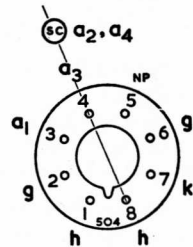


RIMGUARD II TELEVISION PICTURE TUBE



B8H Base, CT8 Cap

GENERAL

Rectangular Face	19 in.	Diagonal
Reinforced Envelope	Integral	Mounting Lugs
Electrostatic Focus	Magnetic	Deflection
Deflection Angle	110°	Diagonal
Aluminised Screen	White	Fluorescence
Grey Glass	50%	Transmission (Approx.)
Straight Gun	Non Ion	Trap

External Conductive Coating

Heater Voltage	V_h	6.3	V
Heater Current	I_h	0.3*	A

DESIGN CENTRE RATINGS

Maximum Second and Fourth Anode Voltage	$V_{a2,a4(max)}$	20†	kV
Minimum Second and Fourth Anode Voltage	$V_{a2,a4(min)}$	13	kV
Maximum Third Anode Voltage	$V_{a3(max)}$	+1000 to -500	V
Maximum First Anode Voltage	$V_{a1(max)}$	700	V
Maximum Heater to Cathode Voltage, Heater Negative (d.c.)	$V_{h-k(max)}$	250	V
Maximum Peak Heater to Cathode Voltage, Heater Negative	$V_{h-k(pk)max}$	400‡§	V
Maximum Impedance, Grid to Cathode (50 Hz)	$Z_{g-k(max)}$	0.5	M Ω
Maximum Resistance, Grid to Cathode	$R_{g-k(max)}$	1.5	M Ω

All voltages referred to cathode.

* The CRT heater should always be connected at the chassis end in a series heater chain.

† For $I_{a2+a4}=0$.

‡ Absolute rating.

§ During a warming-up period not exceeding 45 seconds.

The A47-25W is electrically identical to the AW47-91.

The mechanical fixing of this tube is interchangeable with other existing reinforced tubes.

Tubes incorporating a B8H sparkguard base will have a suffix S after the type number. For details of the sparkguard base see separate sheet.

INTER-ELECTRODE CAPACITANCES *

		*	†	
Cathode to all	C_{k-all}	3.0	3.5	pF
Grid to all	C_{g-all}	7.0	8.5	pF
Anode 2 and Anode 4 to External Conductive Coating, M_1 (approx.)	$C_{a2,a4-M1}$	1000		pF
Anode 2 and Anode 4 to Shell, M_2 (approx.)	$C_{a2,a4-M2}$	250		pF

* Inter-electrode capacitances with holder capacitance balanced out.

† Total inter-electrode capacitances including an AEI B8H holder VH68/81 (8 pin).

TYPICAL OPERATION—Grid Modulation (Voltage referred to cathode)

Second and Fourth Anode Voltage	$V_{a2,a4-k}$	18	18	kV
First Anode Voltage ‡	V_{a1-k}	400	500	V
Beam Current	I_{a2+a4}	350 500	350 500	μA
Third Anode Voltage Range for Focus	V_{a3-k}	0 to 400	0 to 400	V
Average Peak to Peak Picture Modulating Voltage		35.5 40.5	39.5 45	V
Grid to Cathode Voltage for cut-off of raster (See chart for limits)	V_{g-k}	-57	-69	V

TYPICAL OPERATION—Cathode Modulation (Voltage referred to grid)

Second and Fourth Anode Voltage	$V_{a2,a4-g}$	18	18	kV
First Anode Voltage ‡	V_{a1-g}	400	500	V
Beam Current	I_{a2+a4}	350 500	350 500	μA
Third Anode Voltage Range for Focus	V_{a3-g}	0 to 400	0 to 400	V
Average Peak to Peak Picture Modulating Voltage		31.5 35.5	34.5 39.5	V
Cathode to Grid Voltage for cut-off of raster (See chart for limits)	V_{k-g}	51	62	V

‡ Within this range a higher First Anode Voltage will provide an improved focus performance.

PICTURE CENTRING

Maximum magnet flux density at centre of neck should not be less than	17 G
Maximum distance of centre of magnetic field from reference line	53 mm

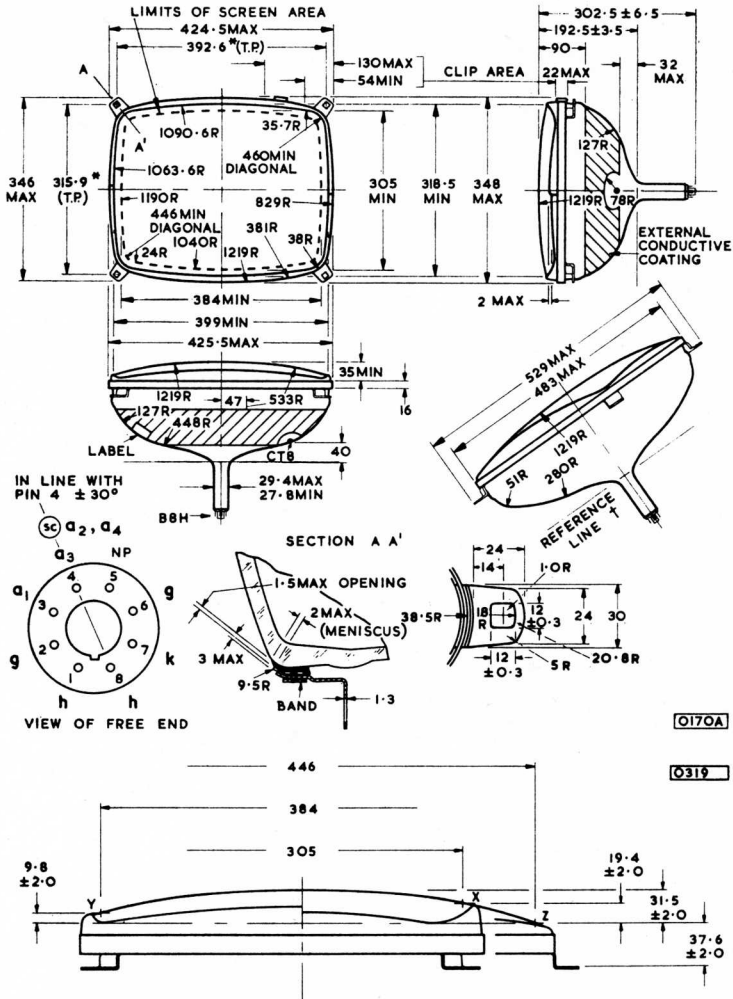
DEFLECTION ANGLES

Height	82°
Width	99°
Diagonal	110°

TUBE WEIGHT (approx.)—Net 191b (8.6 kg)

Note :

If this tube is operated at voltages in excess of 16 kV, x-ray radiation shielding may be necessary to avoid possible danger of personal injury from prolonged exposure at close range.



0170A

0319

All dimensions in mm.

Not to be scaled.

Notes :

It is recommended that the mask used with this tube is flexible enough to take up small variations in fixing and bulb contours.

The metal shell M₂ must be connected to chassis via a 2MΩ resistor.

* The bolts to be used for mounting the tube must lie within the circles of 8.5 mm diameter centred on these true positions (Diagonal 504). One of the four lugs may deviate 2 mm maximum from the plane through the other three lugs.

† Determined by reference line gauge No. 16 (JEDEC No. 126).

