

MAZDA

1.C.1.

PENTAGRID FREQUENCY CHANGER

Directly heated - for battery operation

TENTATIVE**RATING**

Filament Voltage (volts)	V_f	1.4
Filament Current (amps)	I_f	.05
Maximum Anode Voltage (volts)	$V_a(\text{max})$	90
Maximum Screen Voltage (volts)	$V_{g2 \text{ \& } 4}(\text{max})$	67.5
Maximum Screen Supply Voltage (volts)	$V_{g2 \text{ \& } 4(b)}(\text{max})$	90.0
Maximum Mean Cathode Current (mA)	$I_{k(av)}(\text{max})$	5.5

INTER-ELECTRODE CAPACITANCES *

	†	‡
Grid 3/all (μF) (R.F. Input)	7.0	8.1
Anode/all (μF) (I.F. Output)	7.5	8.6
Grid 1/all (μF) (Osc. Input)	3.8	4.9
Grid 3/Anode (μF) (max)	0.4	0.4
Grid 3/Grid 1 (μF) (max)	0.2	0.23
Grid 1/Anode (μF) (max)	0.1	0.13

* With no external shield

† Inter-electrode capacitances with holder capacitance balanced out.

‡ Total capacitance including a Benjamin B7G holder type 75/663R.

DIMENSIONS

Maximum Overall Length (mm)	54
Maximum Diameter (mm)	19.0
Maximum Seated Height (mm)	47.6
Approximate Nett Weight (ozs)	0.25
Approximate Packed Weight (ozs)	0.5

MOUNTING POSITION - Unrestricted.

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TENTATIVE**TYPICAL OPERATION**

Anode Voltage (volts)	V_a	45	67.5	90	90
Screen Voltage (volts)	$V_{g2 \text{ \& } 4}$	45	67.5	45	67.5
Grid 3 Voltage	V_{g3}	0	0	0	0
Grid 1 Resistance (megohms)	R_{g1}	0.1	0.1	0.1	0.1
Anode Impedance (megohms) (approximately)	r_a	0.6	0.5	0.8	0.6
Conversion Conductance (μ mhos)	g_c	235	280	250	300
Grid 3 Bias for Conversion Conductance of approximately 5 μ mhos		-9	-14	-9	-14
Anode Current (mA)	I_a	0.7	1.4	0.8	1.6
Screen Current (mA)	$I_{g2 \text{ \& } 4}$	1.9	3.2	1.9	3.2
Grid 1 Current (mA)	I_{g1}	0.15	0.25	0.15	0.25
Total Cathode Current (mA)	I_k	2.75	5.0	2.75	5.0

BULB Clear**BASE** B7G.

Viewed from free end of pins.

CONNEXIONS

Pin 1	Filament - ve	f-
Pin 2	Anode	a
Pin 3	Grids 2 & 4 (Osc. Anode & Screen)	$g2 \text{ \& } 4$
Pin 4	Grid 1 (Oscillator)	$g1$
Pin 5	Filament - ve & Grid 5	f- & $g5$
Pin 6	Grid 3 (Signal)	$g3$
Pin 7	Filament +ve	f+