniature Tube    NT...9-pin Miniature Tube) # ...Sharp-Cutoff  
 b ...Remote-Cutoff    ○ ...Semi Remote-Cutoff    × ...High-μ    ◇ ...Medium-μ    † ...Low-μ    ◆ ...Design Maximum Value  
 △ ...With External Shield    □ ...Absolute Maximum Value



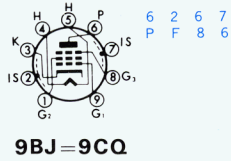
# TUBES for Hi-Fi SETS



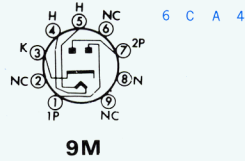
5DA



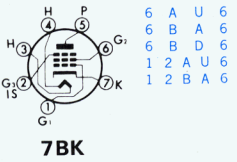
8EP



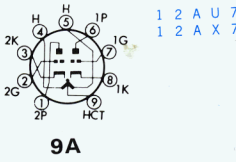
9BJ=9CQ



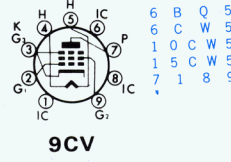
9M



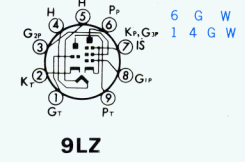
7BK



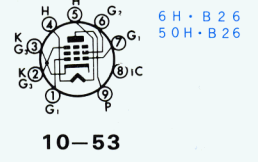
9A



9CV



9LZ



10-53

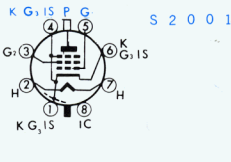
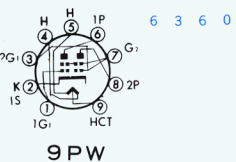
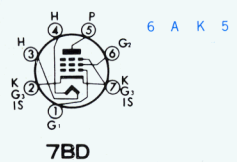
最大定格(設計中心値)				条 件 特 性									備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ik(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> · Rk (V)(Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μU)	rp(kΩ)	Po(w)		Matsushita
epx=1.5kV ib=750mA				Maximum DC output current=250mA										5 A R 4
330	330	3.5	—	250	150	68	10.6	4.3	—	5200	1000	—	6 A U 6	
300	300	12	65	250	250	-7.3	48	5.5	—	11300	38	6	6 B Q 5	
epx=1.3kV ib=500mA				Maximum DC output current=180mA										6 C A 4
800	500	27.5	150	250	265	-13.5	100	14.9	—	12500	17	11	6 C A 7	
300	—	0.5	4	250	—	-1.9	1.2	—	100	1600	—	—	6 G W 8	
300	300	9	55	250	250	-7	36	6	—	10000	48	4	6 H - B 2 6	
350 <sup>◇</sup>	300 <sup>◇</sup>	18 <sup>◇</sup>	220 <sup>◇</sup>	130	130	-12	123	8.5	—	15000	4	8	6 H - B 2 6	
300	—	2.75	20	250	—	-8.5	10.5	—	17	2200	77	—	1 2 A U 7	
300	—	1	8	250	—	-2	1.2	—	100	1600	62.5	—	1 2 A X 7	
300	200	1	6	250	140	-2	3.0	0.6	—	2000	2.5MΩ	—	6 2 6 7	
400	300	12	65	250	250	-7.3	48	5.5	—	11300	40	6	7 1 8 9	
300	200	1	6	250	140	-2	3.0	0.6	—	2000	2.5MΩ	—	P F 8 6	

LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.  
 [ベース接続中の記号(LC)は、とくに指定する接続方法以外に使用してはなりません。]

# TUBES for OTHER APPLICATIONS

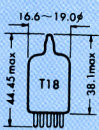
最大定格(設計中心値)				条 件 特 性									備 考	品 種
Maximum Ratings (Design-Center Value)				Typical Operation and Characteristics									Remarks	Type
Eb(V)	Ec <sub>2</sub> (V)	Pp(w)	Ik(mA)	Eb(V)	Ec <sub>2</sub> (V)	Ec <sub>1</sub> · Rk (V)(Ω)	Ib(mA)	Ic <sub>2</sub> (mA)	μ	Gm(μU)	rp(kΩ)	Po(w)		Matsushita
180	180	1.7	18	120	1 2 0	180	7.5	2.5	—	5000	300	—	6 A K 5	
300 <sup>□</sup>	200 <sup>□</sup>	2×5 <sup>□</sup>	—	Ebb=300	1 7 5	-40	2×37.5	2.3	—	F=200 MHz	—	14.5	6 3 6 0	
600 <sup>□</sup>	250 <sup>□</sup>	27 <sup>□</sup>	—	600	2 0 0	-70	150	10	—	F=60 MHz	—	63	S 2 0 0 1	

LC . . . . . The LC (Limited Connection) shown in the base connection drawing should be used only for the cases particularly indicated.  
 [ベース接続中の記号(LC)は、とくに指定する接続方法以外に使用してはなりません。]



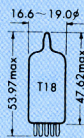


18-1



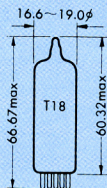
- 2 H A 5
- 3 H A 5
- 4 H A 5
- 6 A L 5
- 6 H A 5
- 6 A K 5

18-2



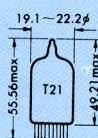
- 2 GK 5
- 3 GK 5
- 4 GK 5
- 6 AU 6
- 6 BA 6
- 6 BE 6
- 6 GK 5
- 12 BA 6
- 3 DT 6 A
- 4 DT 6 A
- 5 M-HH 3
- 6 A V 6
- 6 B D 6
- 6 DT 6 A
- 12 AV 6
- 12 BE 6

18-3



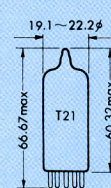
- 5 A Q 5
- 6 A Q 5
- 6 A R 5
- 6 X 4
- 15M-P19
- 3 0 A 5
- 30M-P27
- 3 5 C 5
- 3 5 E H 5
- 3 5 W 4
- 5 0 C 5
- 5 0 E H 5

21-2



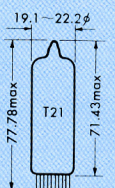
- 4 BL 8
- 5GH8A
- 6AQ8
- 6DT8
- 6HG8
- 6LX8
- 7GS7
- 9A8
- 9JW8
- 12AX7
- 17EW8
- 4GS7
- 5GS7
- 6BL8
- 6GH8A
- 6KZ8
- 6RHH15
- 7HG8
- 9AQ8
- 12AT7
- 6267
- 4RHH15
- 5HG8
- 6DJ8
- 6GS7
- 6LN8
- 7DJ8
- 8A8
- 9GH8A
- 12AU7
- 17A8
- PF86

21-3



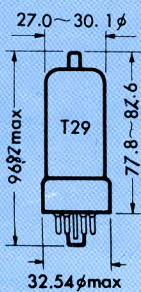
- 4 A B 8
- 6 B X 6
- 6 F Q 7
- 8 F Q 7
- 10DX8
- 12BY7A
- 15DQ8
- 6 A B 8
- 6 D X 8
- 6 J X 8
- 8 L S 6
- 12BH7A
- 12FQ7
- 11LY6

21-4



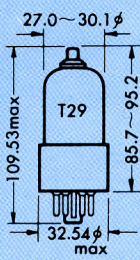
- 6BM8
- 6CA4
- 6GK6
- 6GW8
- 8B8
- 10CW5
- 10GV8
- 11MS8
- 14GW8
- 16A8
- 16Y9
- 50BM8
- 7189
- 6BQ5
- 6CW5
- 6GV8
- 6Y9
- 8CW5
- 10GK6
- 11BM8
- 11Y9
- 15CW5
- 16GK6
- 18GV8
- 6360

29-02



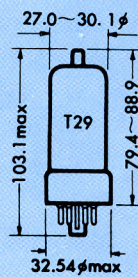
- 3 C U 3
- 3 C U 3 A

29-12A



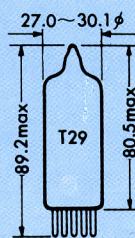
- 6 C M 5
- 12G-B3
- 2 5 E 5
- 5 0 J Y 6

29-16A



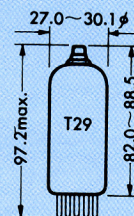
- 3 A 3
- 3 C V 3
- 3 C V 3 A

29-44



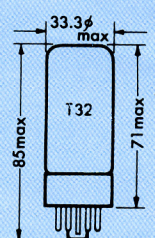
- 6 H-B 2 6
- 50H-B26
- 2 5 H X 5

29-51



- 12B-B14

32-1

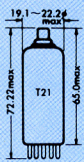


- 5 A R 4



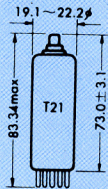
# OUTLINE DRAWINGS FOR MATSUSHITA RECEIVING TYUBES

21-7



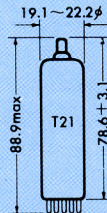
1 B K 2  
1 X 2 B

21-8



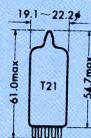
6 R 3  
1 1 R 3  
1 7 Z 3  
3 4 R 3

21-11



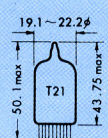
6 A L 3  
1 6 A Q 3  
2 0 A Q 3  
3 0 A E 3

21-12



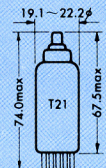
3 E H 7  
3 E J 7  
4 E H 7  
4 E J 7  
6 E H 7  
6 E J 7

21-20



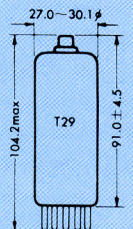
4 G J 7  
5 G J 7  
6 G J 7  
8 G J 7

21-31



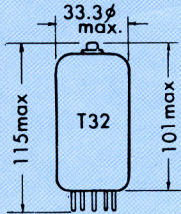
1 S 2  
1 S 2 A

29-01



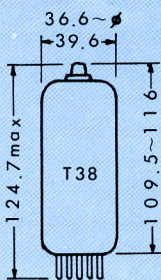
2 1 K Q 6  
2 9 K Q 6  
2 9 L E 6

32-2



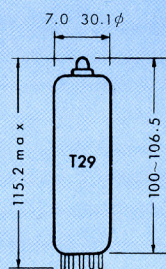
6 C A 7

38-01



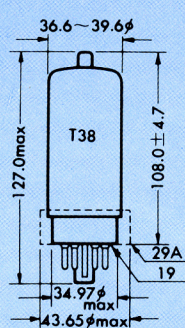
6 K G 6 A  
4 0 K G 6 A

38-02



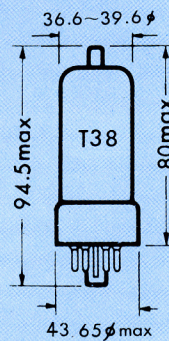
6 E C 4  
4 2 E C 4

38-19.38-29A



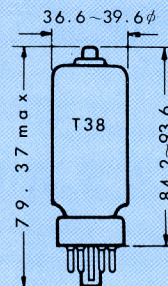
6 B K 4 B  
6 B K 4 C

38-03



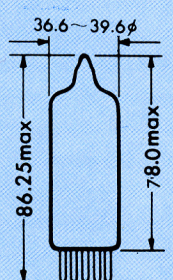
S 2 0 0 1

38-32



1 2 G - B 7

38-57



3 8 H E 7



# 松下電子工業株式会社 電子管事業本部

569 大阪府高槻市幸町1番1号  
電話 高槻(0726)(82)-5521(大代表)

## ELECTRONIC TUBE DIVISION MATSUSHITA ELECTRONICS CORPORATION

TAKATSUKI, OSAKA, 569 JAPAN Tel: (0726)82-5521

### 松下電器産業株式会社

#### 特機営業所

特機営業本部	571	大阪府門真市大字門真1006	大阪(06)	908-1121(大代表)	北陸特機営業所	920	石川県金沢市芳齊2丁目16番15号	金沢(0762)	61-2151(大代表)
東京電子部品営業所	108	東京都港区芝4丁目8番2号(新ナショナルビル)	東京(03)	453-3111(大代表)	富山出張所	930	富山市丸の内3丁目3番21号	富山(0764)	21-8561(代表)
北関東出張所	320	栃木県宇都宮市旭町2丁目3435(ナショナルビル)	宇都宮(0286)	33-9271(代表)	静岡特機営業所	420	静岡市水落町1番1号	静岡(0542)	45-1241(代表)
名古屋電子部品営業所	461	名古屋市東区久屋町4丁目8	名古屋(052)	951-6211(大代表)	名古屋特機営業所	461	名古屋市東区久屋町4丁目8	名古屋(052)	951-6211(大代表)
大阪電子機器営業所	530	大阪府北区天神橋筋1丁目14番地(ナショナルビル3階)	大阪(06)	351-5351(大代表)	長野出張所	390	長野県松本市中央1丁目1番2号	松本(02634)	3-7206(代表)
北海道特機営業所	060	札幌市北3条西1丁目1	札幌(011)	231-6954-5(代表)	大阪特機営業所	530	大阪府北区堂島浜通1丁目25(新大阪ビル8階)	大阪(06)	346-5151(大代表)
仙台特機営業所	980	宮城県仙台市定禅寺通7	仙台(0222)	25-8111(大代表)	京滋出張所	604	京都市中京区烏丸通御池上ル二条殿町548	京都(075)	231-8851(大代表)
奥羽出張所	020	岩手県盛岡市菜園1-3-6(農林会館ビル3階6号)	盛岡(0196)	23-4421	神戸特機営業所	650	神戸市生田区京町78(ナショナルビル)	神戸(078)	339-8011(大代表)
福島出張所	963	福島県郡山市山根町8の3号(福島ナショナル製販内)	郡山(02492)	3-5520	広島特機営業所	730	広島市竹屋町7番15号	広島(0822)	41-5111(代表)
関東特機営業所	320	栃木県宇都宮市旭町2丁目3435(ナショナルビル)	宇都宮(0286)	33-3235(大代表)	岡山出張所	700	岡山市錦町6番16号(松原ビル)	岡山(0862)	25-1311
高崎出張所	370	群馬県高崎市旭町44	高崎(0273)	22-8288(代表)	四国特機営業所	760	香川県高松市古新町8丁目1	高松(0878)	51-1194(代表)
水戸出張所	310	茨城県水戸市泉町2丁目4番16号	水戸(0292)	31-5121(代表)	松山出張所	790	愛媛県松山市大手町1の6	松山(0899)	43-4132
東京特機営業所	108	東京都港区芝4丁目8番2号(新ナショナルビル)	東京(03)	453-3111(大代表)	九州特機営業所	812	福岡市冷泉町4番17号	福岡(092)	27-1131(代表)
千葉出張所	280	千葉県新田町175(ナショナルビル)	千葉(0472)	41-5411	北九州出張所	802	福岡県北九州市小倉区鍛冶町7丁目101	小倉(093)	53-5221(代表)
埼玉出張所	330	埼玉県大宮市宮原町2-15-5(ナショナルビル3階)	大宮(0486)	65-3001	南九州出張所	892	鹿児島市高麗町53	鹿児島(09922)	58-1391
横浜特機営業所	231	横浜市中区相生町3丁目56	横浜(045)	681-0743(代表)					
新潟特機営業所	950	新潟市東大通2丁目48	新潟(0252)	46-2111(代表)					

□内は郵便番号を示します。

## Matsushita Electric Trading Co., Ltd.

Head Office Kawaramachi Building, 71, 5-chome,  
Kawaramachi, Higashi-ku, Osaka, 541 Japan  
Tel: Osaka 202-1221

Tokyo Branch 30th Floor, World Trade Center Bldg  
No. 5, 3-Chome, Shibahamamatsu-Cho,  
Minato-ku, Tokyo, 105, Japan  
Tel: Tokyo (03) 435-4545

## MatSushita Electric Corporation of America

Head Office Pan-Am, Building, 200 Park Avenue,  
New York, N.Y. 10017 U.S.A.  
Tel: (213) 973-5710

363 N. Third Avenue,  
Des Plaines Illinois, 60016.  
Tel: (312) 298-5068~9

November, 1971