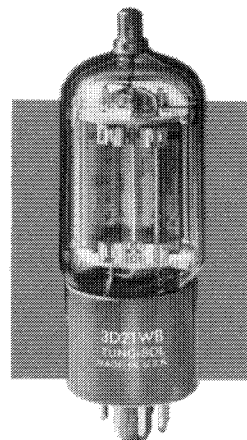


## PULSE BEAM POWER TETRODE

**DESCRIPTION** — The 3D21WB is a rugged, reliable, beam power tetrode designed for pulse service. Featuring the ability to operate under high voltage and high pulse current conditions, the 3D21WB is electrically and mechanically interchangeable with its predecessor types. Rated for 6.3 or 12.6 volts, it can be used either in fixed or mobile equipment.

Good use can also be made of the low tube drop, high current handling capacity and high voltage characteristics in pulse modulators, deflection amplifiers, blocking oscillators, and shunt or series regulated power supplies.

This type replaces such earlier versions as 3D21, 3D21A, 3D21B & 3D21WA.



### MAXIMUM RATINGS ABSOLUTE MAX. SYSTEM — SEE EIA STANDARD RS-239

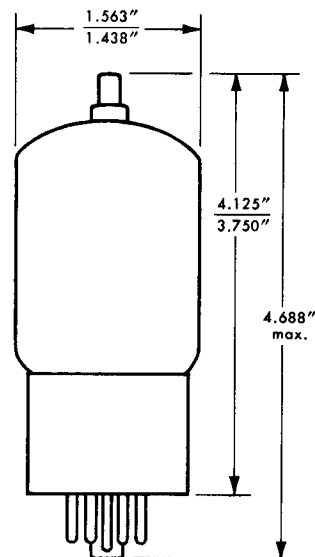
DC Plate Voltage — Note 1 .....	4000 Volts
Peak Plate Voltage including Transient — Note 2 .....	5000 Volts
Grid 2 Voltage — Note 1 .....	850 Volts
Negative DC Grid 1 Voltage .....	200 Volts
Negative Peak Grid 1 Voltage — Note 1 .....	500 Volts
Positive Peak Grid 1 Voltage — Note 1 .....	220 Volts
Plate Dissipation .....	40 Watts
Grid 2 Dissipation .....	3.5 Watts
Grid 1 Dissipation .....	0.5 Watt
D-C Cathode Current .....	175 Milliampères
Peak Cathode Current — See Rating Chart .....	10 Amperes

**Notes:** 1. Series resistance must be inserted in the power supply sufficient to limit the short circuit current to less than 0.5 ampere.

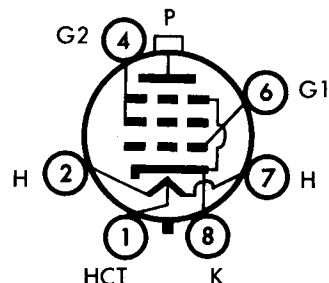
2. With a screen potential not exceeding 400Vdc and when no instantaneous voltage due to transient is present (essentially resistive plate load) a maximum plate potential of 4500Vdc may be used.

### HEATER CHARACTERISTICS AND RATINGS ABSOLUTE MAX. SYSTEM — SEE EIA STANDARD RS-239

<b>Heater Sections Series Connected:</b>		
Average Characteristics .....	12.6 Volts	0.85 Amp
Limits of Applied Voltage .....	11.4 to 13.9 Volts	
<b>Heater Sections Parallel Connected:</b>		
Average Characteristics .....	6.3 Volts	1.70 Amp
Limits of Applied Voltage .....	5.7 to 6.9 Volts	
Heater — Cathode Voltage — Either Polarity .....	Max. 500 Volts	
Cathode Heating Time .....	Min. 30 Sec.	



OUTLINE DRAWING



TERMINAL DIAGRAM  
BOTTOM VIEW

# TYPE 3D21WB

## INTERELECTRODE CAPACITANCES

	Min.	Max.
Grid to Plate .....	—	1.2 Picofarads
Input .....	13	21 Picofarads
Output .....	7.5	12.5 Picofarads

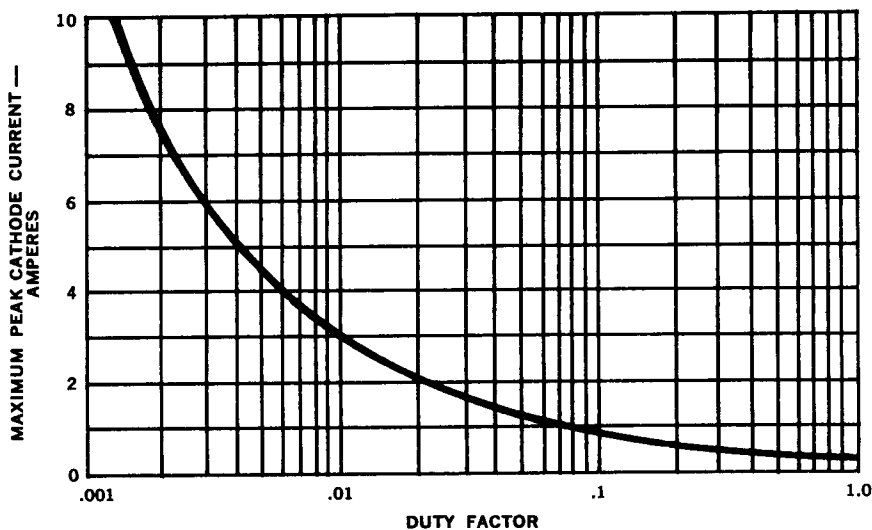
## SPECIAL TESTS

Shock .....	450G for 1 millisecond
Vibration — D = 0.08 inch at 25 cps .....	2.5G
Fatigue Vibration — 96 hours .....	50 to 500 cps at 5G
Heater Cycling Test .....	

## MECHANICAL DATA

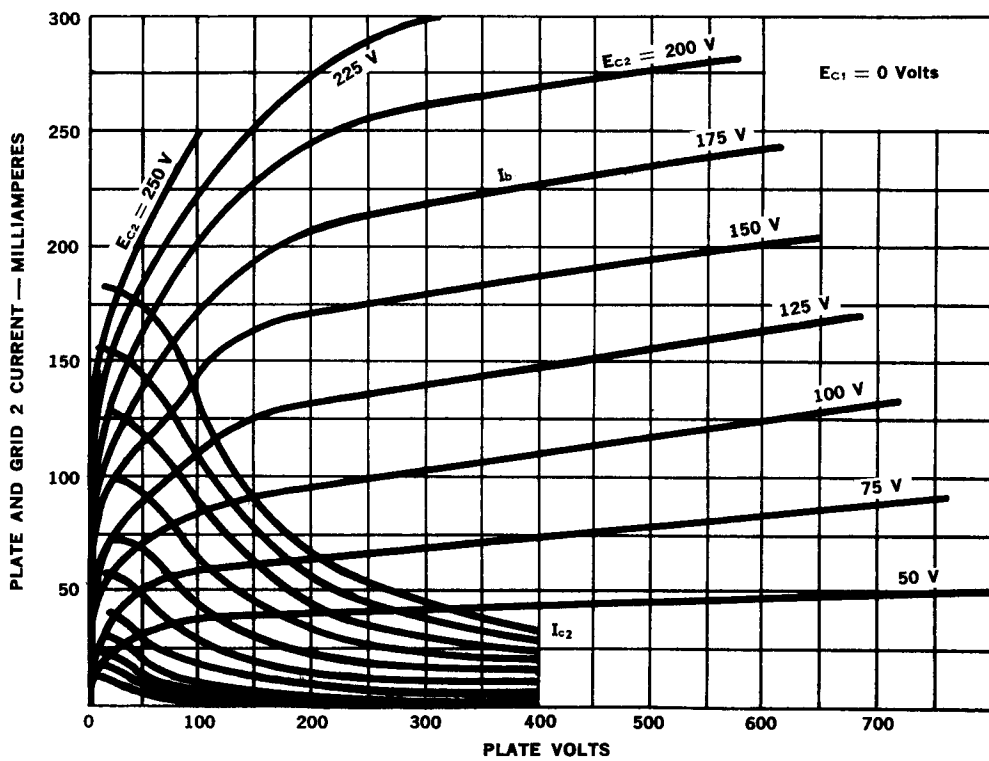
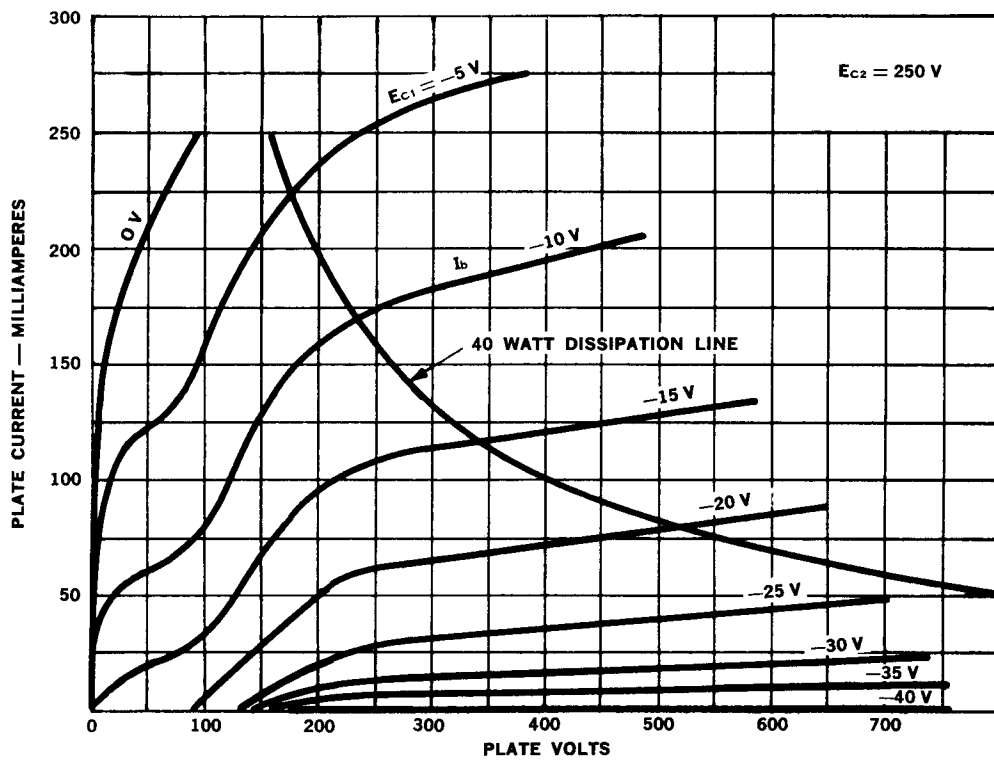
Mounting Position .....	Any
Maximum Bulb Temperature .....	300 degree Centigrade
Maximum Altitude .....	80,000 feet
Bulb .....	T-12 hard glass
Base .....	Medium shell octal, 6 pin, JEDEC type B8-11 low loss phenolic
Cap .....	Skirted miniature, JEDEC type C1-2
Maximum Weight .....	4 ounces

## PULSE RATING CHART

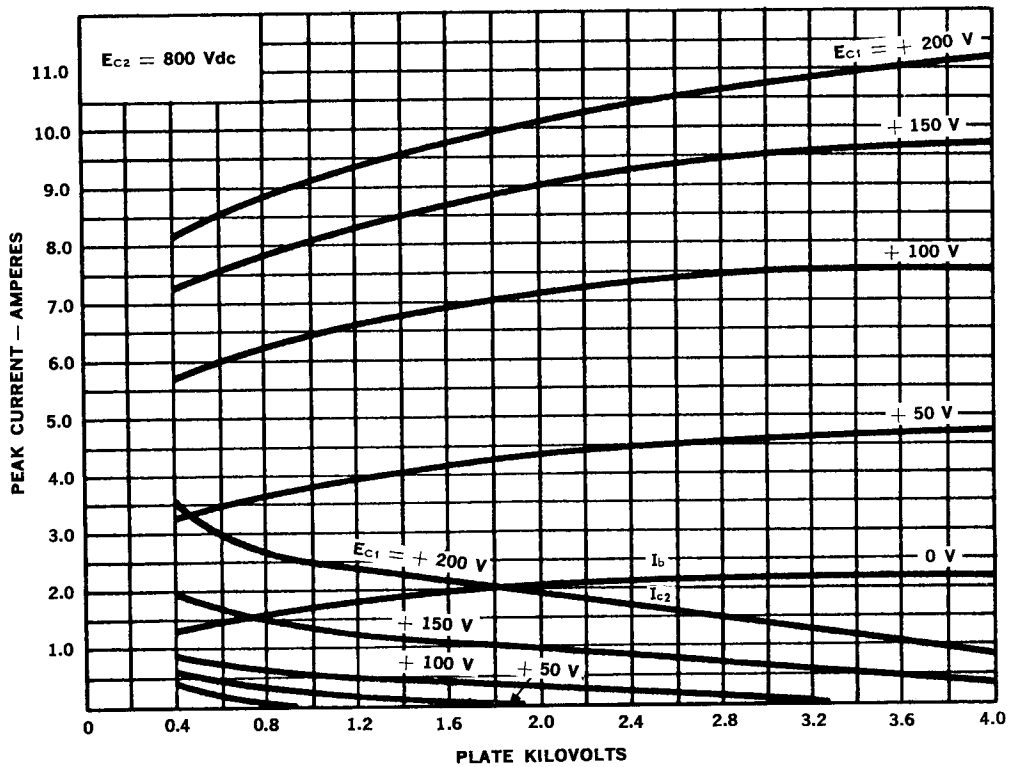
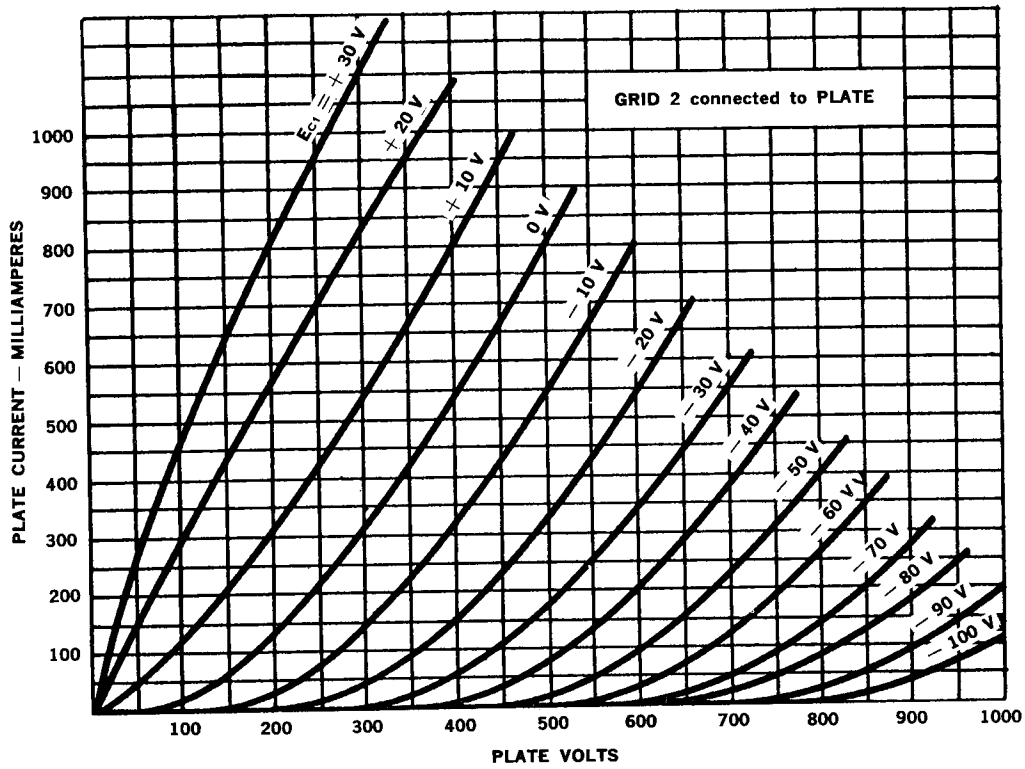


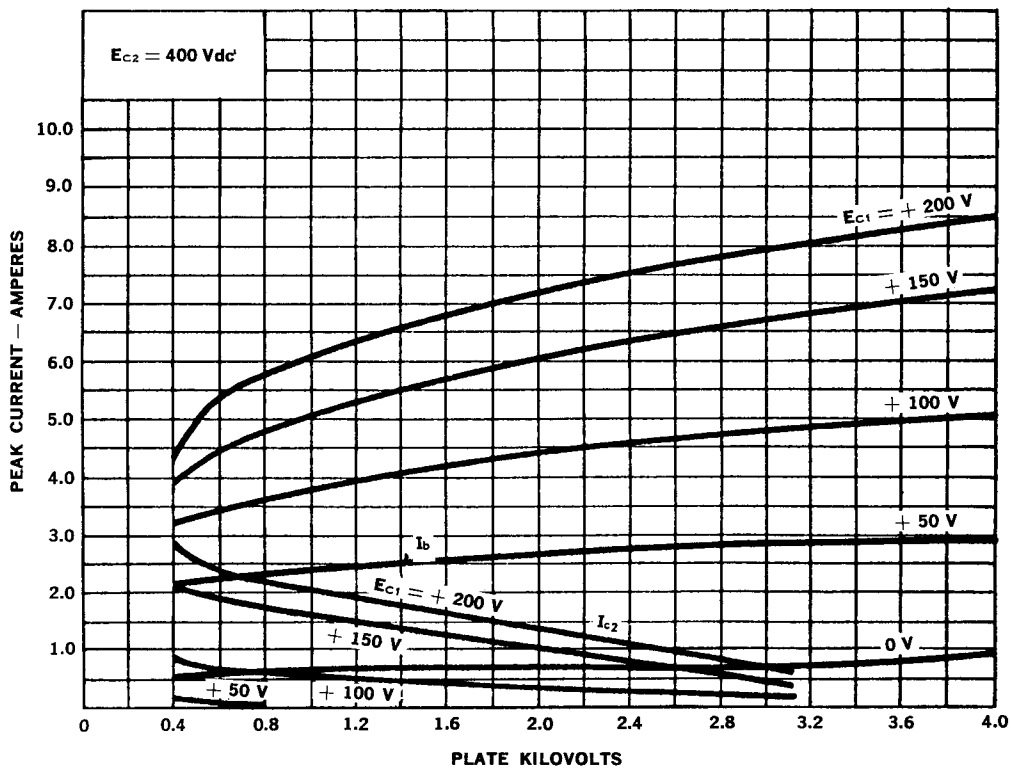
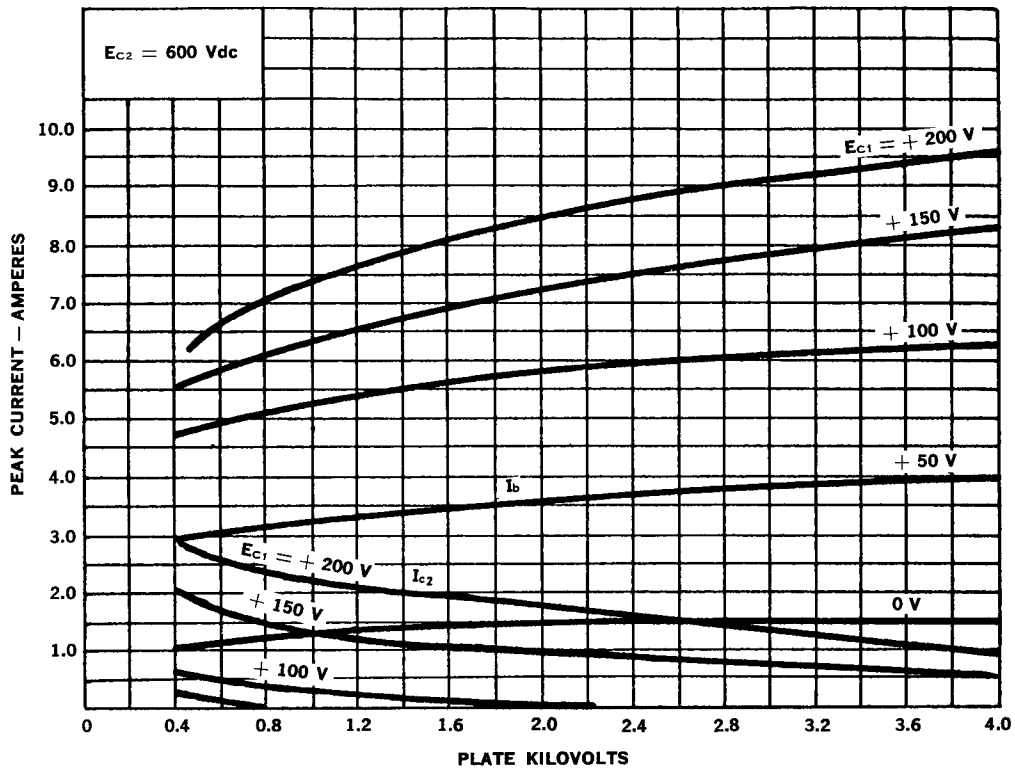
**Definitions:** Duty factor (10,000 microsecond averaging time) is the ratio of "on" time in microseconds to 10,000 microseconds.

"On" Time is defined as the sum of the duration of all individual pulses which occur during any 10,000 microsecond interval.



# TYPE 3D21WB





# TYPE 3D21WB

