

ES1102
RADIATION COOLED TRIODE
TENTATIVE

GENERAL

The ES1102 is a directly heated power triode intended for use in Class AB₁ or AB₂ Push Pull Amplifiers having a maximum power output of 300 watts per pair of valves. It has a maximum anode dissipation of 100 watts.

RATING

Filament Voltage (volts)	V_f	6.0
Filament Current (amps)	I_f	2.7
Maximum Anode Voltage (volts)	$V_a(\text{max})$	1250
Maximum Mean Cathode Current (mA)	$I_{k(\text{av})\text{max}}$	250
Maximum Anode Dissipation (watts)	$P_a(\text{max})$	100
Mutual Conductance (mA/V)	g_m	3.9*
Amplification Factor	μ	5.5*
Anode Impedance (kilohms)	r_a	1.41*

* Measured at $V_a=1\text{kV}$; $I_a=100\text{mA}$.

INTER-ELECTRODE CAPACITANCES (pF)

Anode/Grid	c_{a-g}	15.7
Anode/Filament	c_{a-f}	10.8
Grid/Filament	c_{g-f}	15.8

DIMENSIONS

Maximum Overall Length	(mm)	192
Maximum Seated Height	(mm)	182
Maximum Diameter	(mm)	65
Approximate Nett Weight	(lbs)	1
Approximate Packed Weight	(lbs)	2

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MOUNTING POSITION—Vertical, base downwards.

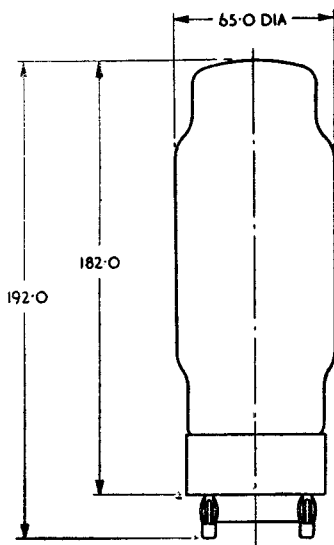
TYPICAL OPERATION—Push-Pull. Values per valve.

	Class AB ₁		Class AB ₂	
Anode Voltage (maximum signal) (kV)	$V_{a(max sig)}$	1.0 1.25	1.0 1.25	
Anode Current (no signal) (mA)	$I_{a(o)}$	50 50	50 50	
Anode Current (maximum Signal) (mA)	$I_{a(max sig)}$	165 150	150 182	
Anode Dissipation (no signal) (watts)	$P_{a(o)}$	55 70	55 55	
Anode Dissipation (maximum signal) (watts)	$P_{a(max sig)}$	53 100	50 80	
Grid Bias (volts)	V_g	—200 —225	—200 —225	
Input Voltage (grid to grid) (peak) (volts)	$V_{in(g-g)pk}$	400 450	500 560	
Grid Current (mA)	I_g	0 0	7.5 10	
Anode Load (Anode to Anode) (kilohms)	R_{a-a}	4 8	8 8	
Power Output (total)(watts)	P_{out}	125 175	200 300	
Distortion (%)		4 5	6 6	

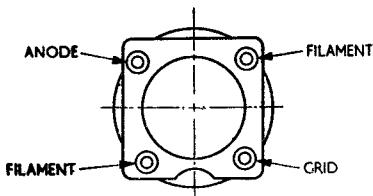
The power supply should have an impedance not greater than 400 ohms.

Under Class AB₂ conditions the anode dissipation rises to a maximum at approximately one half of full output.

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BASE—L4



All dimensions in mm.



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CHARACTERISTIC CURVES: I_a/V_a

