C6J/5C21
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 tube conduction........ 60  sec
Direct Interelectrode Capacitances (Approx.):
   Grid to anode ..........  4  μf
   Grid to cathode ......... 21  μf
Maximum Deionization Time .......... 1000 μsec
Maximum Critical Grid Current ........ 10 μamp
Anode Voltage Drop:
   Average, at beginning of life .......  9  volts
   Maximum, at end of life ..........  12  volts
Maximum Commutation Factor, averaged over first 350 volts of
   inverse anode voltage rise .......... 0.66  va/μs²
Grid Control Ratio (Approx.):
   For conditions: 10000-ohm grid re-
      sistor, circuit returns to filament
      transformer center-tap, filament
      pin 2 negative with respect to
      filament pin 3 when anode is posi-
      tive, 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. ................................ Medium-Metal-Shell Super-Jumbo 4-Pin
   Base. .................. Medium-Metal-Shell Super-Jumbo 4-Pin
   (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 .................. 750 max. volts
   Inverse ................. 1250 max. volts

*: See next page.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TENTATIVE DATA
### GRID VOLTAGE:
- Peak, before tube conduction: \(-100\) max. volts

### ANODE CURRENT:
- Peak: 77 max. amp
- Average: 6.4 max. amp

### Overload:
- 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
- 5 sec: 7.7 max. amp

#### Rating I*, for duration of:
- 3 sec: 12.8 max. amp
- 4 sec: 11.2 max. amp
- 5 sec: 10.3 max. amp
- 6 sec: 9.6 max. amp

#### Rating II**, for duration of:

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### 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 duration of overload occurring no more than once in any period of 30 seconds.

### OPERATING CONSIDERATIONS

The anode of the C6J/5C21 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.
OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:
\( E_f = 2.5 \text{ VOLTS } \pm 5\% \); CIRCUIT
RETURNS 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 =
\(-55 \text{ TO } +75^\circ\text{C}\).