

# MAZDA

11.E.3

## BEAM POWER AMPLIFIER

Indirectly heated - for Pulse Amplification

### RATING

Heater Voltage (volts)	V <sub>h</sub>	4.2
Heater Current (amps)	I <sub>h</sub>	2.5
Maximum Anode Voltage as Series Modulator (volts DC)	V <sub>a(max)</sub>	3,500
Maximum Peak Anode Voltage as Break Modulator (volts)	V <sub>a(pk)max</sub>	12,500
Maximum Screen Voltage (volts)	V <sub>g2(max)</sub>	700
Maximum Control Grid Negative Bias (volts-ve)	V <sub>g1(max)</sub>	-700
Maximum Peak Cathode Current (amps)	I <sub>k(pk)max</sub>	† 3.5
Inner $\mu$	$\mu_{g1-g2}$	† 9.0
Maximum Anode Dissipation (watts)	W <sub>a(max)</sub>	10.0
Maximum Screen Dissipation as Series Modulator (watts)	W <sub>g2(max)Series</sub>	0.9
Maximum Screen Dissipation as Break Modulator (watts)	W <sub>g2(max)Break</sub>	2.0
Maximum Potential Heater/Cathode (volts DC)	V <sub>h-k(max)</sub>	150

† Taken under Pulse Conditions of approximately 10 micro-seconds duration and 400:1 minimum off-on ratio.

: Taken at V<sub>a</sub> = 200; V<sub>g2</sub> = 200; I<sub>a</sub> = 40 mA.

### INTER-ELECTRODE CAPACITANCES

Anode/Earth ( $\mu\text{F}$ )	C <sub>out</sub>	7.5
Anode/Control Grid ( $\mu\text{F}$ )	C <sub>a-g1</sub>	0.26
Control Grid/Earth ( $\mu\text{F}$ )	C <sub>in</sub>	20

"Earth" denotes the remaining earthy potential electrodes and heater joined to cathode.

### DIMENSIONS

Maximum Overall Length (mm)	140
Maximum Diameter (mm)	54
Maximum Seated Height (mm)	125
Approximate Nett Weight (ozs)	2½
Approximate Packed Weight (ozs)	7

MOUNTING POSITION - Vertical

### NOTE

This valve is intended for use as a break or series modulator with a short duration pulse input signal. When the equipment may be subjected to reduced atmospheric pressures the peak voltage between the control grid and Screen grid should not exceed 1,200 volts.

**MAZDA**

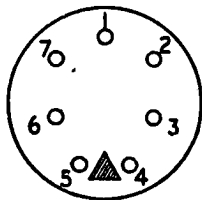
11.E.3

**BEAM POWER AMPLIFIER**

Indirectly heated - for Pulse Amplification

TYPICAL OPERATION

		<u>Series Modulator</u>	<u>Break Modulator</u>
Quiescent Anode Voltage (volts)	$V_{a(o)}$	3,500	500
Screen Voltage (volts)	$V_{g2}$	500	500
Signal Voltage Positive (volts)		50	25
Peak Anode Current (amps)	$I_a(pk)$	2	1
Approximate Knee Voltage (volts)		200	
Peak Anode Output Voltage (volts)		3,300	10,000
Approximate Peak Grid Current (amps)	$I_{g1(pk)}$	0.12	0.05

CAP EVA StandardBULB ClearBASE British 7 Pin.

Viewed from free end of pins.

CONNEXIONS

Pin 1	Blank	-
Pin 2	Control Grid	g1
Pin 3	Blank	-
Pin 4	Heater	h
Pin 5	Heater	h
Pin 6	Cathode	k
Pin 7	Screen Grid	g2
Top Cap	Anode	a