



C6J

# C6J/5C21

## XENON THYRATRON NEGATIVE-CONTROL TRIODE TYPE

### GENERAL DATA

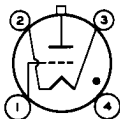
#### Electrical:

Filament, Coated:	<i>Min.</i>	<i>Average</i>	<i>Max.</i>	
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 $\mu$ f
Grid to cathode . . . . .				21 $\mu$ f
Maximum Deionization Time . . . . .				1000 $\mu$ sec
Maximum Critical Grid Current . . . . .				10 $\mu$ amp
Anode Voltage Drop:				
Average, at beginning of life . . . . .				9 volts
Maximum, at end of life . . . . .				12 volts
Maximum Commutation Factor $\downarrow$ , averaged over first 350 volts of inverse anode voltage rise. . . . .				0.66 va/ $\mu$ s <sup>2</sup>
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 (JETEC No.A4-81)
Basing Designation for BOTTOM VIEW. . . . .	4BZ

Pin 1 - Grid



Pin 4 - No Connection

Pin 2 - Filament

Cap - Anode

Pin 3 - Filament

### GRID-CONTROLLED RECTIFIER SERVICE

#### Maximum Ratings, Absolute Values:

#### PEAK ANODE VOLTAGE:

Forward . . . . .	750 max. volts
Inverse . . . . .	1250 max. volts

$\downarrow$ : 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	} 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	}		
duration of . . . . .				
Rating II**, for			} 3 sec. . . . . 12.8 max. amp 4 sec. . . . . 11.2 max. amp 5 sec. . . . . 10.3 max. amp 6 sec. . . . . 9.6 max. amp	}
duration of . . . . .				
Fault, for duration of 0.1 second				
maximum . . . . .		°C		
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/5C21 will show a red color when the tube is operated at full load.

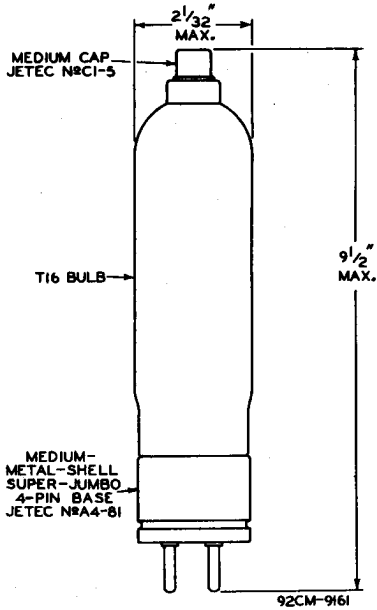
Sufficient *anode-circuit resistance*, including the tube load, must be used under any conditions of operation to prevent exceeding the current ratings of the tube.



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### OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:  
 $E_f = 2.5$  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.

