

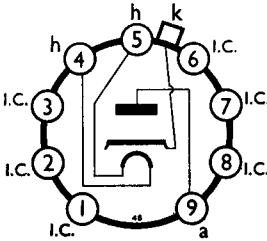


# BOOSTER DIODE

## 0·3A INDIRECTLY HEATED

**U329**  
NOVEMBER, 1953

### BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside  
of base.

Base : B9A  
Bulb : Tubular

Overall length : 83 mm. (max.)  
Seated length : 76 mm. (max.)  
Max. diameter : 22·2 mm.  
Top cap : CT1

### RATING

$I_h$	0·3	A
$V_h$	25 approx.	V
$V_{h-k}$ (heater-ve)	2	kV
$v_{h-k}$ (pk) (pulse)*	7·5 max.	kV
PIV† (pulse)*	7 max.	kV
$I_{out}$	120 max.	mA
$i_a$ (pk)	720 max.	mA
$i_a$ (sur)	2·4 max.	A

\* Maximum pulse duration of 15% of one cycle with a maximum of 15μs.

† It is desirable to provide some HT delay after application of heater voltage. This is essential, however, above 6kV PIV.

### CAPACITANCES

$C_{a-all}$       6·1 pF                                       $C_{h-k}$       3·2 pF

### MOUNTING

Any position. It is recommended that the valve pins are aligned in a pin-straightener of accredited design before inserting the valve in a socket. When operating the valve as a booster diode, care must be taken to ensure that the valve holder has adequate insulation to withstand the maximum peak inverse voltage. The cylindrical centre shield of the valve holder should be removed, and it is also advisable to remove contacts 1, 6 and 7. In addition it may be necessary to mount certain types of holder on a plate of insulating material.

### VENTILATION

Free air circulation is preferable. If a retaining device in the form of a metal canister is employed, the surfaces should be blackened. The temperature of the hottest part of the bulb must not exceed 225°C.

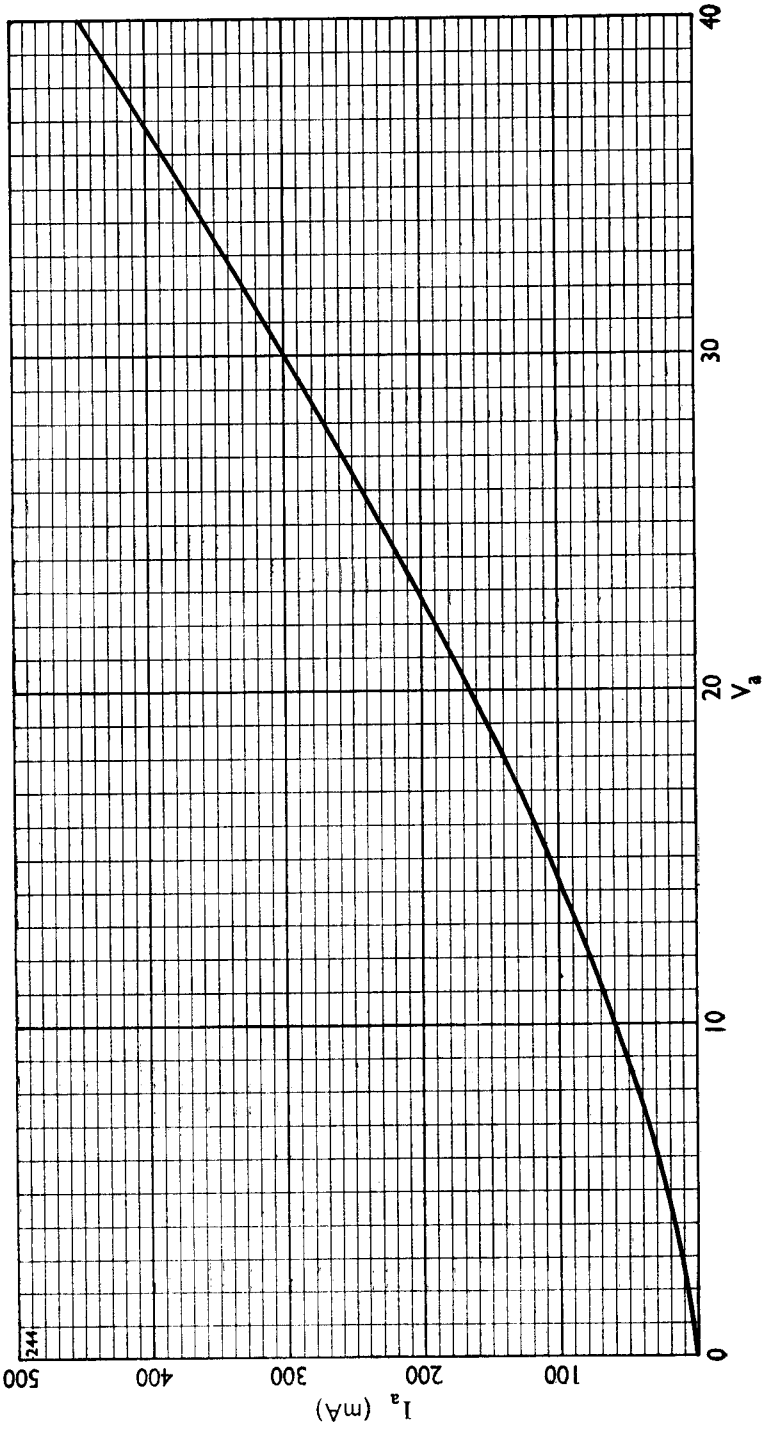
### RETAINING

In equipment subject to vibration or shock a retainer is required.

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# U329





*The ratings and characteristics of the valves mentioned in this Supplement are given in the Technical Data Sheet.*

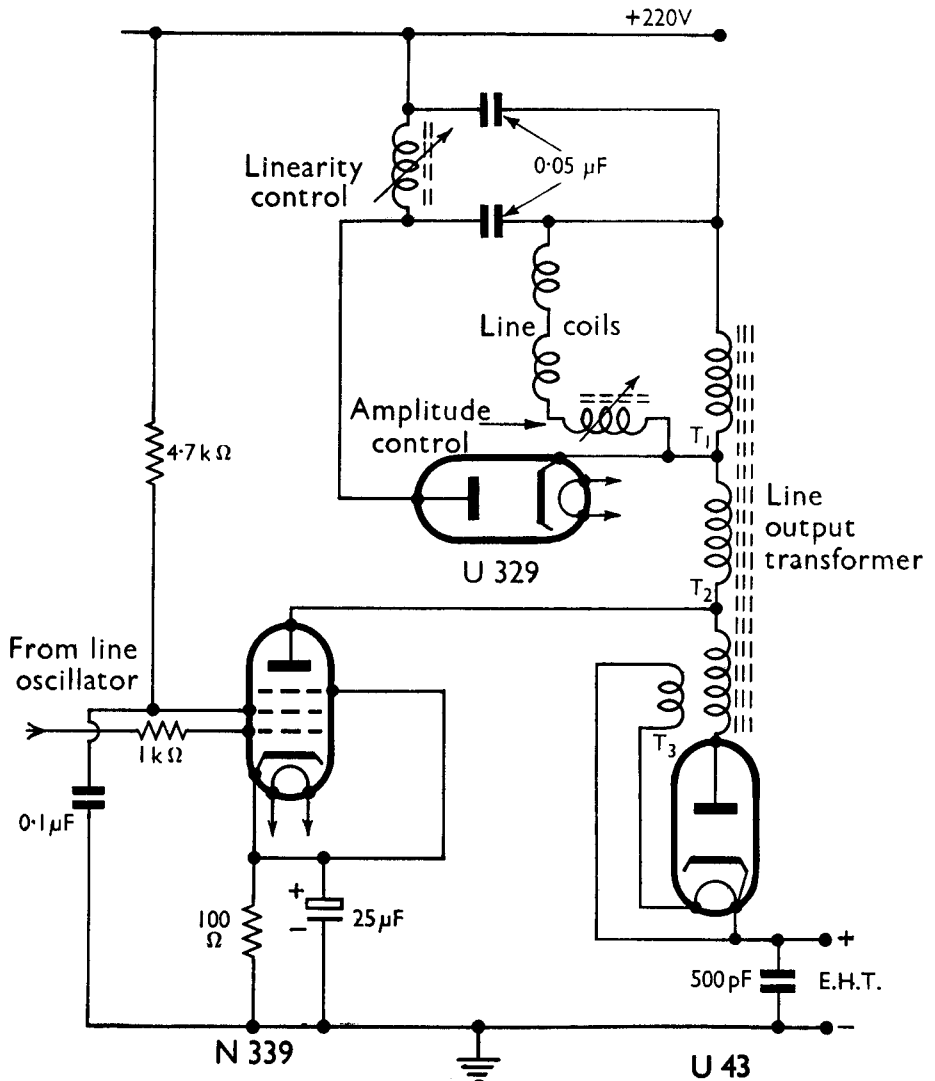
The U329 is a low impedance diode for use principally in voltage booster circuits in television receivers. It is capable of withstanding a peak voltage of 7.5 kV between the heater and cathode. This high voltage is possible due to the special heater and cathode design used. The ceramic insulation used at low voltage is omitted and a special vacuum insulation technique employed.

A typical circuit suitable for use with the U329 is shown overleaf.

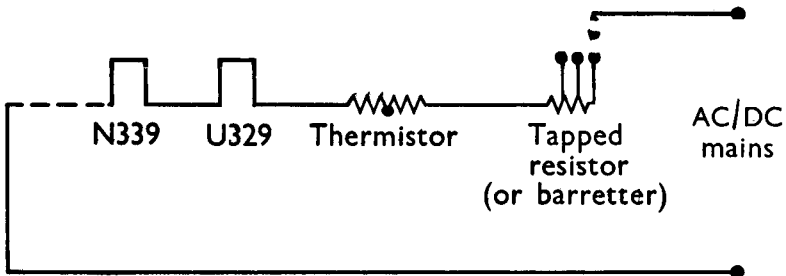
During the flyback period a positive voltage pulse appears at the U329 cathode; the amplitude of this pulse will depend on the impedance of the line coils and consequently on the position of the tapping point on the line transformer. The limiting case is reached when the line coils and diode are connected direct to the line output valve anode at point  $T_2$  and the transformer has then an effective 1 : 1 ratio and maximum peak voltage is reached.

The proportion of the winding between  $T_2$  and  $T_3$  is the overwind for the EHT supply to the picture tube. The pulse produced during the flyback period is rectified by the U43 and appears as a DC voltage across the EHT capacitor.

# U329 CIRCUIT SUPPLEMENT



Typical circuit : line time base output stage.



Heater connections.