



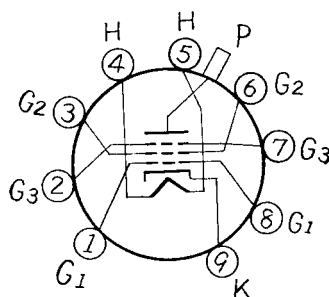
21KQ6 BEAM POWER PENTODE TUBE

The 21KQ6 is a Beam power pentode featuring MAGNOVAL construction design for using as horizontal deflection amplifiers of television receivers with low supply voltage.

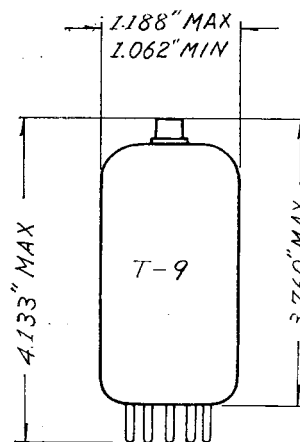
General Data

Mechanical Data

Cathode	Coated unipotential
Outline	See outline drawing
Bulb	T-9
Base	Magnoval E9-23
Maximum Diameter	1.188"
Minimum Diameter	1.062"
Maximum Seated Height	3.760"
Maximum Overall Length	4.133"
Pin connections	
Pin 1	Grid No. 1
Pin 2	Grid No. 3
Pin 3	Grid No. 2
Pin 4	Heater
Pin 5	Heater
Pin 6	Grid No. 2
Pin 7	Grid No. 3
Pin 8	Grid No. 1
Pin 9	Cathode
Cap	Plate
Basing	9RJ



Outline drawing



Mounting position Any



ELECTRON TUBE DATA



Electrical Data

Heater characteristics

Heater voltage	21.5 volts
Heater current	450 ma

Maximum heater-cathode voltage(design maximum values)

Heater negative with respect to cathode	
DC	240 volts
Total DC and peak	240 volts
Heater positive with respect to cathode	
DC	240 volts
Total DC and peak	240 volts

Direct Inter-electrode Capacitances (without external shield)

Grid No.1 to plate	1.5 pF
Input : g1 to (h+k+g2+g3)	27 pF
Output : p to (h+k+g2+g3)	11 pF
Grid No.1 to heater	0.12 pF

Maximum Ratings (Design Maximum Values)

Maximum plate voltage	275 volts
Maximum plate voltage without plate current	600 volts
Maximum peak positive-pulse plate voltage *	6500 volts
Maximum peak negative-pulse plate voltage *	1650 volts
Maximum grid No.3 voltage	70 volts
Maximum grid No.2 voltage	275 volts
Maximum grid No.2 voltage without grid No.2 current	600 volts
Maximum peak negative-pulse grid No.1 voltage	330 volts
Maximum plate dissipation	See fig. 1
Maximum grid No.2 dissipation	See fig. 1
Maximum cathode current	
DC	275 ma
Maximum grid No.1 circuit resistance	0.5 megohms
Maximum grid No.1 circuit resistance for horizontal deflection amplifier circuit only	2.2 megohms

Typical Operating Conditions and Characteristics

Plate voltage	40	50	volts
Grid No.3 voltage #	0	0	volts
Grid No.2 voltage	135	200	volts
Grid No.2 circuit			
resistance **	820	0	ohms
Grid No.1 voltage	0	-12	volts
Plate current	450	550##	ma
Grid No.2 current	35	50 ##	ma
Grid No.1 voltage			
for Ib=50 μ A	-55Max.		volts



ELECTRON TUBE DATA



Notes :

* Valid for application in horizontal deflection amplifiers circuits where the max. pulse duration is 22% of a cycle with a max. of 18 μ sec.

** To prevent an excessive maximum grid No.2 dissipation value, during the heating-up period the following minimum values of grid No.2 circuit resistance are required:

Grid No.2 supply voltage (volts)	Grid No.2 circuit resistance (ohms)
135	820
170	1200
230	2200

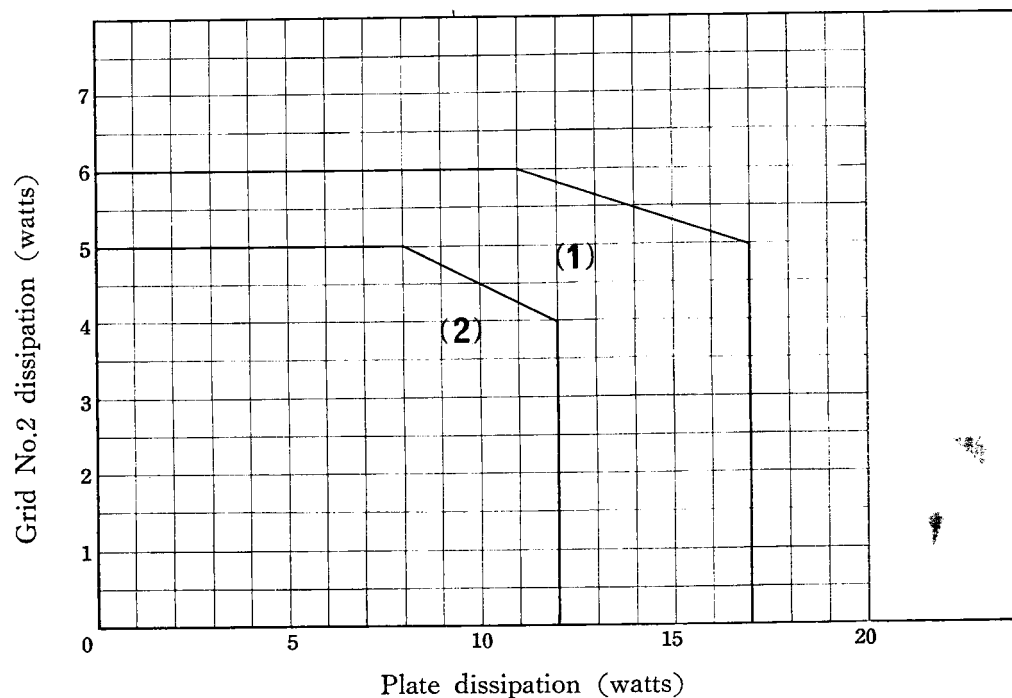
† In case that on optimum suppression of Barkhausen oscillations and or snivets required, the Grid No.3 may be connected to a positive voltage of about 15 ~ 40 volts.

It should however be noted that the current to these Grid No.3 is dependent upon the plate load of tube and may vary between 1 and 4 mA.

‡ This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

Fig. 1

Maximum Permissible Grid No.2 Dissipation as a Function of Plate Dissipation



(1) The area bounded by the axes and the design-maximum curve gives the design-maximum limiting values, which may not exceed with average tubes the most unfavourable conditions.

(2) Design center maximum limiting values.