

## Bi-directional 10-way Selector Tube

# GS10D

### Limit Ratings

Maximum counting rate:	
Continuous sine wave drive	20 kp/s
Rectangular pulse drive	10 kp/s
Maximum total anode current	900 $\mu$ A
Minimum total anode current	700 $\mu$ A
Minimum supply voltage, anode to cathode (normal room illumination)	440 V
Maximum potential between guides and cathodes	180 V
Maximum output pulse available with 47k cathode load resistor	35 V

### Characteristics

Running voltage at 800  $\mu$ A 208 V approx.

### Recommended Operating Conditions

*Anode current	800 $\mu$ A	
**Guide bias	+50 $\pm$ 5 V	
Cathode load resistors	47 k $\Omega$ max.	←
Forced resetting pulse	-140 V	
***Double pulse drive—amplitude	-120 V $\pm$ 10 V	
Double pulse drive—duration	30 $\mu$ S $\pm$ 20%	
Double pulse drive—pulse overlap at the 90% pulse level	10 $\pm$ 5 $\mu$ S	←
****Integrated pulse drive—amplitude	-145 V $\pm$ 15 V	
Integrated pulse drive—duration	33 $\mu$ S $\pm$ 20%	←
Sine wave drive—amplitude	60—100 V r.m.s.	←

\* The required anode current may be obtained from a 475 V supply via a 300 k $\Omega$   $\pm$  5% resistor.

Note—To reduce the effect of stray capacity to a minimum it is essential that the anode resistor be wired not more than  $\frac{1}{4}$ " (5 mm) from the anode tag on the valve holder.

\*\* This does not apply in the case of the sine wave drive. See circuit LK.100, Issue 2.

\*\*\* The pulses should have a rise time of less than 150 V/ $\mu$ S and a droop of less than 30 V. See circuit LK.102, Issue 2.

\*\*\*\* The pulse should have a rate of rise of less than 150 V/ $\mu$ S and a droop of less than 5 V. See circuit LK.101, Issue 2.

N.B. ← Indicates a change from previous data sheet.



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Selector Tube

## Mechanical Data

Mounting position

Any.

For visual indication the tube is viewed through the dome of the bulb.

Alignment

Cathode 1 is aligned with pin No. 11 to an accuracy of  $\pm 12^\circ$ .

Weight

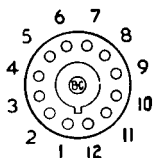
53 g (nominal)

Base

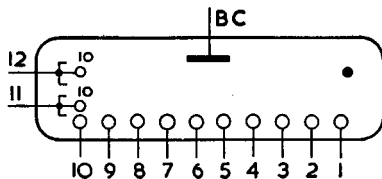
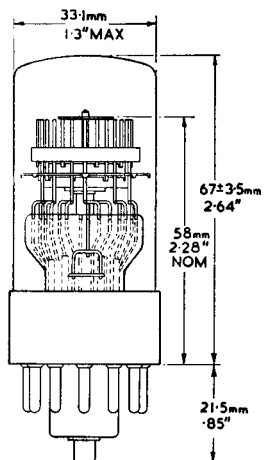
Duodecal with bottom cap.

Escutcheon

N80977.

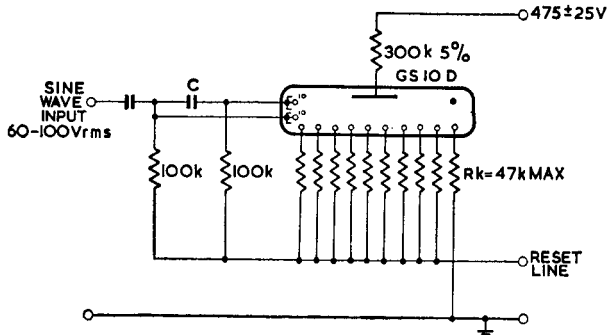
Base Connections  
(underside view)

Pin 1	Cathode 0
2	" 9
3	" 8
4	" 7
5	" 6
6	" 5
7	" 4
8	" 3
9	" 2
10	" 1
11	2nd Guides
12	1st Guides
B.C. Anode	



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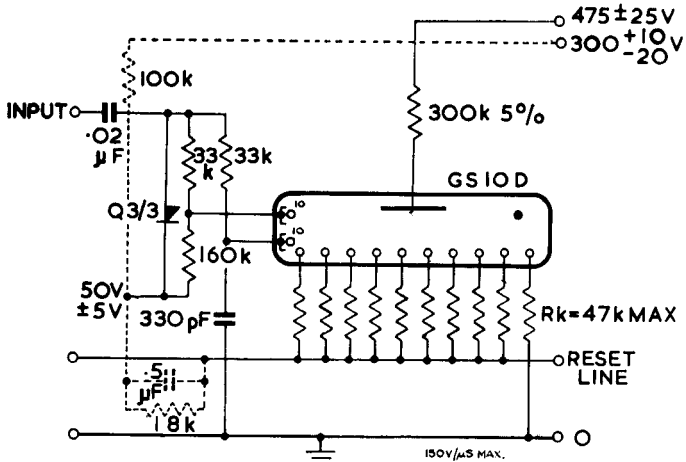
# GS10D



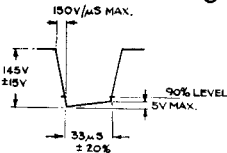
FREQUENCY	20	15	10	5	2	1	500	200	100	50
	kc/s	kc/s	kc/s	kc/s	kc/s	kc/s	c/s	c/s	c/s	c/s
C	270	330	470	680	0.002	0.005	0.1	0.2	0.5	1
	pF	pF	pF	pF	μF	μF	μF	μF	μF	μF

LK100  
ISSUE 2

## Continuous Sine-Wave Drive



INPUT PULSE  
10kpps MAX.



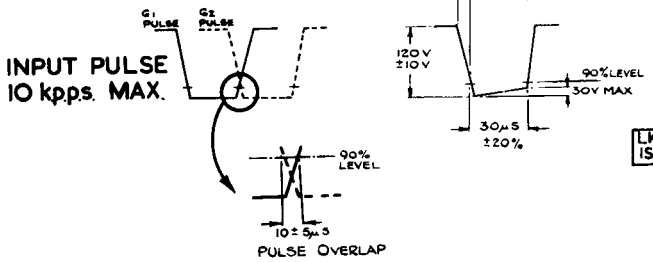
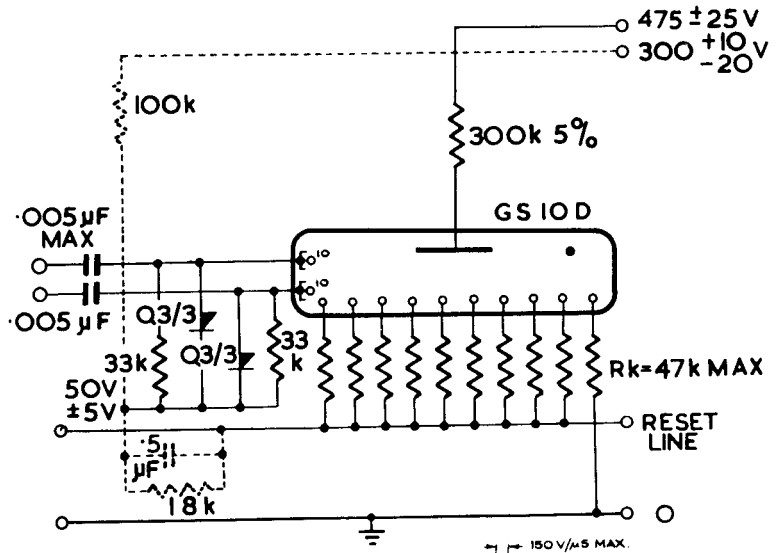
LK101  
ISSUE 2

## Integrated-Pulse Drive



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### Paired-Pulse Drive

