

MAZDA

1.FD.9

DIODE - R. F. PENTODE

Directly heated - for battery operation

TENTATIVE**RATING**

Filament Voltage (volts)	V_f	1.4
Filament Current (amps)	I_f	.05
Maximum Anode Voltage (volts)	$V_a(\max)$	90
Maximum Screen Voltage (volts)	$V_{g2}(\max)$	90
Maximum Control Grid Voltage (volts positive)	$V_{g1}(\max)$	0
Maximum Cathode Current (mA)	$I_{k(av)}\max$	3.0
Maximum Mean Diode Current (μA)	$I_{a(d)}(av)\max$	200
Inner μp ..	μg_{1g2}	12.0

.. at $V_a = 67.5$; $V_{g2} = 67.5$; $V_{g1} = 0$.**INTER-ELECTRODE CAPACITANCES**

			q
Grid/Anode (μF)	$C_{a,g1}$	0.4	0.67
Grid/Earth (μF)	C_{in}	2.2	3.3
Anode/Earth (μF)	C_{out}	3.3	4.4

• 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

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TENTATIVETYPICAL OPERATION

Anode Voltage (volts)	V_a	67.5
Screen Voltage (volts)	V_{g2}	67.5
Grid Bias Voltage (volts)	V_{g1}	0
Anode Impedance (megohms)	r_a	0.6
Mutual Conductance (mA/V)	g_m	0.625
Anode Current (mA)	I_a	1.6
Screen Current (mA)	I_{g2}	0.4

As R.C.C. Amplifier

Anode Supply Voltage (volts)	$V_a(b)$	45	45	90	135
Grid Bias Voltage (volts)	V_{g1}	0	0	0	0
Anode Load Resistance (megohms)	R_a	0.22	0.47	0.47	0.47
Screen Resistance (megohms)	R_{g2}	0.39	1.2	1.8	1.8
Grid Resistance of following valve (megohms)	R_g	0.47	2.2	2.2	2.2
Screen Bypass Condenser (μF)	$C_{g2,E}$	.035	0.02	0.03	0.035
Coupling Condenser to following valve (μF)	C	.006	0.002	0.002	0.002
Voltage Gain @ 5v.		24	38	57	70
R.M.S. Output					

BULB ClearBASE B7G

Viewed from free end of pins.

CONNEXIONS

Pin 1	Filament (-) grid 3	$f-, g3$
Pin 2	No connection	NC
Pin 3	Diode	ad
Pin 4	Screen Grid	$g2$
Pin 5	Anode	a
Pin 6	Control Grid	$g1$
Pin 7	Filament (+)	$f+$