



C6J-A

C6J-A/5685

## XENON THYRATRON

NEGATIVE-CONTROL TRIODE TYPE

## GENERAL DATA

## Electrical:

|                                                                                                                                                                                                                             |      |     |      |                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|---------------------------|
| Filament, Coated:                                                                                                                                                                                                           | Min. | Av. | Max. |                           |
| Voltage. . . . .                                                                                                                                                                                                            | 2.4  | 2.5 | 2.6  | ac or dc volts            |
| Current at 2.5 volts . . .                                                                                                                                                                                                  | 19   | 21  | 23   | amp                       |
| Minimum heating time prior to<br>tube conduction. . . . .                                                                                                                                                                   |      |     |      | 60 sec                    |
| Direct Interelectrode Capacitances (Approx.):                                                                                                                                                                               |      |     |      |                           |
| Grid to anode. . . . .                                                                                                                                                                                                      |      |     | 4    | $\mu\text{f}$             |
| Grid to cathode. . . . .                                                                                                                                                                                                    |      |     | 21   | $\mu\text{f}$             |
| Maximum Deionization Time. . . . .                                                                                                                                                                                          |      |     | 1000 | $\mu\text{sec}$           |
| Maximum Critical Grid Current. . . . .                                                                                                                                                                                      |      |     | 10   | $\mu\text{amp}$           |
| Anode Voltage Drop:                                                                                                                                                                                                         |      |     |      |                           |
| Average, at beginning of life. . . . .                                                                                                                                                                                      |      |     | 9    | volts                     |
| Maximum, at end of life. . . . .                                                                                                                                                                                            |      |     | 12   | volts                     |
| Maximum Commutation Factor <sup>1</sup> ,<br>averaged over first 350 volts of<br>inverse anode voltage rise . . . . .                                                                                                       |      |     | 0.66 | $\text{va}/\mu\text{s}^2$ |
| Grid Control Ratio (Approx.):                                                                                                                                                                                               |      |     |      |                           |
| For conditions: 10000-ohm grid resistor, circuit returns to filament transformer center-tap, filament pin 2 negative with respect to filament pin 3 when anode is positive, dc anode voltage, and dc grid voltage . . . . . |      |     |      |                           |
|                                                                                                                                                                                                                             |      |     | 210  |                           |

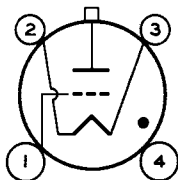
## Mechanical:

|                                              |                                                          |
|----------------------------------------------|----------------------------------------------------------|
| Mounting Position. . . . .                   | Vertical, base down                                      |
| Maximum Overall Length . . . . .             | 9-1/2"                                                   |
| Maximum Diameter . . . . .                   | 2-1/32"                                                  |
| Weight (Approx.) . . . . .                   | 7 oz                                                     |
| Cap. . . . .                                 | Medium (JETEC No.C1-5)                                   |
| Bulb . . . . .                               | T-16                                                     |
| Base . . . . .                               | Medium-Metal-Shell Super-Jumbo 4-Pin<br>(JETEC No.A4-81) |
| Basing Designation for BOTTOM VIEW . . . . . | .4BZ                                                     |

Pin 1-Grid

Pin 2-Filament

Pin 3-Filament



Pin 4-No Connection

Cap - Anode

## GRID-CONTROLLED RECTIFIER SERVICE

## Maximum Ratings, Absolute Values:

## PEAK ANODE VOLTAGE:

|                  |                 |
|------------------|-----------------|
| Forward. . . . . | 1000 max. volts |
| Inverse. . . . . | 1250 max. volts |

<sup>1</sup>: See next page.

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## GRID VOLTAGE:

Peak, before tube conduction . . . . . -100 max. volts

## ANODE CURRENT:

Peak . . . . . 77 max. amp

Average . . . . . 6.4 max. amp

## Overload:

|                                        |                 |           |     |
|----------------------------------------|-----------------|-----------|-----|
| Rating I*, for<br>duration of. . . .   | 0.5 sec . . . . | 77 max.   | amp |
|                                        | 1 sec . . . .   | 38.5 max. | amp |
|                                        | 2 sec . . . .   | 19.2 max. | amp |
|                                        | 3 sec . . . .   | 12.8 max. | amp |
|                                        | 4 sec . . . .   | 9.6 max.  | amp |
| Rating II**, for<br>duration of. . . . | 5 sec . . . .   | 7.7 max.  | amp |
|                                        | 3 sec . . . .   | 12.8 max. | amp |
|                                        | 4 sec . . . .   | 11.2 max. | amp |
|                                        | 5 sec . . . .   | 10.3 max. | amp |
|                                        | 6 sec . . . .   | 9.6 max.  | amp |

Fault, for duration of 0.1 second

maximum. . . . . 770 max. amp

AMBIENT-TEMPERATURE RANGE. . . . . -55 to +75 °C

• Defined as the product of the rate of current decay in amperes per microsecond just before conduction ceases and the rate of inverse voltage rise in volts per microsecond following current conduction.

• Averaged over any period of 6 seconds.

\* Averaged over duration of overload occurring no more than once in any period of 6 seconds.

\*\* Averaged over duration of overload occurring no more than once in any period of 30 seconds.

## OPERATING CONSIDERATIONS

The *anode* of the C6J-A/5685 will show a red color when the tube is operated at full load.

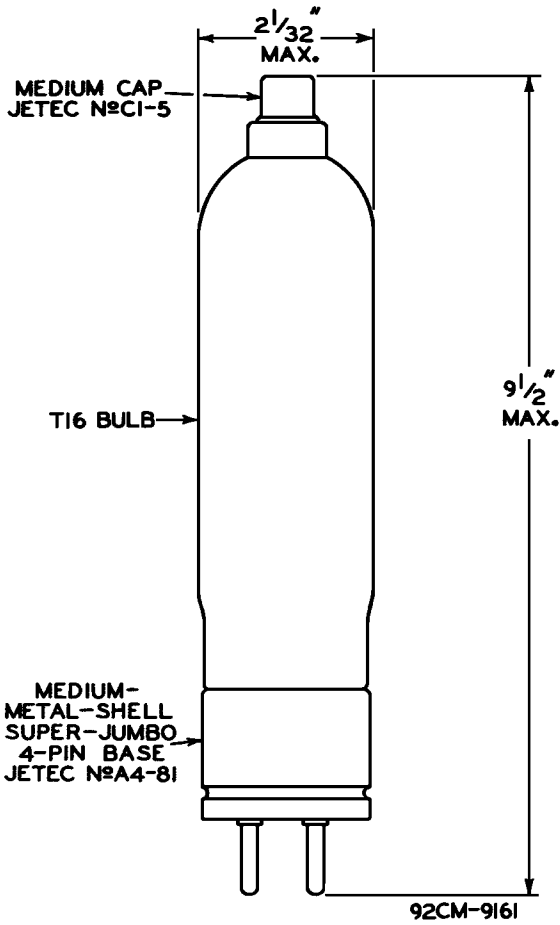
Sufficient *anode-circuit resistance*, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings of the tube.



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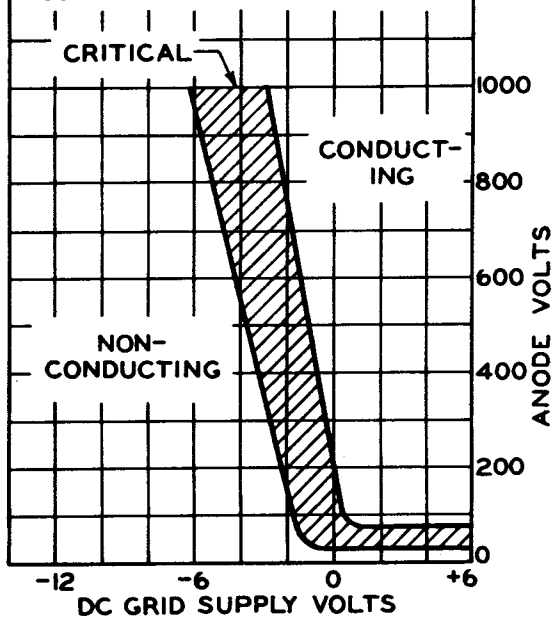


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OPERATIONAL RANGE  
OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:  
 $E_f = 2.5 \text{ VOLTS} \pm 5\%$ ; CIRCUIT RE-  
TURNS TO CENTER-TAP OF FILAMENT  
TRANSFORMER. FILAMENT VOLTAGE  
AT PIN 2 IS (-) WHEN ANODE VOLTAGE  
IS (+). THE RANGE INCLUDES INITIAL  
AND LIFE VARIATIONS OF INDIVIDUAL  
TUBES. GRID RESISTOR = 0 TO 10000  
OHMS. AMBIENT TEMPERATURE =  
-55 TO +75°C.



92CS-9123T