N.U. ENGINEERING BULLETIN
ELECTRONIC COMPONENTS

from JETEC release #1590, Feb. 20, 1956

N. U. - 6090

18 CHANNEL RADIAL BEAM TUBE
MULTIPLE ANODE TYPE

The Type N.U.-6090 is a multiple anode electrostatically focused and deflected radial beam tube intended for high speed electronic switching or commutation. It is capable of handling 18 different channels for transmission over a single carrier in multiplexing or telemetering applications. This is the output tube of such a system. It has a coated unipotential cathode. The N.U.-6090 has eighteen anode leads which are brought out separately, a common lead for the six gap grids and another lead for the remaining twelve window grids. The gap grids are physically positioned between adjacent screen segments.

ELECTRICAL RATINGS

Heater Voltage (ac or dc)	6.3 volts ±10%
Maximum Plate Voltage	300 volts dc
Maximum Screen Voltage (G_2)	300 volts rms ac 6φ

TYPICAL OPERATING CONDITIONS

Heater Voltage	6.3	volts
Heater Current	0.670	amperes
Plate Voltage	300	volts ●
Screen Voltage *(Applied through dc focusing bias)*	150	volts rms ac 6φ
Focusing Bias *(Positive end connected to cathode)*	60	volts dc
Shield Voltage	60	volts dc
Grid Voltage EG-1 *(Gap grids)*	0	volts dc
Grid Voltage EG-2 *(Window grids)*	-10	volts dc ▲
Single Channel Peak Current	60	μa dc
Single Channel Transconductance	2.0	μmhos max.
Plate Load Resistance	500K	ohms

● *All voltages except EG-1 and EG-2 are measured with respect to the six phase power supply neutral. EG-1 and EG-2 are measured with respect to the cathode.*

▲ *The bias on the window grids may be adjusted to equalize the uniformity of output current between the gap grid and window grid channels. This will limit the maximum deviation in output uniformity to ± 15%.*

MECHANICAL RATINGS

STYLE	Special
BULB	T-18
BASE	Special 30-pin
OVERALL HEIGHT	4.0"
MAX. DIA.	2.5" (BASED)
MOUNTING POSITION	Any

BASE PIN CONNECTIONS

PIN 1:	P-1
PIN 2:	P-2
PIN 3:	P-3
PIN 4:	P-4
PIN 5:	P-5
PIN 6:	P-6
PIN 7:	P-7
PIN 8:	P-8
PIN 9:	P-9
PIN 10:	P-10
PIN 11:	P-11
PIN 12:	P-12
PIN 13:	P-13
PIN 14:	P-14
PIN 15:	P-15
PIN 16:	P-16
PIN 17:	P-17
PIN 18:	P-18
PIN 19:	H
PIN 20:	SC-1
PIN 21:	G_1 (GAP GRIDS)
PIN 22:	SC-2
PIN 23:	K
PIN 24:	SC-3
PIN 25:	Mica Charge Ring
PIN 26:	SC-4
PIN 27:	G_2 (WINDOW GRIDS)
PIN 28:	SC-5
PIN 29:	H
PIN 30:	SC-6

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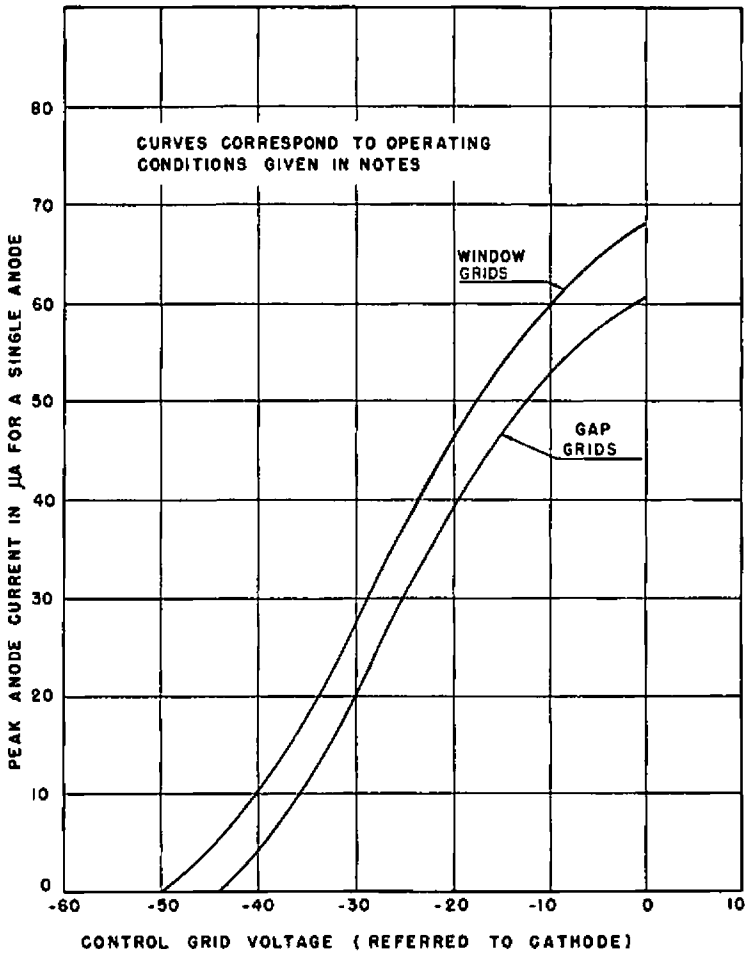
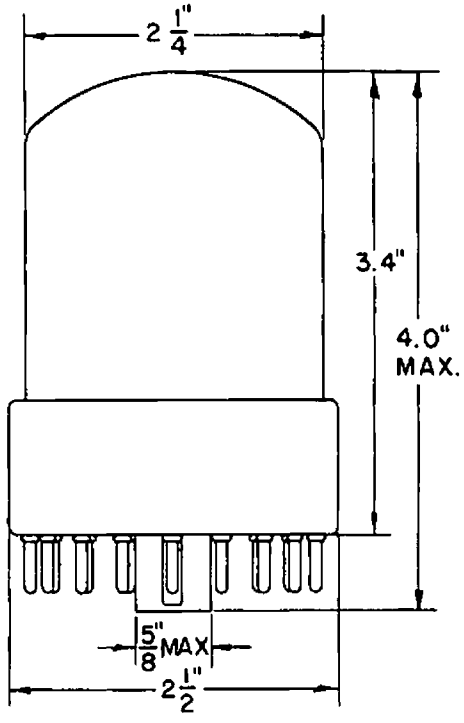
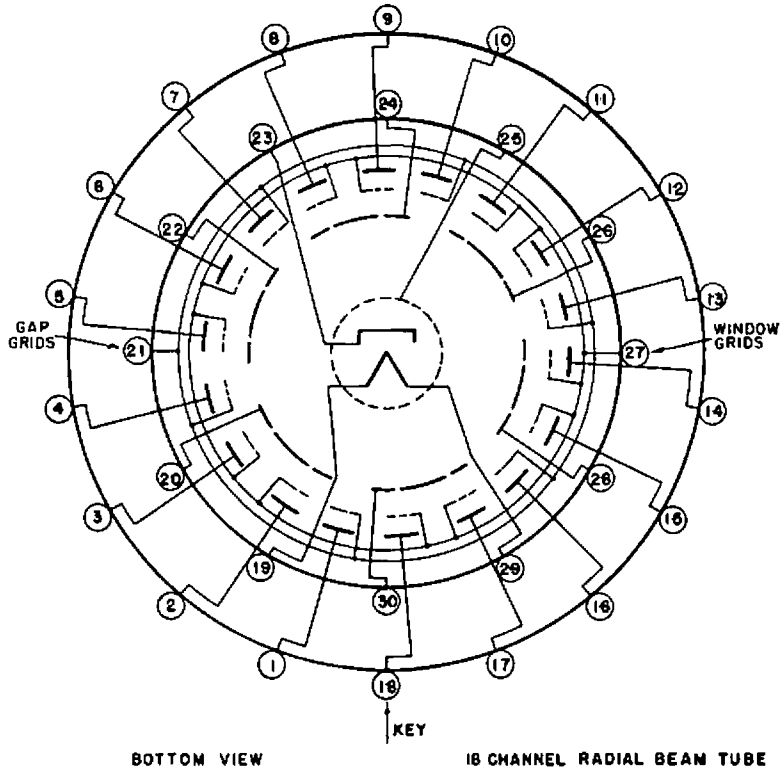
N. U. - 6090 18 CHANNEL RADIAL BEAM TUBE MULTIPLE ANODE TYPE







BOTTOM VIEW

18 CHANNEL RADIAL BEAM TUBE
NU- 6090